

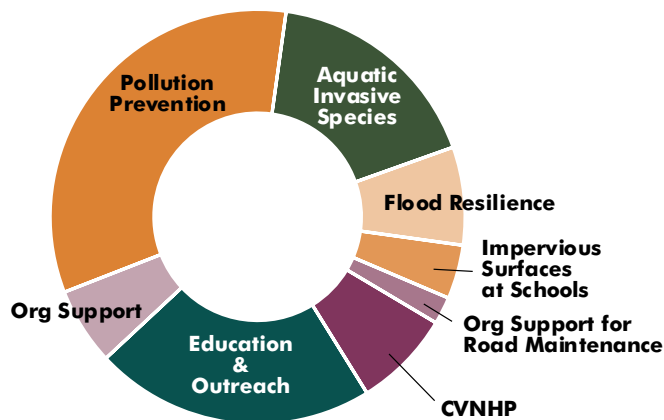
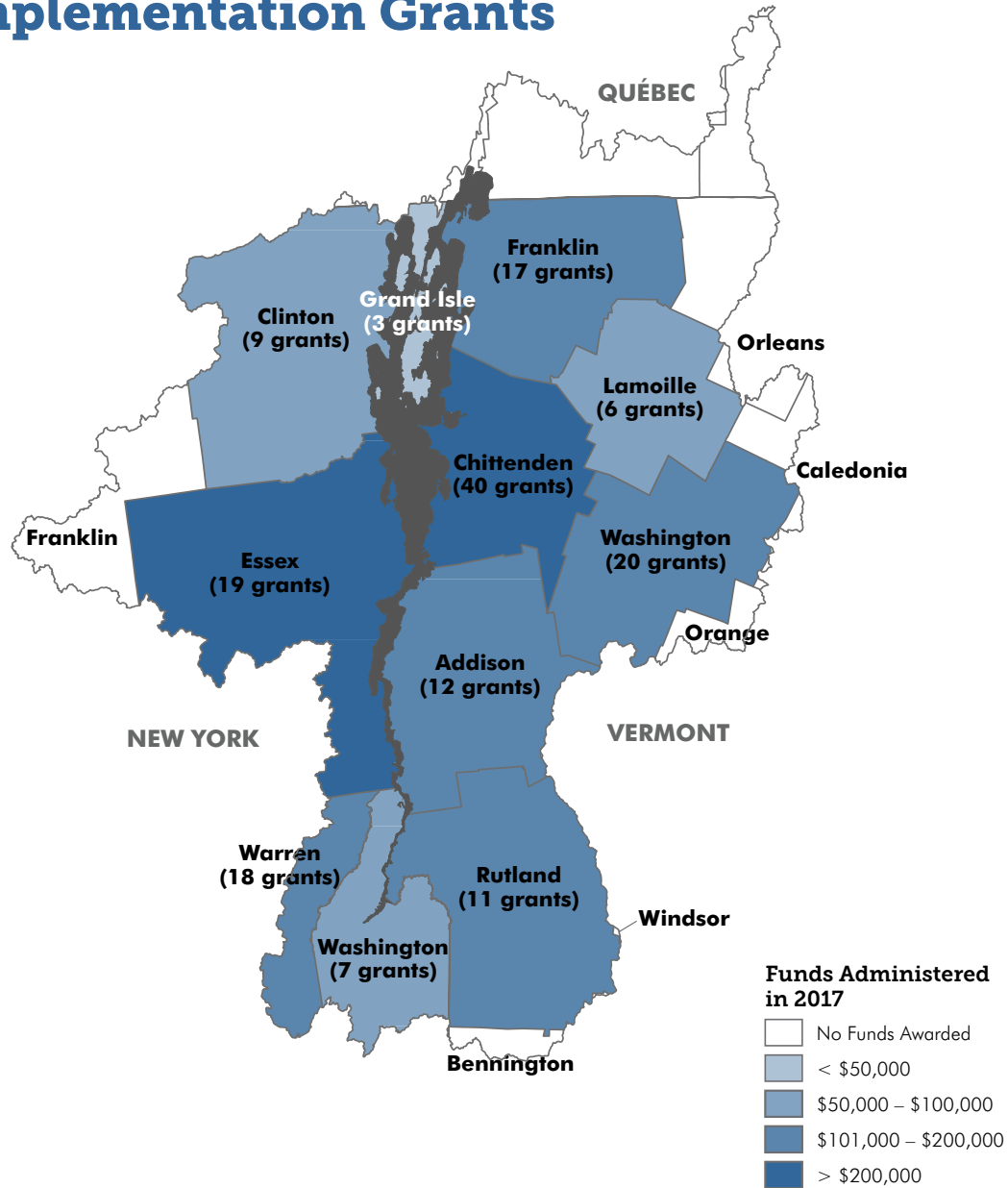
# Lake Champlain Basin Program



**2017 Report of Activities**



# Local Implementation Grants



**\$1,593,881**

Sum of grants administered by LCBP staff in FY 2017

**162**

Local implementation grants administered by LCBP

**8**

Categories of local implementation grants administered

Note: Grants administered in FY 2017 were funded with budgets from multiple years.

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# INTRODUCTION





*A group photo at the signing of Opportunities for Action near the Lake Champlain Bridge June 2017 at Crown Point, NY*

# BUILDING BRIDGES

The 2017 fiscal year was one of renewal and transition for the Lake Champlain Basin Program. The most notable accomplishment was the release of a new version of *Opportunities for Action*, LCBP's management plan for the Lake Champlain watershed. Unveiled at a ceremony at Crown Point, NY, under the gaze of the Champlain Bridge, the plan re-focuses efforts of the LCBP and our partners on four goals: Clean Water, Healthy Ecosystems, Thriving Communities, and an Informed and Involved Public. These themes were first introduced with the launch of the new LCBP website in 2013, and they will serve as the framework for the *2018 State of the Lake and Ecosystem Indicators Report*. The new Plan was signed by the membership of the Lake Champlain Steering Committee, the acting U.S. EPA Regional Administrators for Regions 1 and 2, the Governors of New York and Vermont, and was formally endorsed by the Premier of Québec.

The year also brought new faces to the Grand Isle office. Matthew Vaughan and Ellen Kujawa joined our team, filling the Technical Coordinator and Technical Associate positions. They have brought a wealth of new perspectives and skills to the LCBP team, and many of our partners have directly enjoyed the benefits of their experience in the form of a new internal grant management system, designed to streamline the process for grant administration.

We continue to expand partnerships with others working toward critical water quality goals. The LCBP is participating in several capacities in a new study by the International Joint Commission that is exploring flood mitigation measures in response to flooding events in the Lake Champlain watershed and Richelieu River corridor. The five-year study will evaluate the feasibility and acceptability of an array of projects that can reduce flooding in our binational watershed.

The LCBP Technical Advisory Committee introduced a new budget development process, designed to take advantage of the collective knowledge, skills, and interests of our partners across the watershed and beyond to generate new concepts for the Lake Champlain Steering Committee to consider for our FY2018 budget. We expect to complete this process in April 2018 to initiate new projects in the fall.

We also are excited to report that the LCBP and the Champlain Valley National Heritage Partnership (CVNHP) have expanded our partnerships in Québec. The CVNHP Annual International Summit in Saint-Jean-sur-Richelieu resulted in the first regional stakeholder group in Québec. For the first time, with the appropriation of funds from the Great Lakes Fishery Commission, the LCBP was able to support awards to Québec-based organizations for work in the Missisquoi Bay watershed.

We remain grateful for the strong support of our U.S. congressional delegation, representing Lake Champlain interests in both the Senate and House of Representatives. This steadfast support ensures that the work of the LCBP, CVNHP and all of our partners will continue to improve water quality, ecosystem integrity, and community vitality in the Lake Champlain Basin.

Eric Howe, Director, LCBP and CVNHP

Jim Brangan, Cultural Heritage and Recreation Coordinator; Associate Director, CVNHP

Colleen Hickey, Education & Outreach Coordinator

Ryan Mitchell, Communications and Publications Coordinator

Elizabeth Lee, Communications and Publications Associate

Laura Hollowell, Stephanie Larkin, Cynthia Norman, LCBP Resource Room Specialists

Kathy Jarvis, Office Manager

Meg Modley Gilbertson, AIS Management Coordinator

Matthew Vaughan, Technical Coordinator

Ellen Kujawa, Technical Associate

Pete Stangel, Lake Champlain Long-Term Monitoring Program (VT DEC)

Myra Lawyer, NYS Agronomist (NYS DEC)

Jane Ceraso, Director, NEIWPCC Water Resource Protection Programs





SECTION ONE:

# CLEAN WATER







# CLEAN WATER

**GOAL: 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, working landscapes, and vibrant communities rely on clean water. Efforts to reduce nutrient loading and contaminants that affect human health also help to improve habitat and foster economic opportunity. Sound science is fundamental for understanding and addressing these challenges, and is central to the clean water objectives of the LCBP and its partners.

*Opportunities for Action* 2017 calls for innovation in management approaches to achieving clean water objectives, and the LCBP embraced the theme in 2017. Staff conceived and launched a new process for identifying and awarding large technical research and implementation grants. Requests for pre-proposals will require short summaries of potential projects that address any of the strategies in the Plan. A subset of pre-proposals will be chosen to submit full proposals that will be reviewed for possible funding. The intent of this approach is to encourage creativity by the research and management community in identifying and solving the most pressing challenges. While transitioning to this new process, the LCBP issued requests for proposals for fresh approaches to pollution reduction. RFPs were developed for innovative agricultural phosphorus reduction projects and for enhanced best management practices to be implemented at larger scales than traditionally supported by LCBP grants. These RFPs paved the way to the pre-proposal process by leaving the specific solutions up to applicants.

## Program Highlights

- » Staff supported the **International Joint Commission** technical workgroup tasked with creating flood inundation maps, models and tools for Lake Champlain and Richelieu River flood resilience, coordinating workgroup meetings, facilitating public discussion, and assembling basin-wide datasets.
- » **Agronomists** in Vermont and New York assisted farmers in implementing best management practices to reduce erosion and export of nutrients from farmland.
- » **The Long-term Water Quality and Biological Monitoring Program** continued to provide critical data used for scientific analyses and to guide watershed management, marking the 25th year of the program.
- » Staff worked with the U.S. Army Corps of Engineers to revise the **Section 542 General Management Plan** that implements the Watershed Environmental Assistance Program for large watershed restoration projects.

## Project Initiatives

Technical Coordination Staff:

- Launched a **revised technical budget development process to allow for more innovative ideas** from our partners, and facilitated initiation of new projects to improve water quality.
- **Drafted new content for our updated management plan**, *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*, and the 2018 *State of the Lake and Ecosystem Indicators Report*.

### Quality Assurance and Data

- Coordinated confidential peer review committees to evaluate the 2017 Local Implementation Grant categories, including pollution prevention and habitat conservation, aquatic invasive species spread prevention, watershed organizational support grant categories. Submitted recommendations for funding to the Executive and Steering Committees for consideration. Circulated award notification letters, reviewed and approved workplans, and worked with NEIWPCC to execute contracts. More than 20 reviewers were recruited for these processes.
- Coordinated the release and external peer review process for six technical RFPs, including the Enhanced BMP pollution reduction implementation and design and planning grants and alternative and innovative projects to reduce phosphorus loading from agricultural sources in the St. Albans Bay watershed.
- Coordinated the review and approval process for 16 new and two recurring quality assurance project plans (QAPPs) for projects requiring data collection or manipulation. Technical program staff received NEIWPCC QAPP designee training and completed review and evaluation exercises with the NEIWPCC QAPP Program Manager.

### Workshops and Committees

- Preliminary coordination of the **Lake Champlain Research Conference**, to be held in January 2018, which will provide an opportunity for Lake and watershed stakeholders to hear and discuss new research in the Basin.
- Coordinated **ten Technical Advisory Committee meetings**, with agendas focused on final report reviews, technical presentations, and budget discussions.
- Communicated all technical project task items, reports, and initiatives to the LCBP Executive and Steering Committees.
- Coordinated public meetings in Québec, New York, and Vermont to inform stakeholders and gather public comments on the **International Joint Commission Lake Champlain-Richelieu River flood study**.
- Held public meetings in New York and Vermont to explain the **revised technical budget development process** to interested partners.
- Participated in the **Vermont Dam Task Force to coordinate removal of dams** that serve no useful purpose, prevent aquatic species passage, and limit natural geomorphic river function.
- Participated in the **Missisquoi Bay Task Force** to coordinate efforts in Québec and Vermont to meet phosphorus loading targets for Missisquoi Bay watershed.
- Participated in nearly 100 meetings during FY17. These meetings consisted of conference calls, meetings, workshops or conferences associated with nutrient reduction, AIS spread prevention, water quality monitoring, cyanobacteria, flood resilience, management of contracts and sub-awards, and other topics relevant to the implementation of *Opportunities for Action*.





2016

## Technical Project

## BMP Prioritization &amp; Design in the Mad River Headwaters

## Project Summary

Friends of the Mad River (FMR) proposes launching a program that will position FMR to more strategically and efficiently guide BMP projects through the scoping, design, and implementation phases and to quickly access implementation funding as it arises. The overall goal of this program is to improve the water quality of the Mad River and Lake Champlain watersheds by reducing damaging stormwater runoff from sensitive, headwater residential development. Specific objectives include: a list of prioritized implementation sites, an established Storm Smart program, a queue of engaged landowners, and a suite of “shovel ready” projects.

## Outputs:

- Contract with a stormwater professional to identify ten common plans of development (CPODs are defined as two or more residences accessed from one private roadway) and fifteen sites for engineering focus
- conduct thirty stormwater property audits, and complete 30% engineering designs for six priority properties.

## Outcomes:

- Planning to reduce stormwater runoff in the Mad River watershed.

**Organization:** Friends of the Mad River

**Contact Person:** Corrie Miller

**Mailing Address:** PO Box 255  
Waitsfield, VT 05673

**Phone:** (802) 496-9127

**E-mail:** friends@madriver.com

**Website:** www.friendsofthemadriver.org



*Storm Smart driveway in action*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-054

**EPA**

**Start Date:** 9/21/2017

**Grant Amount:** \$49,865.00

**Non-federal Match:** \$14,945.00

**Total Amount:** \$64,660.00

# Technical Project

2016

## Clinton County Shared Vacuum Trailer

### Project Summary

The mission of the Clinton County Soil & Water Conservation District (CCSWCD) is to protect and improve the lakes, rivers, streams, soils and other natural resources of Clinton County through locally-led conservation projects and programs. Special emphasis is aimed at reducing phosphorus runoff into Lake Champlain through the implementation of numerous projects and practices throughout the New York side of the Lake Champlain watershed. These reductions will have a long-term positive impact upon the water quality and ecology of the lake and its many tributaries.

CCSWCD has worked with the local highway departments, and identified some situations that would benefit from equipment that individual towns or villages cannot afford. Runoff from roads and roadside erosion is a significant contributor of sediment and nutrients into the watershed. Permanent infrastructure such as catch basins, sediment basins, and culverts often become plugged with sediment, causing overflowing or possible failure. Maintenance of these sediment traps can be done by hand or with conventional equipment, but is often not possible in towns with less manpower. The purchase of a vacuum excavator, for use by all Clinton County municipal crews, will reduce these negative impacts on local water bodies and preserve the natural assets of local communities and the regional economy.

#### Outputs:

- purchase a sediment vacuum trailer for use of 15 NY towns and 3 villages
- newspaper articles

#### Outcomes:

- decreased sediment and phosphorus runoff to Lake Champlain

**Organization:** Clinton County SWCD

**Contact Person:** Peter Hagar

**Mailing Address:** 6064 Route 22  
Plattsburgh, NY 12901

**Phone:** 518-561-4616

**E-mail:** [peter.hagar@ccsoil-water.com](mailto:peter.hagar@ccsoil-water.com)

**Website:** <http://clintoncountyswcd.org/>



**NEIWPCC Code:** L-2017-035

**EPA**

**Start Date:** 4/17/2017

**Grant Amount:** \$72,996.00

**Non-federal Match:** \$10,000.00

**Total Amount:** \$82,996.00

2016

# Technical Project

## Inventory and Assessment of Roof Drains in the Combined Sewer Service Area of Montpelier, Vermont

### Project Summary

The City of Montpelier's Department of Public Works will update its inventory of connected rooftops located within the City's combined sewer service area, verify the status of rooftop connection or disconnection for each building in the area, develop alternatives and property-specific estimates to complete disconnections, and draft ordinance language to support disconnection program implementation. Completion of this work will leave the City of Montpelier with necessary information regarding the remaining work needed to separate enough remaining roof drain connections to substantially reduce or ultimately eliminate CSO events, the costs associated with completing that work, and a policy option for disconnection program implementation.

#### Outputs:

- inventory of connected rooftops within Montpelier's combined sewer service area

#### Outcomes:

- Eventually, decreased CSOs and phosphorus pollution to Lake Champlain, sharing of information on water quality impacts.

**Organization:** City of Montpelier

**Contact Person:** Kurt Motyka

**Mailing Address:** 39 Main Street  
Montpelier, VT 05602

**Phone:** 802-262-6277

**E-mail:** [kmotyka@montpelier-vt.org](mailto:kmotyka@montpelier-vt.org)

**Website:** <http://www.montpelier-vt.org/>



**NEIWPCC Code:** L-2017-048

**EPA**

**Start Date:** 6/12/2017

**Grant Amount:** \$49,843.00

**Non-federal Match:**

**Total Amount:** \$49,843.00

# Technical Project

2016

## Lake George Stormwater Runoff Direct Discharge Reduction Project

### Project Summary

The Village of Lake George will be installing a hydrodynamic separator, bioswale, and bioretention basin in the Lower Amherst Street subwatershed, which is located directly on Lake George. The Lower Amherst Street subwatershed is approximately 1.2 acres, and encompasses large buildings and several public and private parking lots. This sub-watershed is approximately 95% impervious, and conveys stormwater directly into the lake in two distinct runoff patterns. By installing a hydrodynamic separator at the base of Lower Amherst Street, all of the runoff from two large restaurants and their associated parking lots, as well as the extra-wide road, will be intercepted, and the sediment and debris will be filtered out before the water is discharged to the lake. The second runoff pattern, which includes stormwater from the large Old Courthouse Building and its parking lot, will be conveyed to a bioretention area via a bioswale along the lake's edge, where the stormwater can be infiltrated, reducing sediment and nutrient input into Lake George. Once the systems are in place an eroded shoreline, which is a result of the stormwater runoff, will be stabilized. Preliminary runoff reductions calculated through the STEPL program indicate that by installing these practices there will be a 15% sediment reduction, 5% phosphorus reduction and 5% nitrogen reduction. This equates to a reduction of 800 pounds of sediment, 2.5 pounds of phosphorus and 17 pounds of nitrogen per year.

#### Outputs:

- Implementation of a hydrodynamic separator, bioswale, and bioretention basin in the Village of Lake George. Preliminary runoff reductions calculated through the STEPL program indicate that by installing these practices there will be a 15% sediment reduction, 5% phosphorus reduction and 5% nitrogen reduction. This equates to a reduction of 800 pounds of sediment, 2.5 pounds of phosphorus and 17 pounds of nitrogen per year.

#### Outcomes:

- Stormwater nonpoint source run-off pollution reduction to Lake George in the Lake Champlain Basin

**Organization:** Village of Lake George

**Contact Person:** Dave Harrington

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Lake George, NY 12845

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**E-mail:** lgwtp@hotmail.com

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**NEIWPCC Code:** L-2017-047

**EPA**

**Start Date:** 5/16/2017

**Grant Amount:** \$ 87,000.00

**Non-federal Match:** \$ 30,600.00

**Total Amount:** \$117,600.00



2016

# Technical Project

## Pinnacle at Spear Stormwater Improvements

### Project Summary

The Pinnacle at Spear Stormwater Improvements project aims to bring four existing stormwater ponds up to current stormwater treatment standards and investigate the potential to install a fifth stormwater treatment practice in the area. In their current condition, these ponds do not provide the flow reduction and nutrient removal that modern stormwater treatment systems regularly achieve. It is anticipated that some of these ponds will be redesigned to function as stormwater treatment wetlands. This would further improve their ability to remove nutrients, specifically phosphorus, from stormwater runoff. Successful implementation of this project will result in construction ready engineering plans for pond retrofit. Once constructed, these retrofits would provide improved stormwater treatment to 12.95 impervious acres within the stormwater impaired watersheds of Munroe Brook and Bartlett Brook.

#### Outputs:

- Project plan, conceptual plans, all necessary permits, final design, and a final report.

#### Outcomes:

- Upgraded stormwater ponds will reduce sediment and nutrient loads to Lake Champlain.

**Organization:** South Burlington Public Works

**Contact Person:** Thomas J. DiPietro Jr.

**Mailing Address:** 104 Landfill Road  
South Burlington, VT 05403

**Phone:** (802) 658-7961 x6108

**E-mail:** [tdipietro@sburl.com](mailto:tdipietro@sburl.com)

**Website:** <http://www.sburl.com/index>.



*Project Location Map*



**NEIWPCC Code:** L-2017-040

**EPA**

**Start Date:** 6/1/2017

**Grant Amount:** \$40,000.00

**Non-federal Match:** \$10,832.00

**Total Amount:** \$50,832.00

# Technical Project

2016

## Sanitary Sewer Utility Mapping to reduce Occurrence of Combined Sewer Overflows and Stormwater Master Planning for Vergennes, VT

### Project Summary

This project has two (2) objectives. The first is to comprehensively map the sanitary sewer system (manholes, pipes, etc.) and collect attribute information pertaining to condition (age, infrastructure type, condition if known) to prioritize maintenance and replacement projects to reduce the occurrence of Combined Sewer Overflows (CSOs). The second objective is to use this information, along with previously mapped storm sewer infrastructure data, to conduct a stormwater master plan (SWMP) using the guidelines developed by the VT Department of Environmental Conservation's (VT DEC) Watershed Management Division in 2013. The SWMP process will identify opportunities for stormwater management using both traditional (end-of-pipe practices such as ponds, or other detention/sedimentation practices) and distributed green stormwater infrastructure (GSI) practices.

#### Outputs:

- Comprehensive GIS-based maps of the City of Vergennes sanitary sewer infrastructure
- A GIS geodatabase of sanitary sewer infrastructure using VT DEC's database structure for easy integration with VT DEC's Statewide dataset
- Tables and Maps illustrating sanitary sewer pipe and other infrastructure replacement priorities Preliminary stormwater management practice opportunities maps and field sheets
- A list of top 20 initial priority sites selected from preliminary opportunities in consultation with City staff
- A prioritization and ranking table for the top 20 sites
- Maps showing each site's drainage area, stormwater infrastructure, soil type, and landuse
- Modeling results (hydrologic, hydraulic, and water quality) for each site
- Preliminary cost projections for each site
- Top three (3) sites selected with input from stakeholders

**Organization:** Watershed Consulting Associates, LLC

**Contact Person:** Andres Torizzo

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Burlington, VT 05406

**Phone:** 802.497.2367

**E-mail:** andres@watershedca.com

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

- Recommendations regarding further design and implementation steps for the remaining sites (to be incorporated in the final SWMP report)
- Three (3), 30% Concept Design engineering plans
- Detailed landscape architectural renderings for each of these sites (provided digitally as PDFs) design/layout sheets for each site (may not be the same sites as the 30% Concept Design sites)
- Public outreach/stakeholder session minutes

#### Outcomes:

- Reduced or eliminated combined sewer overflows in the City of Vergennes, Vermont



**NEIWPCC Code:** L-2017-031  
**EPA**  
**Start Date:** 4/20/2017  
**Grant Amount:** \$49,786.00  
**Non-federal Match:** \$10,224.00  
**Total Amount:** \$60,010.00

2016

## Technical Project

## South Lake Champlain Shoreline Stabilization and Runoff Reduction Project

## Project Summary

In 2012, the Town of Putnam acquired a 13-acre property on the shoreline of South Lake Champlain for the creation of a Town Park. The property, which was actively farmed until the purchase, has a drainage pattern that slopes to the Lake, which has created a series of head-cuts at the top of the bank and gullies cutting down the bank. This runoff pattern, which includes 5.5 acres of the property, has destabilized the top of approximately 600 feet of bank with a 15% slope composed of Vergennes silty clay loam soil.

To stop the runoff from reaching the bank, the Town will install a large, gradual vegetated berm along the top of the bank with a sloping bioretention area behind it to capture and infiltrate the runoff from the field. The goal of this project is to reduce sediment input into South Lake Champlain, which the LCBP states in the most recent State of the Lake Report is "one of the most compromised parts" of the Lake and "where the water tends to be quite muddy." The project tasks and objectives will be achieved through an existing partnership between the Town, Washington County Soil and Water Conservation District and Lake Champlain – Lake George Regional Planning Board, who will assist with project and grant management to ensure that the project is completed efficiently and in a timely manner.

## Outputs:

- Surveys, engineering design, permits, completed construction project, and final report.

## Outcomes:

- Reduced erosion and sediment load to Lake Champlain

**Organization:** Town of Putnam

**Contact Person:** Gary Treadway

**Mailing Address:** 10 Putnam Center Road  
Putnam, NY 12861

**Phone:** (518) 547-8297

**E-mail:** grtreadway@gmail.com

**Website:** <http://www.townofputnamny.com/>



**NEIWPCC Code:** L-2017-039

**EPA**

**Start Date:** 6/1/2017

**Grant Amount:** \$104,520.00

**Non-federal Match:**

**Total Amount:**

# Technical Project

2016

## Village of Fort Ann Wastewater Treatment Plant Upgrade Plan and Concept Design

### Project Summary

The Village of Fort Ann was awarded a \$50,000 Lake Champlain Basin Program (LCBP) grant to perform an analysis of their publicly-owned wastewater treatment plant (WWTP). This funding will be utilized to provide the Village with a comprehensive engineering analysis to move the Village forward with rebuilding or upgrading the WWTP. The condition of the current facility will be analyzed along with options for rehabilitation and upgrades. This WWTP discharges into Halfway Creek, approximately 250 feet from the Champlain Canal.

Planning for improving the WWTP is imperative to the health of the surface waters in the Lake Champlain watershed. Halfway Creek, the Champlain Canal, and South Lake Champlain are all listed by the NYS Department of Environmental Conservation (NYSDEC) as “impacted.” Most notably, the Champlain Canal is listed as impaired due to decreased dissolved oxygen/oxygen demand, nutrients (phosphorus), and pathogens from known municipal sanitary discharges. In addition, the Lake Champlain – Lake George Regional Planning Board (LCLGRP) began a NYS Department of State funded effort in 2014 to identify subwatersheds on the New York portion of the Basin that are the highest priority for phosphorus reduction. Of the 79 HUC-12 subwatersheds, 19 were deemed high priority. Of these high priority locations, the Wood Creek/Lake Champlain Canal subwatershed ranked #4, and contains the site where the Fort Ann WWTP is located. The planning for and retrofitting of the Village’s WWTP is not only identified as a project for phosphorus reduction within the subwatershed, but was deemed the highest priority project for funding in that subwatershed. This conclusion from stakeholders on the New York side of the watershed is in line with the LCBP’s Priority Action 4.4 in *Opportunities for Action*, which calls to “Address phosphorus loads associated with inadequately treated sewage.”

#### Outputs:

- WWTF Engineering report and WWTF concept designs

#### Outcomes:

- reduced phosphorus loading to Lake Champlain via Halfway Creek

**Organization:** Village of Fort Ann

**Contact Person:** Beth Gilles

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Fort Ann, NY 12827

**Phone:** 518-668-5773

**E-mail:** bgilles\_rpb@verizon.net

**Website:** N/A



**NEIWPCC Code:** L-2017-044

**EPA**

**Start Date:** 5/25/2017

**Grant Amount:** \$50,000.00

**Non-federal Match:** \$ 1,000.00

**Total Amount:** \$51,000.00

2015

## Local Implementation Grant

## Building a Flood Resilient Northfield

## Project Summary

As a result of damage done by Tropical Storm Irene, the Town of Northfield has acquired seven contiguous properties (~5 acres) along the Dog River, just upstream of downtown. These properties will be restored to enhance the floodplain functions, and provide passive non-structural recreation amenities. A significant amount of funding and effort has gone toward the physical restoration of the floodplain. This project proposal will complement the physical transformation of the floodplain park with an education and outreach program developed by an interdisciplinary team. The team, which participated in the Summit at ECHO in March 2015, envisions a series of outreach activities that focus' on a key goal from the Summit: to help the community move from disaster recovery to a new relationship and respect for the river that runs through its core.

## Outputs:

- A program of education and outreach activities that will leverage the physical transformation of a portion of floodplain near downtown and will help Northfield improve its flood resilience to include: river flume demonstrations at schools and community events, series of Tropical Storm Irene related interviews, written personal flood related articles, floodplain park public events, outreach activities in schools.

## Outcomes:

- Enhance educator and student learning about watershed issues.
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.
- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin
- Protect and restore forests, wetlands, floodplains, and stream corridors to maximize storage of phosphorus in the watershed.

**Organization:** Friends of Winooski River

**Contact Person:** Ann Smith

**Mailing Address:** PO Box 777  
Montpelier, VT 05602

**Phone:** 802 882-8276

**E-mail:** ann@winooskiriver.org

**Website:** <http://www.winooskiriver.org/>



**NEIWPCC Code:** L-2016-035

**EPA**

**Start Date:** 2/26/2016

**Grant Amount:** \$19,844.00

**Non-federal Match:** \$10,400.00

**Total Amount:** \$30,244.00



# Local Implementation Grant

2015

## New Haven River Watershed Flood Adaptation Project

### Project Summary

This project will establish a new working collaboration between the Conservation Commissions of the towns of Lincoln, Bristol, and New Haven to design and implement flood adaptation projects for the New Haven River watershed. Adaptation projects may include: 1) High elevation wetland restoration (Lincoln), 2) Sustainable storm water management demonstration project (Bristol village), 3) River Corridor Conservation Easements incorporating "River Corridor Farming" techniques (New Haven).

#### Outputs:

- Watershed scale "PLACE" community engagement process. Provide Conservation Commissions with citizen generated flood resilience project proposals. Three (3) hands-on flood adaptation projects in the three participating towns.

#### Outcomes:

- Provide hands-on citizen action opportunities. The design and implementation of stormwater mitigation projects in settlement areas will engage citizens at all project phases of, for example, neighborhood scale rain garden design and construction.
- Conserve important wildlife corridors. Wetland restoration in the headwater areas of Lincoln, and river corridor easements within the agricultural floodplain areas of New Haven will restore and enhance wildlife habitat.
- Develop adaptive management capacity by creating a collaborative working agreement between the conservation commissions of the three towns of Lincoln, Bristol, and New Haven flood resilience and adaptation challenges can be discussed and addressed at the whole watershed scale.

**Organization:** Vermont River Conservancy

**Contact Person:** Steve Libby

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**Phone:** 802 229-0820

**E-mail:** [slibby@vermontriverconservancy.org](mailto:slibby@vermontriverconservancy.org)

**Website:** <http://www.vermontriverconservancy.org/>



**NEIWPCC Code:** L-2016-014

**EPA**

**Start Date:** 2/1/2016

**Grant Amount:** \$18,500.00

**Non-federal Match:** \$ 5,400.00

**Total Amount:** \$23,900.00

2015

## Local Implementation Grant

## Northwest Vermont Climate Navigators

## Project Summary

The intent of this project is to develop a local, common language and understanding around climate change for Northwestern Vermont. We will do this by training community leaders through a series of workshops about climate change and the impacts on our region. In addition, we will develop concise messaging and visual tools such as infographics that will be utilized by regional partners and integrated into their work to educate the public around the impacts of climate change and how to better mitigate and prepare for it at all levels.

## Outputs:

- Up to 7 workshops for community leaders about climate change that will lead towards a local (or regional) common language and understanding about climate change.
- Series of materials using messaging and graphics to better understand and explain climate change and resilience strategies to the public which include a climate change community toolkit for water quality partners and healthy soils and resilient transportation posters.

## Outputs:

- Developing adaptive management capacity to manage the anticipated impacts of climate change, particularly on the changing dynamics between hydrological processes and eutrophication.

**Organization:** Friends of Northern Lake Champlain

**Contact Person:** Kent Henderson

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Swanton, VT 05488

**Phone:** 802 373-1998

**E-mail:** nugamoo@comcast.net

**Website:** <http://www.northernlakechamplain.org/>



**NEIWPCC Code:** L-2016-011

**EPA**

**Start Date:** 1/15/2016

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 5,850.00

**Total Amount:** \$25,850.00

# Local Implementation Grant

# 2015

## Tools for Resilience in the Mad River Watershed

### Project Summary

The Mad River Taskforce's watershed-wide stormwater management planning initiative began via participation in the March 2015 Leahy Summit and has since been supported by High Meadows Fund. The proposed LCBP project will supplement this effort and deepen its impact. LCBP funding would enable us to develop a suite of tools that translate technical information into a variety of formats accessible to a range of diverse stakeholders and create an ongoing online forum for watershed-wide stormwater management resources. Using these tools, the Taskforce will effectively educate and engage community leaders in developing the broader community's awareness of flooding and engagement in individual, municipal, and watershed action steps towards resilience.

#### Outputs:

- A suite of locally-filmed videos about stormwater, water quality, and flood resilience tailored to a diverse range of stakeholders
- Infographics for print and presentations that convey complexity in an understandable manner
- A website landing page to serve as a stormwater resource database and forum that houses and tracks usage of watershed resilience educational resources and provides a venue for information sharing

#### Outcomes:

- Build awareness and understanding of Lake Champlain Basin behaviors that contribute to pollution
- Use education to empower the general public to reduce phosphorus contributions
- Improve communication and cooperation among diverse groups
- Develop adaptive management capacity to manage climate change impacts
- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands

**Organization:** Friends of the Mad River

**Contact Person:** Corrie Miller

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**Phone:** 802 496-9127

**E-mail:** friends@madriver.com

**Website:** <http://www.friendsofthemadriver.org/>



**NEIWPCC Code:** L-2016-024

**EPA**

**Start Date:** 1/15/2016

**Grant Amount:** \$19,026.00

**Non-federal Match:** \$ 5,000.00

**Total Amount:** \$24,026.00

2015

## Local Implementation Grant

## Cabot School Stormwater Reduction Project

## Project Summary

The Cabot School property generates considerable runoff that enters the stormwater system and discharges to the nearby Winooski River. The Friends of the Winooski River (Friends) received an Ecosystem Restoration Program grant to complete a detailed site evaluation, engineering survey and soils assessment that resulted in the identification of seven stormwater mitigation practices for the site. Engineering designs have been completed for the three highest priority practices. This grant application will pursue the implementation of one the practices which will include student participation. In addition students will facilitate discussion and lead educational events regarding the reduction of stormwater runoff from the school property.

## Outputs:

- Implementation of one stormwater mitigation practice with student participation and student led community education programs.

## Outcomes:

- Enhance educator and student learning about watershed issues
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution
- Reduce nonpoint source phosphorus load from developed land.
- Use education to empower the general public to reduce phosphorus loads.

**Organization:** Cabot School

**Contact Person:** David Schilling

**Mailing Address:** 25 Common Road, Cabot VT 05647

**Phone:** 802 563-2289

**E-mail:** dschilling@cabotschool.org

**Website:** <http://www.washnesu.org/cabot/>



**NEIWPCC Code:** L-2016-070

**EPA**

**Start Date:** 1/1/2016

**Grant Amount:** \$ 8,740.00

**Non-federal Match:** \$ 2,850.00

**Total Amount:** \$11,590.00

# Local Implementation Grant

2015

## School Stormwater Audits

### Project Summary

LCC will conduct audits of the existing stormwater infrastructure for five schools and provide recommendations about ways to increase infiltration and water quality treatment. The audits will assess the current state of each school's stormwater management and make recommendations for increasing infiltration and low impact development. The audits will better position the schools to seek future funding for stormwater remediation projects.

#### Outputs:

Stormwater audits at 5 schools which will:

- Identify existing stormwater infrastructure (ponds, swales, etc.),
- Identify sewer drains and assess their functionality,
- Identify stormwater issues
- Identify the receiving water for stormwater runoff
- Identify opportunities and locations for infiltration practices (rain gardens etc.) to reduce runoff
- Provide a clear report that photo documents issues and outlines opportunities for remediation

#### Outcomes:

- Provide technical assistance to nongovernmental organizations and municipalities on low-impact development, stormwater best management practices, shoreline protection, and other topics
- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin.
- Provide education and technical support to municipalities and homeowners to increase use of rain gardens, rain barrels, and other stormwater reduction techniques.

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** L-2016-027

**EPA**

**Start Date:** 2/1/2016

**Grant Amount:** \$16,000.00

**Non-federal Match:** \$ 1,380.00

**Total Amount:** \$17,380.00

2015

## Local Implementation Grant

## Stormwater Mitigation at Cambridge Elementary School

## Project Summary

The project is to scope out and develop designs for two identified stormwater remediation measures, which will reduce and filter the stormwater runoff from the school buildings and parking lot that currently discharge directly into the Brewster River from an outflow pipe. Other potential stormwater remediation projects on the school grounds, ensuring a fully integrated mitigation strategy will be identified. This project provides a hands-on learning opportunity for the CES students, who will be involved in the design, construction, installation, and maintenance of the rain barrels. Two Vermont DEC water quality monitoring stations in close proximity to the project – one upstream and one downstream of the project site – offer a unique opportunity for the students to directly assess the water quality benefits resulting from these stormwater mitigation projects.

## Outputs:

- A design for a detention basin, design and construction of a bio-retention area (“raingarden”), installation of 2 rain barrels to capture and reuse roof runoff to water adjacent gardens, and interpretive signage explaining the project and how it improves water quality of the Brewster River and Lake Champlain.

## Outcomes:

- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin.
- Use education to empower the general public to reduce phosphorus contributions.
- Enhance educator and student learning about watershed issues.
- Provide local groups, schools, and municipalities financial and technical resources to implement *Opportunities for Action* in Basin communities and watersheds.
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.

**Organization:** Cambridge Conservation Commission

**Contact Person:** Jean Jenkauskas

**Mailing Address:** PO Box 127  
Jeffersonville, VT 05464

**Phone:** 802 644-5048

**E-mail:** jaheba@myfairpoint.net

**Website:** <https://www.facebook.com/cambridgeconservation/>



**NEIWPCC Code:** L-2016-016

**EPA**

**Start Date:** 2/1/2016

**Grant Amount:** \$20,154.00

**Non-federal Match:** \$ 4,844.00

**Total Amount:** \$ 24,998.00



# Technical Project

2016

## Development of an Approach and Tool to Optimize Farm Scale P Management and Achieve Watershed Scale Loading

### Project Summary

The goal of this project is to successfully demonstrate an innovative approach and tool designed to identify optimal land and nutrient management options at the farm scale that meet watershed-scale water quality metrics required to achieve the phosphorus load reductions established in the Lake Champlain Phosphorus TMDL. The current approach to meeting phosphorus reduction goals established in the total maximum daily load (TMDL) for Lake Champlain from agricultural sources includes the implementation of best management practices (BMPs). A scenario tool, developed by the US Environmental Protection Agency (EPA), has been used to assess whether or not selected BMPs could achieve in-lake water quality goals. While this approach establishes that a suite of BMPs exist that could realize the intended reduction in phosphorus loads, it has not been explicitly translated to a target phosphorus loading rate (kg/ha/year) that would support attainment and maintenance of in-lake water quality standards.

#### Outputs:

- Project advisory committee formation, web-based farm phosphorus management tool, tool user guide, final report.

#### Outcomes:

- Reduced phosphorus loading to Lake Champlain from agricultural sources

**Organization:** Stone Environmental

**Contact Person:** Michael Winchell

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Montpelier, VT 05602

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**E-mail:** mwinchell@stone-env.com

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



**NEIWPCC Code:** L-2017-051

**EPA**

**Start Date:** 6/15/2017

**Grant Amount:** \$189,945.00

**Non-federal Match:**

**Total Amount:** \$189,945.00

2016

## Technical Project

## Feasibility Evaluation of P Removal via Engineered Ecosystems in the St Albans Bay Watershed

### Project Summary

This project will analyze the regulatory feasibility of an engineered ecosystem to reduce P loading to St. Albans Bay. For many years, a top priority for lake managers and the agricultural sector has been reducing tributary P loading through the implementation of agricultural conservation practices. This work recently took on a renewed urgency due to deteriorating conditions in St. Albans Bay and the completion of the Lake Champlain Phosphorus TMDL (US EPA, 2016), which specifies P load reductions required to meet the in-lake P standard for the Bay (0.017 µg/L). The time has now arrived when innovative treatment approaches should be considered—among management options for specific, priority watersheds—to complement agricultural conservation practices and deliver more certain, near-term P reductions. Drawing off and treating a portion of the flow in Jewett Brook through a combination of engineered and biotechnical systems has the potential to significantly reduce P loading to St. Albans Bay.

#### Outputs:

- A summary report on the findings of the regulatory feasibility of an engineered ecosystem to reduce phosphorus loads to St. Albans Bay

#### Outcomes:

- An increased understanding of alternative and innovative options to reduce phosphorus loading to Lake Champlain.

**Organization:** Stone Environmental

**Contact Person:** Dave Braun

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Montpelier, VT 05602

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



**NEIWPCC Code:** L-2017-038

**EPA**

**Start Date:** 6/1/2017

**Grant Amount:** \$36,000.00

**Non-federal Match:**

**Total Amount:** \$36,000.00

# Local Implementation Grant

# 2015

## Bank Stability and Invasive Species Assessment on the Ausable River

### Project Summary

Sedimentation due to bank instability and collapse remains a primary pollutant in the Ausable River system, choking habitat, releasing nutrients and chemicals normally bound in soils, and weakening the river's capacity to manage flood flows. AsRA will undertake a resurvey of the East and West Branch of the Ausable (1) to identify areas of significant bank instability - using the bank erosion index rating methodology, and (2) to catalog infestations of non-native invasive plant species that could compromise riparian cover and bank stability and create erosion. Data will be compared to 2006 and 2009 surveys and guide implementation of bank stabilization and invasive plant removal projects.

#### Outputs:

- Updated maps of vulnerable streambanks and invasive plant species available to partners and the public and realignment as needed of stream project priorities.
- Purchase of a data collection unit.

#### Outcomes:

- Prioritization of aquatic and streambank habitat for protection
- Areas of sediment reduction
- Identified invasive species to increase spread prevention

**Organization:** Ausable River Association

**Contact Person:** Kelley Tucker

**Mailing Address:** PO Box 8, 1181 Haselton Road  
Wilmington, NY 12997

**Phone:** 518 637-6859

**E-mail:** ktucker@ausableriver.org

**Website:** <https://www.ausableriver.org/>



**NEIWPCC Code:** L-2016-031  
**GLFC**  
**Start Date:** 2/1/2016  
**Grant Amount:** \$12,520.00  
**Non-federal Match:** \$ 2,500.00  
**Total Amount:** \$15,020.00

2015

## Local Implementation Grant

## BTV Blue®: Enhanced Residential Stormwater Management Cost-Sharing Framework Development and Implementation

### Project Summary

The City of Burlington is implementing an enhanced residential cost-sharing program to install green stormwater upgrades. In order to effectively get this implementation funding on the ground, City staff and our partner Blue® will work together to identify the mechanics, details, opportunities, challenges and level of interest in a residential stormwater management program (BTV Blue®). This program would include appropriately sized cost-sharing amounts that would support the work of contractors overseen by the existing residential stormwater program BLUE® in the direct, and in many cases, targeted, implementation of a range of stormwater best management practices.

#### Outputs:

- The capture of runoff from impervious located on residential properties from as much impervious surface as possible (a minimum of 11,000 sq. ft. of impervious).
- A fully developed framework that will drive the creation and ultimate funding of a residential stormwater cost-sharing program in the years to come.

#### Outcomes:

- Reductions of non-point source phosphorus reductions from developed lands.
- Using education to empower the general public to reduce phosphorus contributions
- Addressing the development and implementation of a framework for Critical Source Area analysis
- Building awareness and understanding among residents about the Lake and providing hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.

**Organization:** City of Burlington Public Works

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Burlington, VT 05401

**Phone:** 802 540-1748

**E-mail:** jcalvi@burlingtonvt.gov

**Website:** <https://www.burlingtonvt.gov/DPW>



**NEIWPCC Code:** L-2016-015

**EPA**

**Start Date:** 2/1/2016

**Grant Amount:** \$18,220.00

**Non-federal Match:** \$18,220.00

**Total Amount:** \$36,440.00

# Local Implementation Grant

2016

## CWICNY Rain Harvesting Project

### Project Summary

The School Rain Harvester Project will capture roof runoff from a school in each of the 5 counties on the New York shore of the Lake Champlain watershed. The stormwater will be collected in large cisterns and stored to be used during drier periods. School buildings are large impervious structures that are next to large impervious parking lots. When it rains, both the building and the parking lot generate 100% runoff and place that runoff into the stormwater system in that area. The cisterns would capture some of that runoff from the school roof and use it later when it would be a greater benefit to the lawn or garden. The cistern would remove thousands of gallons of runoff throughout the year, keeping it out of the stormwater system. The cisterns will be installed at public schools or education centers allowing each local community to see the benefits of the harvesting system. Another added benefit of installing the cistern at a school is that it will be a great hands-on tool for teachers to easily incorporate into the curriculum when discussing stormwater issues.

The Rain Harvester project will address priorities in both Chapter 3 and 4 in *Opportunities for Action*, by promoting better understanding and appreciation of the Lake Champlain Basin, providing hands-on citizen action opportunities to improve the watershed, using education to empower the general public to reduce phosphorus contributions to the lake, and by directly reducing phosphorus inputs to the lake.

#### Outputs:

- 5 installed rain harvesting cisterns

#### Outcomes:

- decreased stormwater runoff to Lake Champlain
- educational opportunities for schools

**Organization:** Champlain Watershed Improvement Coalition

**Contact Person:** David Reckahn

**Mailing Address:** 394 Schroon River Road  
Warrensburg, NY 12885

**Phone:** 518-962-8225

**E-mail:** dreckahn@westelcom.com

**Website:** <https://www.cwicny.org/>



**NEIWPCC Code:** L-2017-034

**EPA**

**Start Date:** 5/10/2017

**Grant Amount:** \$16,570.00

**Non-federal Match:** \$ 2,000.00

**Total Amount:** \$18,570.00

2014

## Local Implementation Grant

## Evaluating Stormwater Pond Performance and Opportunities for Improvement: Using floating restorers to improve stormwater pond efficiency in S Burlington

### Project Summary

This project focuses on monitoring the existing efficacy of a stormwater retention pond located at Quarry Ridge Townhome Development followed by the installation of a floating restorer (a floating wetland system) designed to remove pollutants. There are two phases to the project: (1) one year of monitoring water quality inputs and outputs of the pond to establish its baseline performance related to treating stormwater runoff and (2) one year of monitoring following the design and implementation of a floating restorer that targets the pond's observed water quality issues. The floating restorer will be carefully designed to include plants that target pollutants derived from stormwater runoff over impervious surfaces, which may include but are not limited to, nitrogen, phosphorus, metals, temperature and bacteria.

#### Outputs:

- A report detailing the impacts that installation of a floating restorer has on the water quality effluent in a typical residential stormwater pond - indicating the potential for wide use of such technology in Vermont to improve stormwater effluent water quality.

#### Outcomes:

- Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake.
- Reduce contaminants that pose a risk to public health and the Lake Champlain ecosystem

**Organization:** City of South Burlington

**Contact Person:** Tom DiPietro

**Mailing Address:** 104 Landfill Road  
South Burlington, VT 05403

**Phone:** 802 658-7961

**E-mail:** [tdipietro@sburl.com](mailto:tdipietro@sburl.com)

**Website:** <http://www.sburl.com/>



**NEIWPCC Code:** L-2015-021

**GLFC**

**Start Date:** 5/1/2015

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$18,000.00

**Total Amount:** \$38,000.00



# Local Implementation Grant

# 2016

## Green Stormwater Infrastructure in the Moon and Tenney Brook Watersheds

### Project Summary

The RNRCD will hire an Engineering Consultant to complete an existing conditions base map, take soil cores and run Hydro CAD/winSLAMM models in order to develop design alternatives for GSI to be implemented at Rutland High School and Stafford Technical Center located in the Moon and Tenney Brook watersheds in Rutland City, Vermont. Implementing GSI at Rutland High School and Stafford Technical Center will help the City of Rutland be compliant with the Vermont Clean Water Act and TMDLs for both the Moon Brook and Lake Champlain. The focus will be on improving water quality by reducing and treating stormwater runoff in the Moon and Tenney Brook watersheds. This project will protect and restore fish habitat, protect streambanks, and reduce phosphorus and other urban pollutant loading and sedimentation by installing bioretention practices and enhancing vegetation for buffering runoff, leading to an overall increase in the health of the brooks.

#### Outputs:

- At least two Green Stormwater Infrastructure practices.

#### Outcomes:

- Reduction of stormwater volume and pollution in the Moon and Tenney Brook watersheds, student involvement and a demonstration of Rutland Public School's commitment to innovation.

**Organization:** Rutland NRCD

**Contact Person:** Nanci McGuire

**Mailing Address:** 170 South Main St., Ste 4  
Rutland, VT 05701

**Phone:** 802 775-8034

**E-mail:** [Nanci.mcguire@vt.nacdnet.net](mailto:Nanci.mcguire@vt.nacdnet.net)

**Website:** <https://www.vacd.org/conservation-districts/rutland/>



**NEIWPCC Code:** L-2017-020

**EPA**

**Start Date:** 4/19/2017

**Grant Amount:** \$16,875.00

**Non-federal Match:**

**Total Amount:** \$16,875.00

2016

## Local Implementation Grant

## Hazardous Soil Removal from the Boquet River Banks

## Project Summary

This is part of a larger project on the Boquet River to stabilize the riverbank where the former Georgia Pacific paper mill was located. Following plant demolition some of the construction demolition (C&D) debris was used as fill to cover foundation remnants and other material including ash cinders, roofing, smokestack tile concrete and metal. During Hurricane Irene the river overtopped its banks and eroded portions of the site exposing debris which includes brick, concrete/rebar, asbestos roofing tile, transite pipe, and smokestack tile and undermined old foundations creating a public safety concern at this unofficial public fishing site located at the base of the bedrock cascades where the river meets Lake Champlain. The project incorporates NYS DEC WQIP funding for streambank stabilization, a NYS State Smart Growth Grant for an ACA compliant handicap fishing platform and various partner contributions of time, materials (Stone), and a permanent fishing easement from the landowner (John Lease III) to create a safe recreational resource as well as a regional destination for landlocked salmon fishing.

## Outputs:

- stabilized streambank
- improved fishing access
- removal of hazardous materials from site

## Outcomes:

- reduced phosphorous pollution from eroding banks
- reduction of hazardous material deposition into the waters of Lake Champlain
- improved recreational access to the public
- support fisheries restoration efforts by improving riparian habitat and creating a sustainable local economy that enhances ecological services.

**Organization:** Town of Willsboro

**Contact Person:** Shaun Gilliland

**Mailing Address:** 5 Farrell Rd.  
Willsboro, NY 12996

**Phone:** 518 963 8668

**E-mail:** [supervisor@townofwillsborony.gov](mailto:supervisor@townofwillsborony.gov)

**Website:** <https://www.townofwillsboro.com/>



**NEIWPCC Code:** L-2017-046

**EPA**

**Start Date:** 6/1/2017

**Grant Amount:** \$ 19,662.00

**Non-federal Match:** \$163,206.00

**Total Amount:** \$182,868.00

# Local Implementation Grant

2016

## Huntington Garage Stormwater Practice Construction

### Project Summary

Under a 2015 LCBP grant, the Town worked with the Friends of the Winooski River and an engineering consultant to design a mitigation practice that would address runoff. The consulting engineer, Watershed Consulting Associates (WCA), completed a thorough analysis of the property and developed a design to mitigate the stormwater flow and pollutants to the river. This design was reviewed and modified based on input from the Town representatives. The final design was approved by the Selectboard in September. The Friends of the Winooski River (the Friends) will assist the Town as they did with the design grant. Also, the Town will use the constructed practice as an educational opportunity. The Huntington Conservation Commission (HCC) and the Friends will publish at least one article about the project in the local paper and host a site tour after the project is completed. This project will construct the practice that will, once installed, reduce sediment and phosphorus annual loads to the Huntington River by 1,057 pounds and 1.2 pounds respectively.

#### Outputs:

- completed swale
- site tour

#### Outcomes:

- reduced phosphorus and sediment loading to Lake Champlain via the Huntington River
- educational opportunities for school and community

**Organization:** Town of Huntington

**Contact Person:** Barbara Elliott

**Mailing Address:** 4930 Huntington Road  
Huntington VT 05462

**Phone:** (802) 434-2032

**E-mail:** townhunt@accessvt.com

**Website:** <http://huntingtonvt.org/>



**NEIWPCC Code:** L-2017-019

**EPA**

**Start Date:** 4/10/2017

**Grant Amount:** \$18,098.00

**Non-federal Match:** \$ 4,300.00

**Total Amount:** \$22,398.00

2015

## Local Implementation Grant

## Nesti Swale Phosphorus Pollution Mitigation Project

## Project Summary

This project develops a variety of natural stream channel methods which will infiltrate flow into the porous sand of the headland while still maintaining adequate flow to support fish and macroinvertebrates in the stream. In 2010 a concerned landowner had photo documented significant shoreline erosion and stormwater pollution in Shelburne Bay. In 2012 the State of Vermont Ecosystem Restoration Program provided funds to examine options for addressing the problem. In 2014 a contractor completed final plans for a constructed gravel wetland to be located on land owned by Vermont Electric Company (VELCO) at 123 Nesti Drive in South Burlington. In addition, the contractor proposed a restoration and stabilization of the eroded bay headland.

## Outputs:

- Development of plans for natural channel stream bank erosion practices.

## Outcomes:

- Reduction of the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin.
- Streambank stabilization
- Sediment and phosphorus load reduction to Shelburne Bay.

**Organization:** Town of Shelburne

**Contact Person:** Chris Robinson

**Mailing Address:** PO Box 88, 5420 Shelburne Road  
Shelburne, VT 05482

**Phone:** 802 985-3700

**E-mail:** [crobinson@shelburnevt.org](mailto:crobinson@shelburnevt.org)

**Website:** <http://www.shelburnevt.org/>



**NEIWPCC Code:** L-2016-025

**EPA**

**Start Date:** 3/1/2015

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$44,345.00

**Total Amount:** \$64,345.00

# Local Implementation Grant

# 2015

## Phosphorus Loading in the Flower Brook Subwatershed

### Project Summary

The goal of this project is to collect phosphorus-loading data for a target watershed that is the currently the focus of Stormwater Master Planning and has been the focus of ongoing water quality monitoring. The District will collect comprehensive phosphorus data for one year to help determine the flow conditions that carry the highest phosphorus loads and facilitate the identification of projects that alleviate the greatest amount of phosphorus draining to Lake Champlain. A landscape and ecosystem survey and mapping assessment will be completed in tandem with the nutrient monitoring to help identify conservation and restoration projects to mitigate or attenuate phosphorus sources and conserve or enhance phosphorus sinks. In addition, previously-identified projects that meet phosphorus reducing criteria will be implemented.

#### Outputs:

- A landscape and ecosystem survey and mapping assessment
- nutrient monitoring
- implementation of phosphorus reducing projects
- Critical source area analysis
- Develop list of high-priority habitats in need of protection.
- Complete an ecosystem assessment of a sub-watershed in the Lake Champlain Basin.

#### Outcomes:

- Increase resident awareness about local resources and behaviors that contribute to pollution.
- Hands-on citizen action
- Reduce agricultural phosphorus loads
- Reduce phosphorus loads from developed lands
- Protect and restore forests, wetlands, floodplains, and stream corridors to maximize phosphorus storage.
- Empower the public through education.
- Changes due to climate
- Enhance and conserve riparian and wetland habitat.
- Focus on landuse changes; effects of Stormwater runoff on water quality.
- Promote sustainable agricultural practices.

**Organization:** Poultney Mettowee NRCD

**Contact Person:** Hilary Solomon

**Mailing Address:** PO Box 209, Poultney, VT 05764

**Phone:** 802 287-8339

**E-mail:** pmnrcd@gmail.com

**Website:** <http://www.pmnrcd.org/>



**NEIWPCC Code:** L-2016-017

**GLFC**

**Start Date:** 2/1/2016

**Grant Amount:** \$20,001.00

**Non-federal Match:** \$ 4,127.00

**Total Amount:** \$24,128.00

2016

## Local Implementation Grant

## Protecting and Restoring Floodplain Forests for Wildlife and Recreation

## Project Summary

This is a multifaceted community floodplain forest conservation and enhancement project at three sites in the Lake Champlain Basin. Projects and goals include:

**Fuller (New Haven River, Bristol, VT):** The eradication of Japanese knotweed, the coordination of a community conservation planning process, and the restoration of wildlife habitat through riparian plantings on a 15 acre floodplain forest.

**Morrisville Oxbow Park (Lamoille River, Morrisville, VT):** The restoration of a riparian buffer providing important wildlife habitat and public river access, and the engagement of local community members and students in habitat and erosion prevention projects.

**Richford River Access (Missisquoi River, Richford, VT)** The development of a small riverside nature preserve for use by paddlers and anglers, the restoration of wildlife habitat through riparian plantings, and the development of a river access trail.

## Outputs:

- restoration of riparian buffer
- paddler access to Lamoille river
- removal of Japanese knotweed

## Outcomes:

- improve riparian and wetland habitats
- conserve wildlife corridor
- restore native plants and habitat
- provide hands-on citizen action opportunities

**Organization:** Vermont River Conservancy

**Contact Person:** Noah Pollock

**Mailing Address:** 29 Main St., Suite 11  
Montpelier, VT 05602

**Phone:** 802-229-0820

**E-mail:** [noah@vermontriverconservancy.org](mailto:noah@vermontriverconservancy.org)

**Website:** <http://www.vermontriverconservancy.org/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-043

**EPA**

**Start Date** 5/25/2017

**Grant Amount:** \$12,087.00

**Non-federal Match:** \$ 7,748.00

**Total Amount:** \$19,835.00



# Local Implementation Grant

2016

## Protecting Northern Lake Champlain through Farmer-to-Farmer Implementation of Agricultural Practices

### Project Summary

The Farmers Watershed Alliance (FWA) is a farmer driven non-profit organization focused on implementing water quality improvement practices on dairy farms in Franklin and Grand Isle Counties. In 2016, with the Pollution Prevention Grant from LCBP, the FWA installed three grassed waterways. This practice has proven to be integral to reducing soil and nutrient erosion from agricultural land, especially in heavily sloped critical source areas. FWA has observed that even those farms implementing optimal conservation practices (reduced tillage, cover crops, crop rotation, etc.) may still have significant erosion issues.

Grassed waterways are constructed graded channels that are seeded to grass. The principal of a grassed waterway is simple—plant a vegetative strip in an area of a field to slow the movement of water across the surface of the field to prevent the erosion of soil. In some situations, the cropping of the grassed waterway can provide feed from previously unproductive land. Also, in addition to benefitting aquatic habitats through reduced soil erosion and improved water quality, grassed waterways may also be utilized as habitat for feeding, nesting, and resting wildlife as well as travel corridors for animals to move safely between habitats.

FWA's goal is to draw attention to this conservation practice by quickly implementing grassed waterways on three key farms in its area and then utilize farmer peer networks to demonstrate the effectiveness of this practice, educate farmers and service providers about its use, and motivate farmers to adopt grassed waterways on their farms by encouraging enrollment in existing NRCS programs.

#### Outputs:

- 3 on-farm grassed waterway installations
- educational articles published in local newspapers

#### Outcomes:

- Decreased nutrient pollution to Lake Champlain
- education for farmers, and enrollment in existing NRCS programs

**Organization:** Farmer's Watershed Alliance

**Contact Person:** Darlene Reynolds

**Mailing Address:** PO Box 298  
St. Albans, VT 05478

**Phone:** 802-752-5156

**E-mail:** farmerswatershedallianceNW@gmail.com

**Website:** <http://farmerswatershedalliance.org/>



**NEIWPCC Code:** L-2017-032

**EPA**

**Start Date:** 4/21/2017

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 3,300.00

**Total Amount:** \$23,300.00

2016

## Local Implementation Grant

## Reducing Phosphorus Loading and Improving Fish Habitat and Connectivity within Texas Hill Tributary Huntington, VT

### Project Summary

The WNRCD with partner organizations will undertake the replacement of three culverts on Texas Hill Tributary in Huntington, VT that fail during storm events causing substantial washouts, adding phosphorus and sediment to the stream.

#### Outputs:

- Replacing the failing culverts with a bridge will open up 3 miles of Brook Trout habitat and allow access to 10.78 acres of wetlands and reduce 20-28 cubic yards of sediment loading a year and an estimated 0.0139 to 0.0195 metric tons of phosphorus that enters the stream during every washout.

#### Outcomes:

- Culvert replacements will reduce nutrient loading to Lake Champlain and open up additional habitat for aquatic organisms, namely brook trout.

**Organization:** Winooski NRCD

**Contact Person:** Corrina Parnapy

**Mailing Address:** 617 Comstock Rd, Suite 1  
Berlin, VT 05602

**Phone:** (802) 778-3178

**E-mail:** [corrina@winooskinrkd.org](mailto:corrina@winooskinrkd.org)

**Website:** <http://winooskinrkd.org/>



**NEIWPCC Code:** L-2017-028

**EPA**

**Start Date** 4/24/2017

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 5,000.00

**Total Amount:** \$25,000.00

# Local Implementation Grant

# 2016

## Shelburne Community School Stormwater Retention

### Project Summary

Lewis Creek Association will finish the construction design plans and implementation of a rain garden on the Shelburne Community School campus in Shelburne, Vermont. The Town of Shelburne is stormwater impaired; this project will implement a bioretention area on campus that will both physically mitigate stormwater and act as a demonstration site for the citizens and municipalities of Shelburne. This project is one of fourteen "Ahead of the Storm" optimal flood resiliency and pollution prevention practices to be displayed at strategic locations throughout the LaPlatte watershed region. The outputs of this award are a completed engineered design, the construction of the "Ahead of the Storm" bioretention area in the entrance island on campus, photos and reports. The anticipated outcomes are: a high public visibility rain garden that will reduce pollutant inputs into nutrient impaired McCabe's Brook and Shelburne Bay, and increased student and community understanding of how and where to address non-point stormwater related pollution such as phosphorus in the LaPlatte River watershed.

#### Outputs:

- Education and outreach to four Shelburne Community School classrooms about stormwater runoff prevention, selection of a contractor and site plans for a raingarden, implementation of the raingarden at the Shelburne Community School.

#### Outcomes:

- Reduction of stormwater runoff in the Lake Champlain Basin and education and outreach about nonpoint nutrient reduction.

**Organization:** Lewis Creek Association

**Contact Person:** Krista Hoffis

**Mailing Address:** 442 Lewis Creek Road  
Charlotte, VT 05445

**Phone:** 513-470-7554

**E-mail:** kristahoffis@yahoo.com

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** L-2017-045

**EPA**

**Start Date:** 5/10/2017

**Grant Amount:** \$19,255.00

**Non-federal Match:** \$ 6,046.00

**Total Amount:** \$25,301.00

2016

## Local Implementation Grant

## Smilie School Stormwater Mitigation Project

## Project Summary

The Smilie School property occupies a 3+ acre site on the bank of Joiner Brook, just upstream of its confluence with the Winooski River. The school property generates runoff that enters a small stormwater system discharging to a swale that conveys the run-off to the brook. There is also direct overland flow across a river access driveway that extends to the stream. In 2016, using funds provided by the LCBP, a stormwater master plan was created for the school, along with complete construction designs for four stormwater mitigation practices. This proposal requests funding to implement the construction of three of those designs and to engage students in the process. The three practices, chosen by a team of school staff and community members from the stormwater master plan recommendations, include a rain garden at the entrance to the school, a stormwater bio-retention area, and renovation of the river access road to limit vehicular traffic, reduce compaction, and encourage infiltration. Implementation of these practices is expected to reduce stormwater runoff volume and associated pollutants, and improve the water quality of Joiner Brook.

## Outputs:

- Implementation of three stormwater reduction projects at the Smilie School and engagement of students in the process.
  - (1) Rain Garden
  - (2) Stormwater bio-retention area
  - (3) River access pond renovation

## Outcomes:

- Reduction of nutrient loading to the Lake Champlain watershed from stormwater run-off.

**Organization:** Friends of the Winooski River

**Contact Person:** Shawn White

**Mailing Address:** P.O. Box 777  
Winooski, VT

**Phone:** 802-882-8276

**E-mail:** shawn@winooskiriver.org

**Website:** <https://winooskiriver.org/>



**NEIWPCC Code:** L-2017-024

**EPA**

**Start Date** 4/18/2017

**Grant Amount:** \$18,740.00

**Non-federal Match:** \$ 1,926.00

**Total Amount:** \$20,666.00

# Local Implementation Grant

2015

## St Albans City Stormwater Reduction and Treatment

### Project Summary

The Friends of Northern Lake Champlain is proposing to install up to 4 rain gardens in St. Albans City. The grant will pay for the siting, design, and installation of up to 4 rain gardens with a qualitative analysis of up to 4 different entrance design alternatives that could include: waterbar, curb cuts, curb cuts with indentations, and pavement milling to direct water. Site selection would be based on 2 criteria: Amount of water that is treated (i.e. maximizing the amount of acres of runoff treated in the various locations) and landowner willingness to host a rain garden in their front yard and the ability to help with maintenance.

#### Outputs:

- Construction site plans, rain garden construction and installation, community tour of rain gardens

#### Outcomes:

- Reduction in nonpoint source phosphorous and pollutant loads entering stormwater and natural waterways.

**Organization:** Friends of Northern Lake Champlain

**Contact Person:** Kent Henderson

**Mailing Address:** PO Box 58, Swanton, VT 05488

**Phone:** 802 373-1998

**E-mail:** hugamoo@comcast.net

**Website:** <http://www.northernlakechamplain.org/>



**NEIWPCC Code:** L-2016-023

**EPA**

**Start Date:** 1/15/2016

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 34,553.00

**Total Amount:** \$54,553.00

2016

## Local Implementation Grant

## Stormwater Pond Floating Treatment Wetland -Season III

## Project Summary

In 2015, the City of South Burlington received a grant from LCBP (Project code: L-2015-021) to evaluate the performance of floating treatment wetlands in a stormwater pond collecting runoff from a residential development in the Centennial Brook Watershed. For that project, the influent and effluent pollutant mass loading of the pond were monitored for a growth season prior to any pond modifications. The City then designed, built, and installed eight small floating mats with vegetation to cover about 25% of the surface area of the pond (following performance indications from scientific literature on the topic). After floating treatment wetland (FTW) installation, influent and effluent water quality was monitored for an additional season. The goal of that project was to identify the influence of floating treatment wetlands on stormwater pond water quality improvement performance. An unusually dry summer in 2016 left a limited number of storms to evaluate. After reviewing and analyzing the data, it is clear that in order to make any statement about the FTWs influence (or lack thereof) on pond performance, more data is needed. The goal of this project is to continue sampling, testing, and managing the pond site for a third year culminating in a dataset that will allow a statement on FTW performance in cold climate stormwater ponds.

## Outputs:

- A report detailing the impacts that installation of a floating restorer has on the water quality effluent in a typical residential stormwater pond - indicating the potential for wide use of such technology in Vermont to improve stormwater effluent water quality.

## Outcomes:

- reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake.
- reduce contaminants that pose a risk to public health and the Lake Champlain ecosystem.

**Organization:** City of South Burlington

**Contact Person:** Tom DiPietro

**Mailing Address:** 104 Landfill Road  
South Burlington, VT 05403

**Phone:** 802-658-7961

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**Website:** <http://www.sburl.com/>



**NEIWPCC Code:** L-2017-027

**EPA**

**Start Date** 4/10/2017

**Grant Amount:** \$6,110.00

**Non-federal Match:**

**Total Amount:** \$6,110.00



# Local Implementation Grant

2016

## Using Microbial Source Tracking to Identify and Prevent Fecal Pollution to Cumberland Bay

### Project Summary

The City of Plattsburgh Environmental Services Department seeks to protect the health and safety of the public and the environment, while maximizing the recreational potential that Lake Champlain offers to the region. In 2015, closures of public bathing beaches in the region due to high levels of fecal indicating bacteria (FIB) spurred the implementation of a science based approach to monitoring the water quality of Lake Champlain with the ultimate goal of locating and mitigating sources of bacteria within the contributing watersheds (Saranac River, Scammon Creek). The study was narrowed in 2016 by identifying the spatial and temporal aspects of the FIB observed in Cumberland Bay.

The goal of this project is to confirm the suspected source(s) of bacteria in conjunction with environmental conditions during times of elevated FIB in Cumberland Bay. Specialized laboratories have the capability of analyzing molecular DNA of indicator bacteria (bacteroidetes) in water samples through quantitative polymerase chain reaction (qPCR) methods. The results of these analyses may allow identification of bacteria sources by isolating specific DNA signatures in fecal waste from human, cattle, canine, or bird origins.

#### Outputs:

- report documenting water sampling procedures, environmental conditions, bacterial DNA results, source identification, and mitigation options.

#### Outcomes:

- reduced fecal bacteria to Cumberland Bay resulting in fewer beach closures and the increased potential for recreation opportunities.

**Organization:** City of Plattsburgh

**Contact Person:** Jonathan P. Ruff

**Mailing Address:** 41 City Hall Place  
Plattsburgh, NY 12901

**Phone:** 518-536-7519

**E-mail:** [ruffj@cityofplattsburgh-ny.gov](mailto:ruffj@cityofplattsburgh-ny.gov)

**Website:** <http://www.cityofplattsburgh.com/>



**NEIWPCC Code:** L-2017-013

**EPA**

**Start Date:** 4/10/2017

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$12,100.00

**Total Amount:** \$32,100.00

# Local Implementation Grant

# 2016

## UVM Votey Building Bioretention Garden

### Project Summary

The UVM Engineers without Borders student chapter is focused on the reconstruction of a bioretention garden installed over nine years ago between the Votey Building Parking Lot and Colchester Avenue. While originally designed to treat and infiltrate runoff from two campus parking lots and a total area of 1.98 acres, improper maintenance and changes to the region's paving over the years has caused the garden to no longer be performing as planned. In order to revive and improve the bioretention garden's functionality, the UVM EWB team will be removing debris, replacing media, replanting stronger and more effective grasses, and redesigning the current treatment swale. Reconstruction of the bioretention garden would treat contaminated runoff from campus parking lots, reducing the impact of runoff on Burlington's current storm-water infrastructure. Additionally, the project provides an excellent educational opportunity for students at UVM concentrating in environmental and engineering related majors.

#### Outputs:

- restore 1,800 square feet of bioretention garden, which will help treat and infiltrate urban runoff from 1.98 acres of land.

#### Outcomes:

- decreased stormwater runoff to Lake Champlain, educational opportunities for UVM students.

**Organization:** Engineers without Borders  
UVM Student Chapter

**Contact Person:** Gabrielle Mountain

**Mailing Address:** 1031 33rd Street, Suite 210  
Denver, CO 80205

**Phone:** 617-335-2100

**E-mail:** gmountai@uvm.edu

**Website:** <https://www.uvm.edu/~ewb/>



**NEIWPCC Code:** PO 12475

**EPA**

**Start Date:** 4/13/2017

**Grant Amount:** \$1,281.00

**Non-federal Match:** \$ 300.00

**Total Amount:** \$1,518.00

# Local Implementation Grant

# 2016

## Warren County 2017 Habitat Improvement Project

### Project Summary

Three areas have been designated for habitat improvements for this grant project: English Brook in the Town of Lake George, West Brook in the Village of Lake George and the Halfway Brook Watershed in the Town of Queensbury. In 2016 the District completed a pair of NYSDEC sponsored projects within the Lake Champlain Watershed designed to improve or repair damage to stream channels. After discussions with Trout Unlimited (TU) and representatives of the U.S. Fish and Wildlife Service (USFWS), it was suggested that further efforts be made to return the affected stream channels to a more natural condition. A number of locations in the Queensbury's Halfway Brook Watershed were selected to enhance wildlife habitat and complete erosion control plantings.

The stated goal of the Lake Champlain Basin Program's *Opportunities for Action*, Chapter 6, is "Maintain resilient and diverse communities of fish, wildlife, and plants in the Lake Champlain Basin," specifically by restoring native plants and high priority habitats and promoting stream bank restoration. This proposed project will enhance the native fisheries in English Brook, West Brook and in the Halfway Brook Watershed of these waterways. The scheduled work funded by this grant will lead to (1) improved native brook trout habitat with over 1,000 feet of augmented recreational fishing and (2) the stabilization of streambanks and ponds to reduce erosion and sediment contributions to these waters. The projected work in West Brook alone will result in an increase of natural habitat, and a return of over 500 feet of possible spawning area for smelt, trout and possibly landlocked salmon.

#### Outputs:

- 1000 feet of restored streambank

#### Outcomes:

- increased recreational fishing, increased spawning habitat, and decreased erosion and sediment pollution to Lake Champlain.

**Organization:** Warren County SWCD

**Contact Person:** Robert Bombard

**Mailing Address:** 394 Schroon River Road  
Warrensburg, NY 12885

**Phone:** 518-623-3119

**E-mail:** rbombard123@nycap.rr.com

**Website:** <https://www.warrenswcd.org/>



**NEIWPCC Code:** L-2017-033

**EPA**

**Start Date:** 5/10/2017

**Grant Amount:** \$14,840.00

**Non-federal Match:** \$ 1,500.00

**Total Amount:** \$16,340.00

2014

# Technical Projects

## Agricultural Practice Monitoring and Evaluation in the Vermont Portion of the Lake Champlain Basin

### Project Summary

Vermont farmers have shown strong and lasting interest in implementing agricultural conservation practices such as conservation tillage, manure and nutrient management, and cover crops. Although producers often attribute significant agronomic and water quality benefits to these management practices, reductions in nutrient and sediment losses from agricultural land due to practice implementation are not well documented. Few studies have been completed at sites with similar climate and landscape settings to those in Vermont. In addition, many of the reported studies were conducted at the plot-scale and with simulated rainfall; such results may not apply directly to the field or watershed scales.

USDA-NRCS, the Vermont Agency of Agriculture (VTAAFM), the Vermont Department of Environmental Conservation (VTDEC), and the Lake Champlain Basin Program (LCBP) are currently cooperating to evaluate the effects of several agricultural conservation practices on runoff water quality. These organizations initiated a program in 2012 to monitor field runoff at fourteen stations located on six farms in the Vermont portion of the Lake Champlain Basin. Monitoring facilities and procedures were designed in accordance with the USDA-NRCS Interim Conservation Practice Standard 799 – Monitoring and Evaluation. The monitoring facilities and procedures are described in a Quality Assurance Project Plan (Stone Environmental, 2013), approved by the New England Interstate Water Pollution Control Commission.

#### Outputs:

Stone Environmental is under contract with the Vermont Agency of Agriculture to complete the fieldwork, data management and analyses, and reporting for this study. The agricultural practices being evaluated include:

- Soil aeration on hayland (VT NRCS Practice Standard 633) prior to manure application.
- Reduced tillage (VT NRCS Practice Standard 329) with manure injection and cover cropping on corn land
- Cover cropping (VT NRCS Practice Standard 340) on corn land.
- A water and sediment control basin (WASCoB) (VT NRCS Practice Standard 638) treating runoff from corn land.
- A grassed waterway (VT NRCS Practice Standard 412) treating runoff from agricultural fields.

**Organization:** Stone Environmental, Inc

**Contact Person:** David Braun

**Mailing Address:** 535 Stone Cutters Way  
Montpelier, VT 05602

**Phone:** 802 229-5379

**E-mail:** [dbraun@stone-env.com](mailto:dbraun@stone-env.com)

**Website:** <http://www.stone-env.com/>

#### Outcomes:

- The results of this study will inform pre-strategies and policies for conservation practices in the Lake Champlain Basin.



**NEIWPCC Code:** L-2014-062  
**GLFC**  
**Start Date:** 7/1/2014  
**Grant Amount:** \$120,000.00  
**Non-federal Match:**  
**Total Amount:** \$120,000.00

# Technical Project

2015

## Assessment of Tile Drainage System Impacts to Lake Champlain and Phosphorus Loads in Tile Drainage Water in the Jewett Brook Watershed of St. Albans Bay

### Project Summary

The project team of Stone Environmental, Inc. and Friends of Northern Lake Champlain is working in close consultation with the Lake Champlain Basin Program (LCBP) to review published research documenting phosphorus (P) loading impacts of tile drainage systems that can be related to conditions commonly found in the Lake Champlain Basin (LCB), monitor representative tile drainage systems in the Jewett Brook watershed, estimate P loading to Jewett Brook from these tile systems, and to assess the significance of this loading to the overall P export from the Jewett Brook watershed and similar areas of the LCB.

#### Outputs:

- Deliver a summary report based on peer-reviewed, published literature and other quality resources documenting reported contributions of agricultural tile drainage to phosphorus loading to surface waters, and relating these impacts to the LCB;
- Monitor representative tile outlets for discharge (continuous) and P concentrations in the JBW, provide a GIS layer of the selected tile drainage systems based on best available information, as well as information more broadly on the extent and type of tiles systems in the JBW; and
- Generate an estimate of annual P loading from these tile systems and deliver a report describing nutrient loading to Jewett Brook from tile drainage systems in this sub-watershed of St. Albans Bay.

#### Outcomes:

- Enhance the knowledge of tile drainage effects on water quality and soil health within the LCB.
- Inform strategies and policies to reduce P loading from tile-drained agricultural lands.

**Organization:** Stone Environmental, Inc

**Contact Person:** David Braun

**Mailing Address:** 535 Stone Cutters Way  
Montpelier, VT 05602

**Phone:** 802 229-5379

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**Website:** <http://www.stone-env.com/>



**NEIWPCC Code:** L-2016-060

**EPA/GLFC**

**Start Date:** 6/1/2016

**Grant Amount:** \$100,000./\$100,000.

**Non-federal Match:** \$ 12,900.00

**Total Amount:** \$212,900.00

2016

## Technical Project

## Garrant Farm Soil Health Tests

## Project Summary

The Garrant Farm is located on Corbeau Creek just a short distance from Lake Champlain. The owners transitioned to certified Organic production about three years ago and have been very proactive in implementing BMPs to protect the environment on their farm. As part of their Organic plan, the Garrant Farm plans to upgrade their soil testing protocol to the Cornell Soil Health Assessment and conduct a Soil Health Assessment test on the entire farm.

## Outputs:

- a Soil Health Assessment test on the entire farm to get a baseline of soil health parameters across all acres. Twenty-two crop fields have been identified that need testing.

## Outcomes:

- Knowledge of soil health and fertility will allow the farm to make better nutrient management decisions, reduce application of excess nutrients and thus reduce the potential for ag non-point pollution into Lake Champlain.

**Organization:** Clinton County SWCD

**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](mailto:peter.hagar@ccsoil-water.com)

**Website:** <http://clintoncountyswcd.org/>



**NEIWPCC Code:** PO 12351

**EPA**

**Start Date:** 8/3/2017

**Grant Amount:** \$1,500.00

**Non-federal Match:**

**Total Amount:** \$1,500.00

# Technical Project

2016

## High Resolution Land Use/Land Cover Mapping for the Lake Champlain Basin

### Project Summary

This project will yield the most detailed and accurate land-cover dataset ever produced for the United States portion of the Lake Champlain Basin (LCB). State, regional, and federal organizations have recently made large investments in high-resolution imagery and LiDAR for the LCB, and this project will harness these data to map land cover that is 900 times more detailed than any existing land-cover dataset. Land cover will be mapped using advanced object-based image analysis techniques using high-performance computing. A detailed accuracy assessment and stakeholder review will be performed to ensure data quality and consistency. All products will be documented with compliant metadata and the approach summarized in a final report.

#### Outputs:

- This project will yield two principal output datasets. The first is a 1-meter resolution land-cover dataset. The second is a 10-meter land cover layer in which the 1-meter classes have been aggregated to the National Land Cover Database (NCLD) classification schema.
- These related and complementary products will ensure that all stakeholders in the LCB have the land-cover data they need to assess landscape status and process, from conservation managers seeking to evaluate riparian buffers to researchers modeling nonpoint source pollution.

#### Outcomes:

- These land-cover products will be immediately useful to the Lake Champlain Basin Program and its collaborators and will serve as crucial input data for efforts seeking to address the issues raised in the Lake Champlain *Opportunities for Action* management plan.

**Organization:** UVM Spatial Analysis Lab

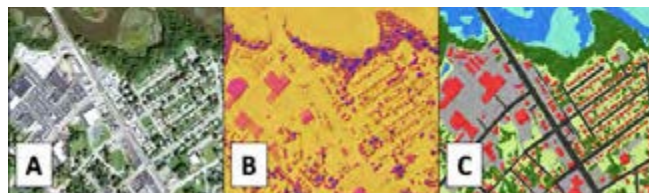
**Contact Person:** Jarlath O'Neil-Dunne

**Mailing Address:** Aiken Center, Room 205  
81 Carrigan Drive  
Burlington, VT 05405

**Phone:** (802) 656-3324

**E-mail:** joneildu@uvm.edu

**Website:** <https://www.uvm.edu/rsenr/sal/>



*Subset of the 1-meter high-resolution land-cover map the SAL produced for the Chesapeake Bay Watershed in Delaware. This work combined orthoimagery (A) and LiDAR (B) to produce a 12-class land cover dataset (C).*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-036

**EPA**

**Start Date:** 4/11/2017

**Grant Amount:** \$150,000.00

**Non-federal Match:**

**Total Amount:** \$150,000.00



2015

## Technical Project

## Human and Ecosystem Health Risks of Mercury and Cyanotoxins in Lake Champlain

### Project Summary

DFWI will collect water samples, and conduct data analyses for mercury and cyanotoxins in Lake Champlain. The collection of fish samples for mercury and cyanotoxin analyses will be the primary responsibility of Lake Champlain International (LCI). Cyanotoxin analyses will be conducted by Dr. Greg Boyer at SUNY College of Environmental Science and Forestry (SUNY ESF) with mercury analyses being conducted by Dr. Richard Bopp at Rensselaer Polytechnic Institute (RPI).

DFWI will work with partners to develop a threat assessment for mercury and cyanotoxin in Lake Champlain. Water samples will be collected every 2 weeks from three locations in Missisquoi Bay and three locations in the Main Lake segment of Lake Champlain beginning in early May and continuing through mid-September. Collection of five target fish species (lake trout, walleye, smallmouth bass, yellow perch and white perch) for mercury analyses from each of the 7 segments (South Lake, South Main Lake, Middle Main Lake, North Main Lake, Malletts Bay, Northeast Arm and Missisquoi Bay) will be conducted throughout this time period by LCI anglers with the primary collection expected during the LCI Father's Day Fishing Derby.

#### Outputs:

- Water quality and seven fish species tissue data analysis for mercury and cyanotoxins from Lake Champlain designated sites.
- Quarterly and final reports will be submitted to the LCBP with 2 peer-reviewed publications anticipated within the year.

#### Outcomes:

- Produce a comprehensive threat assessment of mercury and cyanotoxin to Lake Champlain.

**Organization:** RPI/Darrin Fresh Water Institute

**Contact Person:** Sandra Nierzwicki-Bauer

**Mailing Address:** 5060 Lake Shore Drive  
Bolton Landing, NY 12814

**Phone:** 518 644-3541

**E-mail:** nierzs@rpi.edu

**Website:** <https://www.rpi.edu/dept/DFWI/>



**NEIWPCC Code:** L-2016-058

**GLFC**

**Start Date:** 5/15/2016

**Grant Amount:** \$56,578.00

**Non-federal Match:** \$26,198.00

**Total Amount:** \$82,776.00

# Technical Projects

2014

## Little Chazy Tributary Gage

### Project Summary

The primary purpose for this work is to provide river discharge data from the Little Chazy River for resource managers to calculate nutrient loading rates into Lake Champlain from this tributary. The USGS will operate the Little Chazy River streamgage (Station # 04271815), publish the information on-line in near real-time, and make the data available for download. Further information regarding Intended Uses of Data can be found in the relevant section of the QAPP.

#### Outputs:

- Real-time accurate discharge data for the Chazy River that will be publicly available on the USGS website.

#### Outcomes:

- This discharge data will inform estimates of phosphorus loading to Lake Champlain.

**Organization:** USGS

**Contact Person:** Gerard Butch

**Mailing Address:**

**Phone:** 518 285-5673

**E-mail:** [gkbutch@usgs.gov](mailto:gkbutch@usgs.gov)

**Website:** <https://www.usgs.gov/>



**NEIWPCC Code:** L-2015-063

**GLFC**

**Start Date:** 10/1/2015

**Grant Amount:** \$49,950.00

**Non-federal Match:**

**Total Amount:** \$49,950.00

2013

# Technical Projects

## Multi-Partner Agricultural Conservation Practice Tracking and Planning Database

### Project Summary

This project creates a geospatial database that enables end users from multiple organizations to track and plan the implementation of agricultural conservation practices, also known as agricultural best management practices (BMPs), which are used to improve the water quality leaving agricultural land. The organizations involved include the Vermont Agency of Agriculture, Food and Markets (VAAFM); the Vermont Department of Environmental Conservation (VT DEC); the United States Department of Agriculture Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA); the United States Fish and Wildlife Service (USFWS); the Vermont Association of Conservation Districts (VACD); the University of Vermont Extension Service (UVM Ext.); and the Lake Champlain Basin Program (LCBP).

#### Outputs:

- pilot project involving initial database development, configuration and installation of the database, as well as end-user training.

#### Outcomes:

- The database will improve coordination, collaboration and common reporting among the Partners for BMP implementation activity on farms, allowing for the State of Vermont to more accurately assess past activity, more efficiently deliver technical assistance to farms, and more wisely set future BMP implementation goals.

**Organization:** Vermont Agency of Agriculture

**Contact Person:** Michael Middleman

**Mailing Address:** 116 State Street  
Montpelier, VT 05620

**Phone:** 802 828-5362

**E-mail:** michael.middleman@state.vt.us

**Website:** <http://agriculture.vermont.gov/>



**NEIWPCC Code:** L-2014-066

**GLFC**

**Start Date:** 4/20/2014

**Grant Amount:** \$48,800.00

**Non-federal Match:**

**Total Amount:** \$48,800.00

# Technical Project

2016

## North Country Creamery Grazing Improvement Project

### Project Summary

This project will assist this farm in expanding and improving their existing rotational grazing program. It will allow them to increase the production of the forages through better pasture management of nutrient distribution from the animals themselves, and to share what has been implemented and learned through this project with an outreach event.

#### Outputs:

- upgraded fencing to improve and expand the existing rotational grazing program. Specifically, this funding would finance the purchase of additional grazing supplies to expand the rotational grazing program
- supplies and administrative costs to host a grazing workshop open to regional farmers.

#### Outcomes:

- continue to serve the community as a model of productive, healthy, and sustainable farming practices

**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/>



**NEIWPCC Code:** PO 12365

**EPA**

**Start Date:** 8/24/2017

**Grant Amount:** \$3,025.00

**Non-federal Match:**

**Total Amount:** \$3,025.00

2016

## Technical Project

## North Country School Grazing Improvement Project

## Project Summary

This project will assist this farm in expanding and improving their existing rotational grazing program. It will allow them to increase the land available for grazing through more fencing, improve pasture forages through seeding with a better pasture forage mixture, and to share what has been implemented and learned through this project with an outreach event.

## Outputs:

- perennial seed mixes for the enhancement of pasture fertilization and health
- purchase of additional grazing supplies to expand the rotational grazing program
- supplies and administrative costs to host a grazing workshop open to regional farmers.

## Outcomes:

- serve the community as a model of productive, healthy, and sustainable farming practices

**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/>



**NEIWPCC Code:** PO 12364

**EPA**

**Start Date:** 8/24/2017

**Grant Amount:** \$3,788.00

**Non-federal Match:**

**Total Amount:** \$3,788.00

# Technical Project

2016

## Operation and Maintenance of Lake Champlain Meteorological Stations

### Project Summary

This funding will be used to maintain and operate three Lake Champlain meteorological stations - Colchester Reef (CR), Diamond Island (DI) and Burton Island (BI) for the period October, 15, 2017 to December 31, 2018. These stations have been operating and producing high quality, near real-time meteorological data for nearly two decades. Meteorological stations at Colchester Reef, Diamond Island and Burton Island will be maintained by staff at the University of Vermont, Rubenstein School of Environment and Natural Resources. This will include all instrument recalibrations or replacement as needed and/or maintenance, and overall site maintenance.

#### Outputs:

- Equipment and sensor maintenance and calibration will be conducted in accordance with manufacturer recommendations. Communications and solar-recharged battery power will be maintained (barring events during winter months when access to the stations may not be possible). Automated failure reporting systems will be maintained by the FEMC.
- Long-term data collection at Colchester Reef, Diamond Island and Burton Island will continue, capturing air temperature, relative humidity, barometric pressure, wind speed, wind direction, total radiation and water temperature, stored as 15-minute averages.
- Data will be retrieved hourly and made immediately accessible through the FEMC website (<https://www.uvm.edu/femc/data/live>) and to NWS for ingest into their systems (<http://www.weather.gov/btv/recreation>). Data will undergo daily automated QA/QC procedures provided by FEMC to remove errant values outside expected ranges. These inspected data will be archived in the FEMC database and made publicly available at no charge through the FEMC website or by special request to the FEMC data management staff. Real-time data visualizations will also be maintained via the FEMC website.

#### Outcomes:

- Production of high quality, near real-time meteorological data collection to inform management decisions.

**Organization:** UVM - Rubenstein School of Environment and Natural Resources

**Contact Person:** Jennifer Pontius

**Mailing Address:** 217 Wateman Building  
85 South Prospect Street  
Burlington, VT 05405-0160

**Phone:** (802) 656-3091

**E-mail:** [Jennifer.Pontius@uvm.edu](mailto:Jennifer.Pontius@uvm.edu)

**Website:** <https://www.uvm.edu/rsenr>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-055

**EPA**

**Start Date:** 10/16/2017

**Grant Amount:** \$15,055.00

**Non-federal Match:**

**Total Amount:** \$15,055.00

2016

## Technical Projects

## Streamflow monitoring of the West Branch Little River, Stowe, VT

## Project Summary

This streamgage is part of a paired-watershed study on the east slope of Mt. Mansfield, in Stowe, Vermont. Two adjacent watersheds are being studied: Ranch Brook, a 10.5-km<sup>2</sup> nearly pristine forested basin, and West Branch Little River, a 12.0 km<sup>2</sup> basin containing the entire Mt. Mansfield Ski Resort and bisected by Vermont State Highway 108. The Ranch Brook streamgage is being funded through an interagency agreement between the US Forest Service and USGS. The two basins have similar geology, size, elevation, slope, aspect, soils, and forest cover; the principle difference between them is the sharp contrast in land use. The purpose of this project is to continue data collection at West Branch Little River and to develop a long-term sustainable funding plan for the two gages.

## Outputs:

- Real-time accurate discharge data for the Chazy River that will be publicly available on the USGS website.

## Outcomes:

- This discharge data will help determine the effects of land use change on water quality in the Lake Champlain Basin.

**Organization:** USGS

**Contact Person:** Richard Kiah

**Mailing Address:** USGS New England  
Water Science Center  
331 Commerce Way  
Pembroke, NH 03275

**Phone:** 603-226-7819

**E-mail:** rkiah@usgs.gov

**Website:** <https://newengland.water.usgs.gov/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-002

**GLFC**

**Start Date:** 4/30/2017

**Grant Amount:** \$30,000.00

**Non-federal Match:**

**Total Amount:** \$30,000.00



# Technical Projects

2016

## Volunteer Coordination and Training for the Lake Champlain Cyanobacteria Monitoring Program

### Project Summary

The Lake Champlain Committee (LCC) will develop an outreach campaign to educate citizens about cyanobacteria and actions to take to keep people and pets safe and reduce future bloom frequency. While there is strong public concern about cyanobacteria, many people do not know the triggers for blooms, how to recognize cyanobacteria or how to assess risks from exposure. This educational effort will build on LCC's successful cyanobacteria citizen monitoring program which has run since 2003. While LCC will make information available to all communities in the Lake Champlain watershed, efforts will be concentrated in New York where fewer public resources have been focused on this issue.

#### Outputs:

- informational materials such as rack cards, fact sheets
- weekly reports distributed via mailings, emailings, social media, event tabling and presentations.

#### Outcomes:

- Citizens will be more informed on cyanobacteria in Lake Champlain.

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** L-2017-041

**EPA**

**Start Date:** 6/11/2017

**Grant Amount:** \$47,000.00

**Non-federal Match:**

**Total Amount:** \$47,000.00

2015

# Technical Projects

## Wastewater Treatment Facility Asset Management

### Project Summary

This project will develop and implement asset management plans and training for up to twelve small and medium-sized wastewater treatment facilities in Vermont and New York. The objective of this project is to provide municipalities, wastewater treatment governing boards and plant operators with the necessary tools for effective asset management. With proper operational, maintenance, and financial guidance, meeting the goals of long-term sustainability of the sewer infrastructure systems can be accomplished. Improvements in the operation and maintenance of the sewer infrastructures systems will also decrease the risk of pollution to the Lake.

#### Outputs:

- Identification and mapping of wastewater system assets
- Evaluation of existing condition and current level of service
- Development of a management plan to maintain and replace equipment based on life cycle costs
- Optimization of phosphorus removal.
- Improved WWTF efficiency to reduce O&M costs
- Establishment of a long-term funding plan for present and future improvements.

#### Outcomes:

- Point source pollution from wastewater treatment facilities will be reduced. WWTF will be able to manage their facilities more effectively.

**Organization:** MJ Engineering and Land Surveying, PC

**Contact Person:** Carrie Dooley

**Mailing Address:** 1533 Crescent Road  
Clifton Park, NY 12065

**Phone:** 518 371-0822

**E-mail:** [carriedooley@mjels.com](mailto:carriedooley@mjels.com)

**Website:** <http://www.mjels.com/>



**NEIWPCC Code:** L-2016-066

**EPA**

**Start Date:** 10/26/2017

**Grant Amount:** \$379,200.00

**Non-federal Match:**

**Total Amount:** \$379,200.00

# Local Implementation Grant

2015

## Champlain Valley Union High School Flood Resiliency Demonstration Project

### Project Summary

Using the results of a previous State of Vermont funded study, LaPlatte Stormwater Study (2010 LCA), this “Ahead of the Storm” (AOTS) Leahy Summit inspired project will build flood resiliency capacity at the very high visibility Champlain Valley Union High School (CVUHS) campus in preparation for flood and climate change impacts within two LaPlatte River subwatersheds of the Lake Champlain Basin. AOTS “optimal conservation practice” designs will be created by our engineer team with a process that includes education opportunities with both the student and administration community at CVUHS. Our collaborating partners will include the very popular CVUHS EnACT Club led by Katie Antos Ketcham, the school administration including Kurt Proulx, Building and Grounds, Adam Bunting, Principal, Ben Mason, Business Manager, and LCA subcontractors including engineer firm Milone & MacBroom.

#### Outputs:

- Engineered designs for the CVU campus
- a landowner interest letter
- cost opinions, education materials
- public awareness campaigns
- stewardship plans for implementation work on the CVU school campus

#### Outcomes:

- Enhance educator and student learning about watershed issues.
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.
- Provide education and outreach to encourage homeowners, industries, health care facilities, businesses, government agencies, and public institutions to prevent pollution and recycle by 2015.

**Organization:** Lewis Creek Association

**Contact Person:** Marty Illick

**Mailing Address:** 442 Lewis Creek Rd.  
Charlotte, VT 05445

**Phone:** 802 425-2002

**E-mail:** [marty.illick@gmail.com](mailto:marty.illick@gmail.com)

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** L-2016-013

**EPA**

**Date Complete:** 4/6/2017

**Grant Amount:** \$15,000.00

**Non-federal Match:** \$ 4,612.00

**Total Amount:** \$19,612.00

2015

## Local Implementation Grant

## Plainfield Community Resilience Organization/Streambank Stabilization

## Project Summary

This project established a Community Resilience Organization (CRO) in Plainfield. CROs are local teams, appointed by the Selectboard, that engage residents and town leaders in tasks aimed at climate adaptation, while strengthening local collaboration and social cohesion.

CROs are here for the long term, to build connections between silos of passionate volunteers in conservation, emergency response and social services, by bringing them together to design collaborative climate resilience tasks completed via volunteers on a Day for CROing that includes celebration. Plainfield will focus their volunteer activity in 2016-17 on preparing and completing streambank stabilization on a 100' section of the Great Brook, which is subsiding adjacent to the Town's picnic shelter after 2015 flooding.

### Outputs:

- Establishment of an ongoing framework for improved public understanding
- A CRO Annual Day.
- Volunteers plant 12' x 100' buffer perched above the Great Brook with 40 native trees to stabilize eroding streambank

### Outcomes:

- Improved water quality
- Reduction of nutrient runoff from streambank
- Education and outreach, and the active involvement of the local community.

**Organization:** Town of Plainfield

**Contact Person:** Alice Merrill

**Mailing Address:** PO Box 217  
Plainfield, Vermont 05667

**Phone:** 802-454-8461

**E-mail:** mermo@charter.net

**Website:** <http://www.plainfieldvt.us/>

**NEIWPCC Code:** L-2016-012

**EPA**

**Date Complete:** 5/31/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:**

**Total Amount:** \$10,000.00

# Local Implementation Grant

2015

## Smilie School Stormwater Master Plan

### Project Summary

The Smilie School property occupies a 3+ acre site on the banks of Joiner Brook, just upstream of its confluence with the Winooski River. The school property generates runoff that enters a small stormwater system that discharges to a swale which conveys that water to the stream. There is also direct overland flow across a driveway that extends to the stream. In the fall of 2014, the Friends worked with a group of Norwich University undergraduate engineering students who identified several stormwater mitigation opportunities. These opportunities have been discussed with school administration. This project built on that work to produce a stormwater master plan including three complete engineering designs.

#### Outputs:

- Production of a stormwater master plan for the Smilie School property with practices that have the potential to decrease annual sediment and phosphorus loads by 500 and 1 pounds respectively. This plan includes descriptions of nine recommended practices to reduce stormwater volume and associated pollutant loads. These practices were presented during a September meeting of the school principal, the school district facilities manager, a member of the Bolton Conservation Commission, and Friends of the Winooski staff. During this meeting four priority practices were chosen to advance to design phase. In October the stormwater engineer prepared final designs suitable for construction for these four BMPs.

#### Outcomes:

- Enhance educator and student learning about watershed issues
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution
- Reduce nonpoint source phosphorus load from developed land
- Use education to empower the general public to reduce phosphorus loads

**Organization:** Friends of Winooski River

**Contact Person:** Shawn White

**Mailing Address:** PO Box 777  
Montpelier VT 05601

**Phone:** 802-882-8276

**E-mail:** [info@winooskiriver.org](mailto:info@winooskiriver.org)

**Website:** <http://www.winooskiriver.org/>



*Preliminary Identification of Stormwater Management Opportunities - Smilie School, Bolton, VT*



**NEIWPCC Code:** L-2016-026  
**EPA**

**Date Complete:** 1/10/2017  
**Grant Amount:** \$8,932.00  
**Non-federal Match:** \$1,000.00  
**Total Amount:** \$9,932.00

2015

## Local Implementation Grant

## Stowe Elementary Green Stormwater Infrastructure Plan

## Project Summary

Lamoille County Conservation District prepared for stormwater runoff and future flooding impacts by identifying and developing a Green Stormwater Infrastructure (GSI) Plan on the Stowe Elementary School Campus. The goal of this project increased school and municipality partnerships and participation to implement watershed restoration practices while improving water quality and reducing stormwater runoff in urban areas.

## Outputs:

- Jensen, and Andres Torizzo from Watershed Consulting, LLC. (the subcontracted engineer), completed the initial site assessments to determine the cause of the stormwater concerns, referenced maps and infrastructure, and calculated the impervious acreage for the preliminary concepts. Kim completed three different site field visits to investigate stormwater flow, pooling, and erosion concerns throughout early Spring through Summer. The information gleaned from the site visits was used within the completed *Stowe Elementary Green Stormwater Infrastructure Plan*. The Stowe Elementary Green Stormwater Infrastructure Plan (GSI Plan) contains information on the location of the site, stormwater concerns, the type of practice recommended and a description, and the benefits and constraints for the practice. The School Board approved four projects to move forward with designed concept plans based on the recommendation. The projects addressed approximately 4.5 acres of impervious stormwater flow from reaching downstream waterways on an annual basis as a result.

**Organization:** Lamoille County NRCD

**Contact Person:** Kim Jensen

**Mailing Address:** 109 Professional Drive, Suite 2  
Morrisville, VT 05661

**Phone:** 802 888-9218 ext.113

**E-mail:** kimberly.jensen@vt.nacdn.net

**Website:** <http://www.lcnrcd.com/>



**Stowe Village with locations of Elementary School and Wetland Tributary in relation to Little River.**

## Outcomes:

- Prioritize and design BMPs to address non point P loads



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-007  
**EPA**

**Date Complete:** 1/10/2017

**Grant Amount:** \$13,800.00

**Non-federal Match:** \$ 3,000.00

**Total Amount:** \$16,800.00



# Local Implementation Grant

2015

## Huntington Town Garage and Office Stormwater

### Project Summary

The Town of Huntington Garage and Town Office sit on an approximately eight-acre parcel with roughly one third being impervious surface along the Huntington River. The site receives runoff from the Main Road. Presently, much of this runoff is channeled along the driveway to a storm drain, which discharges to the river. Based on a preliminary site assessment, there are several on-site opportunities to mitigate the flow and its pollutants. This project completed designs and construction drawings for those mitigation practices.

#### Outputs:

- A comprehensive stormwater management plan for the site including construction drawings for several mitigation practices.

#### Outcomes:

- Reduce the nonpoint source phosphorus load that is being generated from developed lands in the Basin.

**Organization:** Town of Huntington

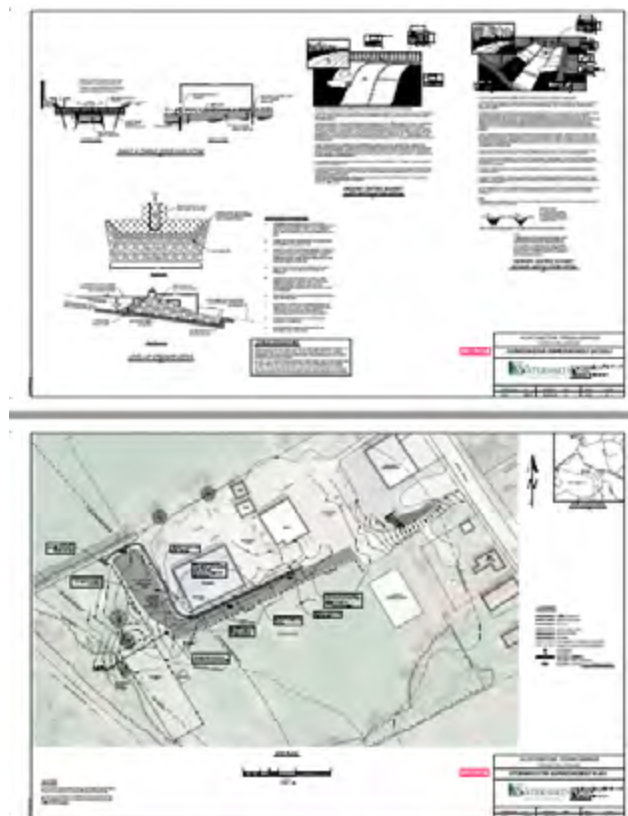
**Contact Person:** Barbara Elliot

**Mailing Address:** 4930 Main Road  
Huntington VT 05462

**Phone:** 802 434-2032

**E-mail:** townhunt@gmavt.net

**Website:** <http://huntingtonvt.org/>



**NEIWPCC Code:** L-2016-005

**GLFC**

**Date Complete:** 11/18/2016

**Grant Amount:** \$10,005.00

**Non-federal Match:** \$ 1,254.00

**Total Amount:** \$11,259.00



2015

## Local Implementation Grant

## Lake George Association Stream Habitat Improvement

## Project Summary

The Lake George Association enhanced aquatic habitat and stabilized streambanks within two stream corridors in the Lake George Watershed. The two streams had severe undercutting of their banks and unstable channels. The project also improved fish passage and created areas of fish habitat.

## Outputs:

- installation of fish habitat and passage improvement utilizing step pools and rock piles
- stabilize eroding streambanks using rock vanes, J-hooks or root wads, and large capstones to stop the stream from degrading further. Large toed in stone were utilized as needed to maintain streambed width.
- engineered designs.

## Outcomes:

- Improving habitat for fish, wildlife and plants
- Restoring connections of aquatic habitats
- Reduction of the amount of phosphorus and sediment entering Lake George

**Organization:** Lake George Association

**Contact Person:** Randy Rath

**Mailing Address:** PO Box 408  
Lake George, NY 12845

**Phone:** 518-668-3558

**E-mail:** [rrath@lakegeorgeassociation.org](mailto:rrath@lakegeorgeassociation.org)

**Website:** <http://www.lakegeorgeassociation.org/>



*Post construction view looking downstream. The cross vane has been installed to keep flow in the center of the stream, take pressure off the banks and provide pockets of protection during high flow events and spring runoff.*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-019

**EPA**

**Date Complete:** 1/6/2017

**Grant Amount:** \$19,608.00

**Non-federal Match:** \$ 978.00

**Total Amount:** \$20,586.00

# Local Implementation Grant

2015

## McKenzie Brook Stream Bank Stabilization

### Project Summary

A streambank, approximately eighty feet wide and eighty feet tall, along McKenzie Brook is depositing sediments and nutrients into the brook, which empties directly into Lake Champlain. This project stabilized the bank using natural materials when possible. While the stream is not classified as a trout stream, it was last stocked with brook trout in 2014. This project also addressed fish habitat enhancement.

#### Outputs:

- Installation of streambank restabiization structures and plantings with natural woody materials.

#### Outcomes:

- Streambank erosion reduction
- Phosphorus reduction
- Enhancement of habitat for aquatic organisms

**Organization:** Essex County SWCD

**Contact Person:** David Reckahn

**Mailing Address:** Box 407  
Westport, NY 12993

**Phone:** 518-962-8225

**E-mail:** dreckahn@westelcom.com

**Website:** <http://www.essexcountyswcd.org/>



**NEIWPCC Code:** L-2016-008

**EPA**

**Date Complete:** 11/22/2016

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 3,150.00

**Total Amount:** \$23,150.00

2015

## Local Implementation Grant

## Preventing the Spread of Antibiotic Resistance in Lake Champlain and Urban Water Systems

## Project Summary

The project involved collection of water samples from Lake Champlain, major farms, wastewater treatment plants, and drinking water treatment plants to obtain an inventory of antibiotic resistance gene (ARG) and antibiotic resistance bacteria (ARB) in the region. The information was used to identify hot spots of ARGs/ARB dissemination. At a practical level, local implementation plans for mitigating the spread of antibiotic resistance, primarily in the agriculture sector, were developed in line with the National Action Plan for Combating Antibiotic Resistant Bacteria (NAP).

## Outputs:

- An inventory of the critical areas or hot spots for ARG and ARB in the Lake Champlain Basin, and strategic implementation plans to control the spread of antibiotic resistance.

## Outcomes:

- Investigate and address the distribution, fate and effects of contaminants of concern and sites of concern
- identify public health risks associated with toxic substances and communicate risk to the public through advisories from the three jurisdictions
- Opportunities for future actions: identify research and monitoring projects that can improve management programs and conduct when funding resources become available.

**Organization:** University of Vermont

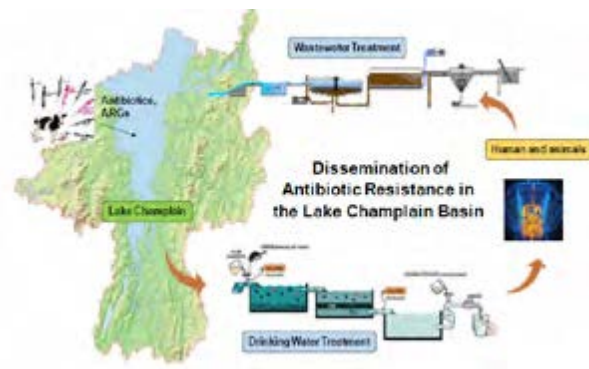
**Contact Person:** Huijie Lu

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Burlington VT, 05405

**Phone:** 802 656-4571

**E-mail:** hlu2@uvm.edu

**Website:** <https://www.uvm.edu/cems/cee>



*Antibiotic resistance dissemination pathways.*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2015-066

**GLFC**

**Date Complete:** 2/2/2017

**Grant Amount:** \$19,237.00

**Non-federal Match:** \$ 8,077.00

**Total Amount:** \$27,237.00

# Local Implementation Grant

2015

## Protecting Northern Lake Champlain through Farmer-to-Farmer Implementation of Agricultural Conservation Practices

### Project Summary

Farmer's Watershed Alliance implemented and demonstrated an effective agricultural conservation practice—grassed waterway installation—on three Franklin County farms located in critical source areas (CSAs) within the Lake Champlain Basin. As a vegetative sediment trapping measure, grassed waterways prevent erosion and gully formation, reduce sediment transport, and may provide wildlife habitat and/or extra livestock feed. The farmer-to-farmer approach is cost effective and helps ensure buy-in among our farmer peers.

#### Outputs:

- Three grassed waterways installed on farms located in Franklin County, and 100 farmers and others learned about the benefits of the grassed waterway as an effective, low-cost conservation practice

#### Outcomes:

- Reduce the phosphorus load that is being generated by agricultural land uses, including farmsteads, cropland, and pasture lands in the Basin.

**Organization:** Farmers Watershed Alliance

**Contact Person:** Darlene Reynolds

**Mailing Address:** 278 S. Main Street  
St. Albans, VT 05478

**Phone:** 802 752-5156

**E-mail:** farmerswatershedalliancenw@gmail.com

**Website:** Farmers Watershed Alliance



Grassed waterway site on Kane Road in Enosburg, VT



**NEIWPCC Code:** L-2015-067

**GLFC**

**Date Complete:** 1/10/2017

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$ 3,300.00

**Total Amount:** \$23,300.00

2015

## Local Implementation Grant

## St. Albans Town Hall Rain Garden

## Project Summary

The project consisted of the design and implementation of a rain garden to treat and infiltrate stormwater runoff at the Town Hall. The Town collaborated with Friends of Northern Lake Champlain to involve and engage local volunteers to install the rain garden. In addition to treating stormwater runoff from Town Hall, the rain garden serves as a demonstration project and an educational tool.

## Outputs:

- The rain garden reduced untreated stormwater runoff from ½ acre of impervious surface and mitigated erosion impacts from stormwater in the St. Albans Bay Watershed.

## Outcomes:

- Informing and involving the public.
- Reducing overall stormwater runoff.

**Organization:** Town of St. Albans

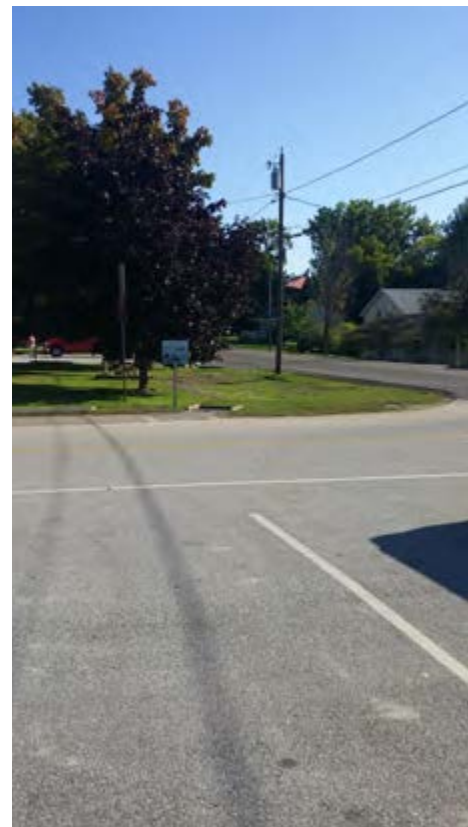
**Contact Person:** Ned Connell

**Mailing Address:** PO Box 37  
St. Albans Bay, VT 05481

**Phone:** 802 524-7589 ext. 108

**E-mail:** satplanner@comcast.net

**Website:** <http://www.stalbanstown.com/>



**NEIWPCC Code:** L-2015-015

**GLFC**

**Date Complete:** 9/15/2017

**Grant Amount:** \$16,840.00

**Non-federal Match:** \$ 3,647.08

**Total Amount:** \$20,487.08



# Local Implementation Grant

2015

## Stormwater Mitigation in the Munroe Brook Watershed

### Project Summary

This project installed a stormwater best management practice with maintenance plan (convert an eroding swale to a perforated pipe with an infiltration trench and a raingarden) for pollution prevention and flood resiliency in the Brook Lane right of way in Shelburne, Vermont, a strategic mitigation location in the stormwater-impaired Munroe Brook watershed (VT ANR Tactical Basin Plan). It further used an existing screening matrix to identify additional priority sites in Shelburne for similar stormwater BMP installations.

#### Outputs:

- 100' of a new perforated pipe and infiltration trench
- a 30' x 10' rain garden and a maintenance plan.
- A list of other appropriate sites at which to implement similar stormwater BMPs.

#### Outcomes:

- Sediment and phosphorus reduction

**Organization:** Lewis Creek Association

**Contact Person:** Susan Moegenburg

**Mailing Address:** 442 Lewis Creek Road  
Charlotte, VT 05445

**Phone:** 802-922-1370

**E-mail:** susan.moegenburg@gmail.com

**Website:** <http://www.lewiscreek.org/>



*Pre-construction: erosion at pipe inlet.*



*Post-construction: raingarden created with new flow controlling inlet into downstream infiltration trench.*



**NEIWPCC Code:** L-2016-020

**EPA**

**Date Complete:** 12/20/2016

**Grant Amount:** \$19,984.00

**Non-federal Match:** \$ 975.00

**Total Amount:** \$20,959.00

2015

## Local Implementation Grant

## Stormwater Solutions in Lamoille County 2

## Project Summary

Lamoille County Conservation District (LCCD) reduced stormwater runoff and future flooding impacts by installing two green stormwater infrastructure (GSI) projects on two Vermont State properties. The goal of this project was to increase state partnerships with the Vermont Agency of Transportation (VTRANS) and the Vermont Building and Ground Services (BGS) to implement watershed restoration practices while improving water quality and reducing stormwater runoff in urban areas.

## Outputs:

- Two GSI practices to increase flood resiliency and decrease sedimentation. A larger component was to educate new partners and their staff on the effectiveness, and importance of installation of GSI projects on Vermont State properties. LCCD identified two separate projects that had failing "stormwater" projects that were built with out of date methods and were not maintained over time. The Hyde Park site (Main Street Site) was on the site of the VTRANS Garage Region 5 Site. Both projects had design concepts for infiltration galleries, preliminary cost estimates, and landowner approval. After updates to the concepts, both projects were approved by all the stakeholders and construction was completed in the Fall, 2016. Water quality models of these GSI projects estimated that stormwater from 2.0 acres of impervious area was treated. Thus, preventing a total of 5,045 lbs. of annual TSS and 2.10 lbs. of annual TP sediments from reaching downstream waterways on an annual basis. These practices also increased the flood resiliency for the areas in which they were implemented.

## Outcomes:

- Provide annual technical assistance and training for municipalities seeking to take greater steps to protect water quality.
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution
- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin
- Provide education and technical support to municipalities and homeowners to increase use of rain gardens, rain barrels, and other stormwater reduction techniques.

**Organization:** Lamoille County NRCD

**Contact Person:** Kim Jensen

**Mailing Address:** 109 Professional Drive, Suite 2  
Morrisville, VT 05661

**Phone:** 802-888-9218 ext.113

**E-mail:** kimberly.jensen@vt.nacdnet.net

**Website:** <http://www.lcnrcd.com/>



*Main Street site pre and post construction*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-021

**EPA**

**Date Complete:** 1/10/2017

**Grant Amount:** \$ 20,000.00

**Non-federal Match:** \$ 97,075.42

**Total Amount:** \$117,075.42



# Local Implementation Grant

2015

## Town of Dresden Salt Barn Reconstruction Project

### Project Summary

The Town's salt storage shed was degraded and under-sized, causing road salt leaching off the site and into a small tributary to South Lake Champlain. Funding was utilized to construct a new salt barn to increase capacity and reduce the presence of uncovered road salt.

#### Outputs:

- Replacement of the currently deteriorating salt shed with a newly constructed barn with 350 ton capacity. Construction of a retaining wall and vegetated swale.

#### Outcomes:

- Reduction of salt from shed leaching directly in to a small tributary to South Lake Champlain
- Address the distribution of contaminants of concern

**Organization:** Town of Dresden

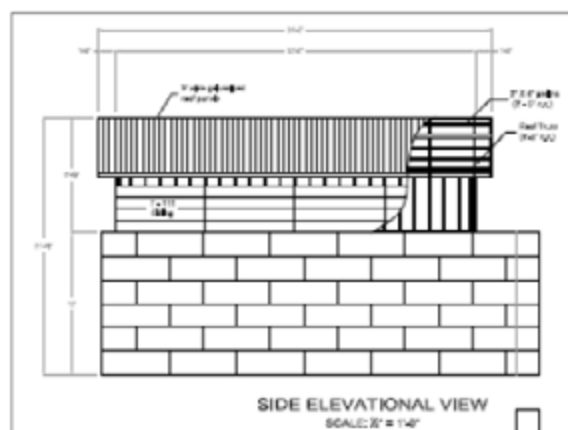
**Contact Person:** Rick Hobus

**Mailing Address:** PO Box 16, 107 Clemons Road  
Clemons, NY 12819

**Phone:** 518 499-0282

**E-mail:** Hobus@verizon.net

**Website:** <http://www.townofdresden.com/>



**NEIWPCC Code:** L-2015-068

**EPA**

**Date Complete:** 1/10/2017

**Grant Amount:** \$20,000.00

**Non-federal Match:** \$12,125.00

**Total Amount:** \$32,125.00

2015

## Local Implementation Grant

## Tree Guard Removal for Stream Bank Stabilization

## Project Summary

The Intervale Center requested \$20,000 to support removal of 8,000 or more plastic tree tubes from the Vermont landscape, eliminating the negative effects of these tubes on the health and vitality of our riparian forests and waterways.

## Outputs:

- Removal of 8,000+ plastic tree tubes removing 0.8 tons of plastic from conservation projects in the Lake Champlain Basin. Tube collection efforts focused in Addison County, but the Intervale also worked on sites in Rutland, Franklin and Chittenden Counties

## Outcomes:

- Restoration of stream banks and canopy coverage
- Restoration of native plants to riparian areas
- Reduction of sediment loads in spawning habitats
- Reducing the amount of plastics potentially destined to enter our waterways

**Organization:** Intervale Center

**Contact Person:** Mandy Fischer

**Mailing Address:** 180 Intervale Road  
Burlington, VT 05401

**Phone:** 802 660-0440

**E-mail:** [mandy@intervale.org](mailto:mandy@intervale.org)

**Website:** <http://www.intervale.org/>



**NEIWPCC Code:** L-2016-022

**EPA**

**Date Complete:** 1/27/2017

**Grant Amount:** \$19,989.00

**Non-federal Match:**

**Total Amount:** \$19,989.00

# Technical Project

2011

## Addressing Critical Source Areas in the Missisquoi Bay Watershed by Implementing Conservation Field Practices

### Project Summary

This project utilized a Critical Source Area (CSA) model for phosphorus in the Missisquoi Bay of Lake Champlain to: identify farms with the highest proportion of CSAs on their land, target outreach for program sign-up to those farms, and leverage funding to provide 100% financial assistance to farmers implementing Best Management Practices (BMPs) on land containing identified CSAs. Funds provided by the Great Lakes Fishery Commission by way of the Lake Champlain Basin Program were used in conjunction with Vermont Agency of Agriculture, Food and Markets' (VAAFM) funds to augment USDA-NRCS payments to participating farmers in this program. The purpose of increasing financial payments to participants of this targeted program was to increase landowner participation and BMP implementation to specifically address areas with relatively high phosphorus loading.

#### Outputs:

- The implementation 5,715 acres of cover crop, 137.2 acres of conservation crop rotation, 144.7 acres of forage and biomass planting (seeding cropland to hay), 10.6 acres of filter strip, 153.9 acres of residue management (no till, strip till, or direct seeding), 841.1 acres of waste recycling (manure injection or aeration), 2 grade stabilization structures (53 total cubic yards), 2 lined waterways for gully stabilization (202 ln. ft.), and 2 grassed waterways (1,140 ln. ft. stone centered, 505 ln. ft. grass centered).
- These practices either directly addressed identified phosphorus CSAs (lined waterways), or were implemented on fields containing CSAs (cover crop, etc.) within the Missisquoi Bay watershed of Vermont. As a result of this project, it is estimated that 908.1 kg of phosphorus were prevented from entering Lake Champlain in 2012, 928.3 kg in 2013, 923.3 kg in 2014, 290 kg in 2015, and 251 kg in 2016. Conservation practices that were implemented with life-spans greater than one year are projected to give continued phosphorus reductions at a rate of 236.1 kg/yr.

#### Outcomes:

- Reduced phosphorus load to Lake Champlain

**Organization:** Vermont Agency of Agriculture

**Contact Person:** Michael Middleman

**Mailing Address:** 116 State St.  
Montpelier, VT 05620

**Phone:** 802 828-5362

**E-mail:** michael.middleman@state.vt.us

**Website:** <http://agriculture.vermont.gov/>



Missisquoi Bay Watershed. Red shaded area denotes project area. Image adapted from <https://mrbavt.com/our-watershed/>



**NEIWPCC Code:** L-2012-034

**GLFC**

**Date Concluded:** 7/3/2017

**Grant Amount:** \$170,000.00

**Non-federal Match:**

**Total Amount:** \$170,000.00

2015

# Technical Project

## Ben Harris Animal Trails & Walkways Upgrade

### Project Summary

The farm is located in the town of Westport along Stacey Brook which is a direct tributary to Lake Champlain. This grant funded engineering plans for best management practices to reduce erosion and sedimentation that was leaving the animals trails and walkways and entering the nearby waterway.

#### Outputs:

- Engineered plans were drawn to NRCS Standards by a professional engineer for BMPs to reduce erosion and sedimentation that was leaving the animal trails and walkways.

#### Outcomes:

- Nutrient reduction BMPs on farms.

**Organization:** Essex County SWCD

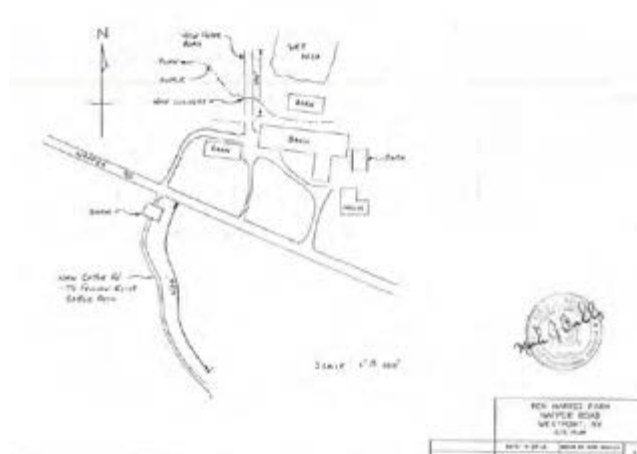
**Contact Person:** Dave Reckahn

**Mailing Address:** P.O. Box 407, 3 Sisco Street  
Westport, NY 12993

**Phone:** 518 962-8225

**E-mail:** dreckahn@westelcom.com

**Website:** <http://www.essexcountyswcd.org/>



**NEIWPCC Code:** L-2016-062

**EPA**

**Date Complete:** 6/16/2017

**Grant Amount:** \$11,000.00

**Non-federal Match:** \$ 200.00

**Total Amount:** \$11,200.00

# Technical Project

2015

## Cover Crop New Users

### Project Summary

In order to promote the use of Cover Crops and thus reduce soil phosphorus losses from bare soils, lack of cover and subsequent soil erosion, farms were provided with a per acre payment and use of the districts' no till drill to plant a cover crop of cereal rye in the fall following harvest. The goal was to recruit farms that have not routinely used cover crops in the past. Because most farms in Clinton County do not have the equipment for no till planting, conventional tillage is commonly used to prepare fields. Since the most fertile soils are often near the river, this tillage method and potential runoff can lead to phosphorus losses into Lake Champlain. The 2015 AEM Strategic plan identified the Great Chazy River, Little Chazy River, and Direct-To-Lake Tributaries Feeding Lake Champlain Main – North as a priority watershed. Farms were chosen and ranked based on their location in the priority watershed, proximity to a watercourse, site slope and ability to complete the project by the project end date.

#### Outputs:

- 5 farms enlisted in the program and participated in the NYS Agricultural Environmental Management (AEM) program. The District planned and implemented the cover crop seeding to NRCS Standard 340 using the NYS AEM Cover Crop Planning tool.
- The nutrient management part of the project will enable the District to assist with fertilizer recommendations with the goal of reducing excess nutrient applications in future crops.
- 150 acres of cereal rye cover crop were planted by October 1st, 2016. Germination and establishment was evaluated on field visits with the assistance of LCBP Project Manager, Myra Lawyer.

#### Outcomes:

- Farm BMPs utilized to reduce loading to Lake Champlain

**Organization:** Clinton County SWCD

**Contact Person:** Peter Hagar

**Mailing Address:** 6064 Route 22, Suite 1  
Plattsburgh, NY 12901

**Phone:** 518 561-4616 x 3

**E-mail:** Peter.hagar@ccsoil-water.com

**Website:** <http://clintoncountyswcd.org/>



**NEIWPCC Code:** PO 12187  
**EPA**  
**Date Complete:** 12/21/2016  
**Grant Amount:** \$9,994.00  
**Non-federal Match:**  
**Total Amount:** \$9,994.00

2014

## Technical Project

## Development of Advanced Flood Recovery and River Management Training Modules

## Project Summary

This project builds on training already taking place in both Vermont and New York with a focus on improving river management. The Vermont Department of Environmental Conservation has developed the Vermont Rivers and Roads Training with the Vermont Agency of Transportation (VTrans). The training modules developed here are the third tier of the Vermont Rivers and Roads Training.

## Outputs:

- Four advanced flood recovery and river management training modules were developed in the following areas: Sediment and large wood removal; Channel stabilization; Floodplain restoration; Geomorphic-engineering design of bridges and culverts
- Teaching slides were created in PowerPoint (.ppt) with speaking notes for each slide.
- Coordination with existing training programs in Vermont and New York.

## Outcomes:

- Road crews and municipal workers will have readily accessible information that will assist them in future flood recovery efforts.

**Organization:** Milone & MacBroom

**Contact Person:** Roy Schiff

**Mailing Address:** 1 South Main Street, 2nd Floor  
Waterbury, Vermont 05676

**Phone:** 802 882-8335

**E-mail:** roys@miloneandmacbroom.com

**Website:** <http://www.miloneandmacbroom.com/Home.aspx>



**NEIWPCC Code:** L-2015-027

**GLFC**

**Date Complete:** 11/4/2016

**Grant Amount:** \$71,000.00

**Non-federal Match:**

**Total Amount:** \$71,000.00



# Technical Project

## Dew Drop Drill Cover Crop Implementation

### Project Summary

Over the last 10 years Essex County's agriculture has been changing over from large farms to smaller diversified farming. Some of these new farms are smaller acreage with less access to large farm equipment. However they are still located within close proximity to major tributaries to Lake Champlain and it is critical to reach out to them about best management practices that help improve water quality. The district along with the LCBP agronomist visited all the new small farms and monitored the growth of the crops throughout the season. The grant provided funding to purchase a small Dew Drop Drill that is used to establish cover crops on fields. Funding also provided a cost share program to purchase the cover crop seed.

#### Outputs:

- The purchase of a small Dew Drop Drill that is used to establish cover crops on fields. Its small compact size is exactly what these farms need along with the ability to use smaller equipment to pull it that most of these farms have readily available.
- Farm visits to discuss how no-till drills work and the benefits of cover cropping for the farm and the environment.
- A cost share program for farms to purchase the cover crop seed
- 90 acres of cover crops were planted with this grant on 4 different farms across Essex County NY.

#### Outcomes:

- Education and outreach about small farming BMPs shared in Essex County, NY and pollution prevention achieved through implementation of cover cropping practices.

**Organization:** Essex County SWCD

**Contact Person:** Dave Reckahn

**Mailing Address:** P.O. Box 407, 3 Sisco Street  
Westport NY 12993

**Phone:** 518 962-8225

**E-mail:** dreckhan@westelcom.com

**Website:** <http://www.essexcountyswcd.org/>



**NEIWPCC Code:** PO 12214

**EPA**

**Date Complete:** 1/6/2017

**Grant Amount:** \$7,298.00

**Non-federal Match:**

**Total Amount:** \$7,298.00



2015

## Technical Project

## Increasing Agricultural Engineering Capacity for Project Implementation in the Lake Champlain Basin

### Project Summary

PRO-DAIRY experience and personnel along with a private sector successful private agricultural engineering company, Vermont Natural Resources Conservation Service (NRCS), and The Vermont Agency of Agriculture Food and Markets (VAAFM), were used to increase the private sector agricultural engineering capacity in the Vermont Lake Champlain Basin (LCBP) by providing two one day training sessions, power point presentations, as pdfs, available on the PRO-DAIRY website and design reviews for private sector engineering designs. The private sector firms can now better adapt agricultural engineering projects that are compliant with current NRCS-VT standards into their service model.

#### Outputs:

- Training materials were prepared emphasizing agricultural and environmental effectiveness as well as meeting Vermont NRCS Standards.
- Two classroom and on-farm training sessions were planned, and held for private sector engineers in the Lake Champlain Basin. PRO-DAIRY, NRCS and VAAFM participated in each session. Several designs of BMP systems for small dairy farms in Vermont submitted by engineers were reviewed for appropriateness and effectiveness.
- The presentations and the list of attending engineers who approved of being listed are available on the PRO-DAIRY website.

#### Outcomes:

- The private sector engineers in Vermont are better prepared to help farms implement BMPs to help reduce nutrient loading to the Lake Champlain

**Organization:** Cornell University

**Contact Person:** Curt Gooch

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Cornell University, Ithaca, NY 14853

**Phone:** 607 255-2088

**E-mail:** cag26@cornell.edu

**Website:** <https://bee.cals.cornell.edu/>



**NEIWPCC Code:** L-2016-059

**EPA**

**Date Concluded:** 11/11/2017

**Grant Amount:** \$48,400.00

**Non-federal Match:**

**Total Amount:** \$48,400.00

# Technical Project

2015

## Monitoring Cyanobacteria Blooms - continuation

### Project Summary

The Lake Champlain Committee's (LCC) portion of the on-going Lake Champlain cyanobacteria monitoring program focuses on program development, recruitment, training, and oversight of volunteer monitors. LCC will refine our cyanobacteria monitoring tools, coordinate with partners on a 2016 monitoring schedule and program, and recruit, coordinate, train, and oversee volunteers, as well as provide quality control of monitor data entered to the Vermont Department of Health database. All aspects of LCC's volunteer monitoring program are coordinated with and supplement monitoring conducted by the Vermont Department of Environmental Conservation (DEC) and the Vermont Department of Health (VDH).

#### Outputs:

- Weekly cyanobacteria monitoring reports posted to the VTDOH website.

#### Outcomes:

- Accurate public health information provided by the cyanobacteria monitoring program data
- Enables the public to view where potentially harmful blooms may be occurring.

**Organization:** Lake Champlain Committee

**Contact Person:** Lori Fisher

**Mailing Address:** 208 Flynn Avenue, Bldg. 3  
Studio 3F, Burlington, VT 05401

**Phone:** 802-658-1421

**E-mail:** [lorif@lakechamplaincommittee.org](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** L-2016-056

**EPA**

**Date Complete:** 6/30/2017

**Grant Amount:** \$47,000.00

**Non-federal Match:**

**Total Amount:** \$47,000.00

2014

# Technical Project

## Operation and Maintenance of Lake Champlain Meteorological Stations

### Project Summary

This project was designed to continue providing high quality, quality controlled and near real-time meteorological data from three lake stations: Colchester Reef, Diamond Island and Burton Island. This project has accomplished those core goals. These data are a valuable asset to many research, monitoring, modelling and recreational efforts related to Lake Champlain. The Colchester Reef data in particular are heavily used by both recreational and commercial users of the Lake. The NWS continues to use data from these on-lake stations for predictive purposes, including their lake advisories. Recreational users of the Lake have access to this data, which improves and facilitates their recreational opportunities. This project supplies invaluable wind data used by researchers to model the trajectories of pollutants such as mercury through and across the lake, in keeping with the LCBP goal of reducing contaminants. These data have helped to develop flood inundation models, predict harmful algal blooms and determine where water and air quality samples should be collected.

### Outputs:

- Variables collected included: wind speed and direction, air temperature, water temperature, relative humidity, barometric pressure and total solar irradiance.
- On-going support for on-lake meteorological data collection at Colchester Reef, Diamond Island, and Burton Island made real-time data available to public and provided summary of variables collected and statistical analyses of current year data in comparison to long-term climate trends.

### Outcomes:

- Near real-time on-lake meteorology data archived by the Vermont Monitoring Cooperative, adding to the overall data record and assuring that these data will be available in the future.

**Organization:** UVM - Rubenstein School of Environment and Natural Resources

**Contact Person:** Jim Duncan

**Mailing Address:** 705 Spear St.  
South Burlington, VT 05403

**Phone:** 802 656-0683

**E-mail:** jim.duncan@uvm.edu

**Website:** <https://www.uvm.edu/rsenr>



<b>NEIWPCC Code:</b>	L-2015-064
<b>GLFC</b>	
<b>Date Complete:</b>	1/8/2017
<b>Grant Amount:</b>	\$11,699.00
<b>Non-federal Match:</b>	
<b>Total Amount:</b>	\$11,699.00

# Technical Projects

## Sugar House Creamery Animal Trails Revitalization

### Project Summary

Sugar House Creamery was funded to supply the District and the farm with an engineered trail from the main barn to the milk parlor. An improved walkway from the barn to the grazing pasture was also funded. Components were concrete, stone, and geotextile for apron from barn to graveled laneway leading to the grazing area. It was co-designed with a drainage system to intersect clean water and take it to the grassed/stoned drainage along the barn. The walkway included curbs to prevent manure from washing off the walkway.

#### Outputs:

- 150 feet of cattle laneway improvements
- approximately 400 sq ft of concrete apron on the barn to milking parlor entrance for 22 head of dairy cattle.

#### Outcomes:

- Enhanced agricultural conservation measures in New York portion of the Basin.

**Organization:** Essex County SWCD

**Contact Person:** Dave Reckahn

**Mailing Address:** PO Box 407, Westport NY 12993

**Phone:** 518-962-8225

**E-mail:** dreckhan@westelcom.com

**Website:** <http://www.essexcountyswcd.org/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** PO# 12189 / 12292

**EPA**

**Date Complete:** 12/20/2016

**Grant Amount:** \$1,000.00 / \$9,000.00

**Non-federal Match:**

**Total Amount:** \$10,000.00

2015

## Technical Projects

## Update of (biennial) Tributary Concentration and Loading Estimates

## Project Summary

This project produced an online USGS Open-File Report similar to OFR 2014-1209 consisting of tables of estimated daily and annual concentrations and loads of total and dissolved phosphorus, total nitrogen, chloride, and total suspended solids (TSS) for the 18 monitored tributaries of Lake Champlain for 1991 through 2014. The Weighted Regression on Time, Discharge, and Season (WRTDS) method (Hirsch et al., 2010) was used to generate all of the estimates. In addition to output similar to OFR 2014-1209, estimates of trends as percentage change in concentration and load between 1991 (or 1993 for nitrogen and TSS) and 2014 was made. Results of significance tests of trend and p-values were presented in tables for concentration and load. Because of the addition of the trend and its associated uncertainty, a new OFR was necessary rather than the update to OFR 2014-1209 that had been proposed in the original workplan approved by the TAC.

## Outputs:

- Production of timely and accessible summary reports
- Estimates of tributary concentration and loading.
- Means for assessing the reduction of phosphorus loads in the Basin.

## Outcomes:

- Analysis of tributary loading data.

**Organization:** USGS

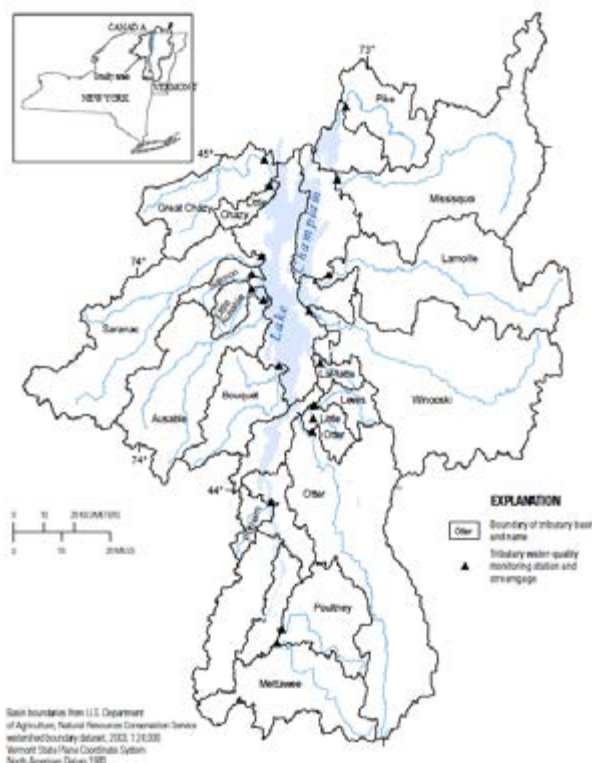
**Contact Person:** Laura Medalie

**Mailing Address:** PO Box 628, Montpelier, VT 05601

**Phone:** 802-828-4512

**E-mail:** lmedalie@usgs.gov

**Website:** <https://www.usgs.gov/>



**NEIWPCC Code:** L-2016-004  
**EPA**  
**Date Complete:** 1/6/2017  
**Grant Amount:** \$24,500.00  
**Non-federal Match:**  
**Total Amount:** \$24,500.00



# Technical Projects

2015

## Urban Stormwater Upgrade Guidance and Training

### Project Summary

This project had three primary tasks to accomplish. The first was the development of a comprehensive guidance document to inform municipal officials of the benefits of using cost-effective stormwater management and green infrastructure techniques aimed at improving water quality in the New York portion of the Lake Champlain Basin. In addition to this guidance document, we created profiles of effective, publicly appealing practices, illustrated by real-life examples. Finally, we developed curriculum for and implemented six training sessions for municipal officials. Each training covered selected green infrastructure practices, explained planning procedures, and identified funding needs and sources for constructing these practices.

#### Outputs:

- 104-page manual with chapters on green infrastructure practices for Village (Developed) Streets, Rural Roads, Parking Lots and Hardscapes, and Building Development (with real-life case studies for each).
- a “decision tree” for choosing green infrastructure practices that fit well into each type of environment (i.e., Village Street, Rural Roads, etc.). This is formatted as a graphically rich, simple to use, and printable poster-sized sheet that can be distributed electronically or physically to municipalities to assist in green infrastructure decision making.
- Training sessions were held via webinars hosted by LCBP and recorded. The PowerPoint presentations, along with accompanying narrative audio, are now hosted on LCBP’s YouTube page, as well as stored on LCBP servers. One in-person training session, held in Plattsburgh and covering Operation, Maintenance, and Inspection procedures, was also recorded and is now hosted and stored in the same manner.  
(<https://www.youtube.com/user/nb05458/videos>)

#### Outcomes:

- reduce pollution to Lake Champlain through education and policy change with respect to stormwater runoff management.

**Organization:** Watershed Consulting Associates

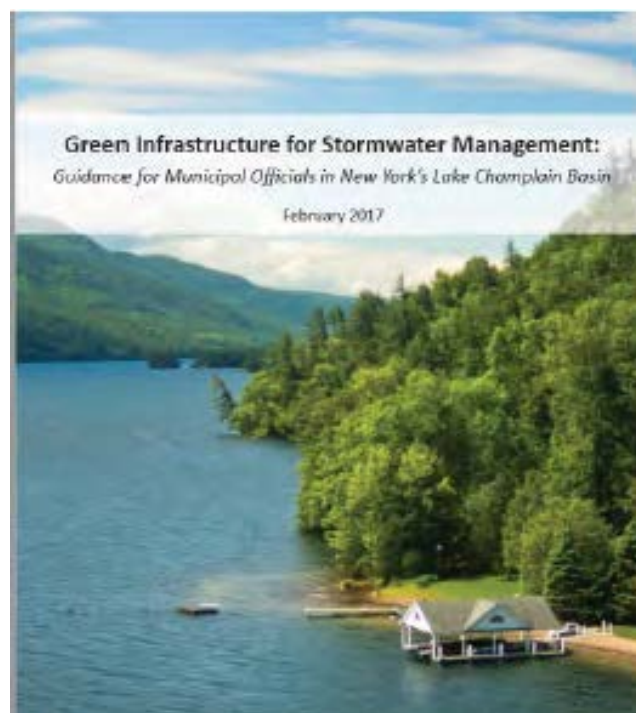
**Contact Person:** Andres Torizzo/Dana Allen

**Mailing Address:** PO Box 4413  
Burlington, VT 05406

**Phone:** 802 497-2367

**E-mail:** andres@watershedca.com

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



**NEIWPCC Code:** L-2016-061  
**EPA**  
**Date Complete:** 8/18/2017  
**Grant Amount:** \$30,000.00  
**Non-federal Match:**  
**Total Amount:** \$30,000.00

SECTION TWO:

# HEALTHY ECOSYSTEMS









# HEALTHY ECOSYSTEMS

**GOAL: 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.**

Healthy ecosystems provide invaluable services such as native species habitat, nutrient filtration, flood resilience, and sediment retention. They help support a lake that provides clean water for drinking and recreating, and healthy fish and wildlife populations. LCBP's work in this area focuses on conserving critical habitat, protecting species of concern, and reducing the risk of new invasions by non-native species.

Among the LCBP's more visible efforts to protect ecosystems is the growing number of boat launch stewards stationed at water bodies throughout the Basin. In addition to the LCBP's own steward program, which inspected more than 25,000 vessels and found invasive species 315 times in 2017, LCBP grants supported programs operated by lake associations and watershed organizations. Stewards and greeters at Lake Dunmore, Fern Lake, Lake Carmi, and Lake Eden in Vermont and at Saranac Lake, Lake Flower and Lake George in New York helped to ensure a regional approach to AIS spread prevention. The Adirondack Mountain Club's back-country water monitoring program and the Lake Champlain Maritime Museum's outreach aboard the travelling canal schooner *Lois McClure* took the message beyond the launches. The LCBP works with partners throughout the Basin to compare and analyze data collected to determine high risk areas and help focus future efforts.

## Program Highlights

- » The LCBP helped finalize an agreement with the U.S. Army Corps of Engineers and NEIWPC for a canal barrier design study to prevent the spread of aquatic invasive species within the **Champlain Canal**.
- » Staff **harvested invasive species**, including European frogbit in Charlotte, VT and water chestnut in St. Albans Bay, VT and the LaChute River wetlands in New York.
- » Staff participated in multiple fish and wildlife and invasive species **management committees**, including the national Aquatic Nuisance Species Task Force, Northeast Aquatic Nuisance Species Panel, New York State Invasive Species Council Advisory Committee, Lake Champlain Fish and Wildlife Management Cooperative, and Fisheries Technical Advisory Committee.
- » Staff participated in developing an **Asian clam control** strategy for Lake George and assisted with investigations into disturbance as a factor that may decrease the local population.
- » **Boat decontamination stations** treated high-risk boats with high-pressure hot water washes at select launches in Vermont and New York.

## Aquatic Invasive Species (AIS) Management Collaborations

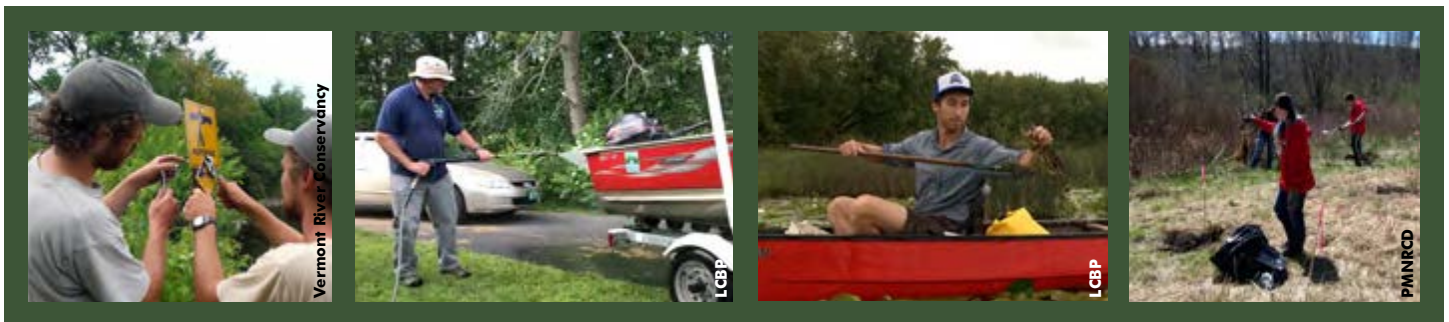
The AIS Management Coordinator worked with management partners on the following initiatives:

- Participated in the **New York State Invasive Species Council Advisory Committee Education and Outreach Committee** and worked to develop a 5-year management plan for the state. The Plan was presented to the full committee in November 2016.
- Attended 5 meetings of the **Adirondack regional AIS spread prevention partnership** to review priority placement of boat launch stewards and decontamination stations, reviewed level of coverage for the program based on different funding scenarios.
- Commenced a two-year term as **co-chair of the Northeast Aquatic Nuisance Species (NEANS) Panel** in December 2016. Co-chairs planned a joint meeting with the Mid-Atlantic Panel for June 2017. Two NEANS Panel calls were held to address

## Program Highlights

a rapid response funding request from the Council and regular business. Participated in **NEANS Panel Steering Committee, Council and Panel** calls and prepared the FY17 NEANS Panel budget serving in the role of treasurer for the Panel. The June 2017 meeting was canceled due to Department of Interior review.

- Participated in a number of **Aquatic Nuisance Species Task Force** calls in preparation for the May 2017 regional meeting in South Lake Tahoe, CA to identify priority agenda items. Participated in the ANS TF Boat Design Ad-Hoc workgroup and provided a second round of technical comments on the technical information report being developed to help prevent the spread of AIS through improved boat design. The May meeting was cancelled due to Department of the Interior review.
- Worked with the data manager to review the 2016 boat launch steward draft report and normalize the 2007-2016 field data for a 10-year trend analysis. The **boat launch steward data collection application was shared with NEIWPCC staff** at the All Staff meeting in October.
- Participated in the Northeast Aquatic Plant Management Society board of director's business meeting in preparation for the January 2017 NEAPMS meeting and ran the student poster session, presentation poster slam and coordinated the poster review competition at the conference. The Coordinator assisted with the meeting logistics and programming, silent action, program evaluation, student poster presentations and awards. The September meeting concluded a two-year elected term to the Board and the Coordinator was nominated and elected President at the January 2017 meeting.
- Attended the Lake Champlain Fish and Wildlife Management Cooperative and Fisheries Technical Advisory Committee meetings to review AIS threats, programs, and opportunities for education and outreach partnership in the Basin.
- Facilitated the Lake Champlain Basin AIS Rapid Response Task Force response to **Asian clam discovery in Lake Bomoseen, VT**, participated in species confirmation, site visit and site survey, coordinated risk assessment process with partners and released the AIS RR Task Force recommendation.
- The **Champlain Canal Barrier Feasibility Study contract** was executed between US Army Corps of Engineers (USACE) and NEIWPCC. On September 26th, Colonel Asbery from the USACE NY District Office signed the Champlain Canal barrier feasibility study contract executing the agreement with NEIWPCC to begin work on an all-taxa invasive species barrier design.
- Served as a **project reviewer for the USACE aquatic plant research and control program** at their Engineering Research and Development Center in Vicksburg, MI in November 2016.
- Held a **water chestnut workgroup meeting** with state, federal, and local partners to debrief the 2016 field season and planned for the 2017 field season. A water chestnut harvest in July 2017 engaged more partners and volunteers.
- Facilitated contract development with a local Québec watershed organization to support **stewards in Missisquoi Bay for the 2017 field season** and provided training to the stewards who used LCBP iPads to collect data. Materials were provided in French (t-shirts, sandwich boards, rack cards).
- Worked with USACE partners to offer and host a **workshop for the Section 542 services available** and other program assistance. LCBP sent out a press release about the workshop, 15 participants attended and a number of projects are



being pursued as a result using the Section 542 assistance. Any project that is selected for USACE support will be reviewed by the LCBP Technical Advisory Committee and approved by the Lake Champlain Steering Committee.

- Worked with USACE to revise the **Section 542 General Management Plan** which was presented and recommended for approval by the LCBP Executive Committee. Coordinator also worked with VT State on project summaries for two Section 542 project proposals (Waterbury Dam and Stevens/Jewett Brook) presented and reviewed by the TAC. Both projects were endorsed and recommended for approval to the LCBP Steering Committee. Coordinator also helped prepare for and attended a VT state and USACE partner meeting to review USACE specific projects, a number of which are being considered under Section 542. Coordinator and LCBP Director attended joint meeting to discuss updates on VT projects and visit two Section 542 field sites (Waterbury Dam and Bartlett Brook).

## AIS Management

Staff coordinated the following AIS management activities:

- Participated in the **Asian-clam control discussions and strategy for Lake George** and is assisting with investigations into disturbance as a factor that may decrease the local population.
- Attended the **Vermont State EcoAmericorps supervisor training program and supervised an Eco Americorps member** serving at the Lake Champlain Basin Program through August 2017. AIS Management Coordinator reviewed the grant agreement with the state program, finalized the scope of service for the BMP nutrient reduction tracking tool, set the EcoAmericops up with field service opportunities for water quality monitoring, boat launch stewardship, and service in the resource room. Other tasks included: timesheet approval, Eco AmeriCorps site visit, project guidance in collaboration with the mentor, and overall professional guidance on how to conduct oneself in the workplace.
- Developed a budget for the 2017 boat launch steward field season. Outreach was conducted to Québec partners to identify how to implement two stewards on Missisquoi Bay. The **Coordinator supervised the 2016 boat launch steward data manager** who worked throughout the winter to do a quality assurance review of the 2016 boat launch steward data. The data manager also worked to prepare the 2016 draft report and normalized all data collected between 2007 and 2016 for a 10-year trend analysis. The Coordinator worked with NEI to develop and post ads to hire 9 stewards for the 2017 boat launch steward program.
- Revised the **Lake Champlain Basin Aquatic Nuisance Species State Management Plan grant** scope of work for FY17 with VTDEC and submitted to USFWS and submitted the FY16 USFWS ANS SMP annual report.
- LCBP assisted VT state with the **harvest of a new population of water chestnut in Black Creek Marsh** in St. Albans Bay. No other rapid response actions took place during this reporting period.





# Local Implementation Grant

# 2016

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

### Project Summary

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 its six 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 2017, the river steward will continue AIS education and prevention on-stream 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 river's condition for presence or absence of AIS, overseeing the distribution of educational materials, and maintaining wader wash stations across the watershed.

#### Outputs:

- Seasonal plan
- Number of days of invasive species outreach on the river with anglers and data collection from those encounters
- Number and location of wader wash stations active along the rivers
- Outreach to local organizations and businesses, and number of events attended and people engaged.

#### Outcomes:

- Aquatic invasive species education and outreach to the angler community along rivers and with businesses and organizations in the watershed.

**Organization:** Ausable River Association (AsRA)

**Contact Person:** Brendan Wiltse

**Mailing Address:** PO Box 8  
Wilmington, NY 12997

**Phone:** 518-637-6859

**E-mail:** [brendan@ausableriver.org](mailto:brendan@ausableriver.org)

**Website:** <http://www.ausableriver.org>



**NEIWPCC Code:** L-2017-018

**GLFC**

**Start Date:** 4/10/17

**Grant Amount:** \$13,500.00

**Non-federal Match:** 2,000.00

**Total Amount:** \$15,500.00

2016

## Local Implementation Grant

## AIS Spread Prevention Watercraft Inspector Program

## Project Summary

The LCBP AIS Spread Prevention Grant helps to underwrite the full cost of the Adirondack Watershed Institute Stewardship Program's watercraft inspection and AIS monitoring efforts at locations in the headwaters of the Lake Champlain Basin, including Second Pond (Lower Saranac Lake) and Lake Flower. Stewards prevent the spread of AIS by performing careful inspections of all watercraft launched and retrieved at these sites, as well as educating the public in order to increase visitor understanding of AIS issues and spread prevention measures that they can take themselves.

## Outputs:

- Number of steward days of coverage
- Number of boats surveyed
- Spread prevention measures taken
- Invasive species collected
- Last body of water visited in previous two weeks.

## Outcomes:

- Aquatic invasive species spread prevention and education.

**Organization:** Paul Smith's College AWISP/Rainbow Lake Association

**Contact Person:** Dr. Eric Holmlund

**Mailing Address:** c/o Paul Smith's College  
P.O. Box 265, Paul Smiths, NY 12970

**Phone:** 518-327-6341

**E-mail:** eholmlund@paulsmiths.edu

**Website** <http://www.paulsmiths.edu/>



**NEIWPCC Code:** L-2017-016  
**GLFC**  
**Start Date:** 4/10/2017  
**Grant Amount:** \$30,000.00  
**Non-federal Match:**  
**Total Amount:** \$30,000.00



# Local Implementation Grant

# 2016

## Backcountry Water Monitors, Year Three

### Project Summary

Working with the Adirondack Park Invasive Plant Program (APIPP), the Backcountry Water Monitors Project, will educate and train ADK members and supporters 1) to identify Aquatic Invasive Species in backcountry waters; and 2) to record and report their work (positive and negative findings) to project staff (with volunteers also learning to self-report positive findings through iMapInvasives). The Backcountry Water Monitors Project utilizes existing APIPP Aquatic Invasive Species (AIS) workshops in order to train volunteers.

#### Outputs:

- ADK will educate its membership about aquatic invasives through a comprehensive awareness campaign
- Two training workshops, and four outings resulting in 25 additional volunteer stewards who will identify, monitor, and report Aquatic Invasive Species (AIS)
- 10 additional backcountry areas of the Lake Champlain Watershed and the Adirondack Park to the survey
- Past volunteers will survey 5 new water bodies.
- Total new water bodies to be surveyed in Year Three will be 15.

#### Outcomes:

- Aquatic invasive species monitoring, spread prevention, and education and outreach.

**Organization:** Adirondack Mountain Club

**Contact Person:** Cathy Pedler

**Mailing Address:** 814 Goggins Road  
Lake George, NY 12845

**Phone:** 518-668-4447

**E-mail:** cathypedler.adk@gmail.com

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



**NEIWPCC Code:** L-2017-022

**EPA**

**Start Date:** 4/10/2017

**Grant Amount:** \$12,757.00

**Non-federal Match:** \$ 5,797.00

**Total Amount:** \$18,554.00

2016

## Local Implementation Grant

## Boat Access Greeter Program

## Project Summary

The Lake Dunmore Fern Lake Association (LDFLA) Greeter and Educational Program provides complimentary boat and trailer inspections and distributes Aquatic Invasive Species (AIS) educational materials to prevent and reduce the spread of invasive species.

## Outputs:

- Inspection of boats and trailers,
- Collection of AIS data per LCBP data protocol and requirements,
- Advise and educate boaters to stay clear of marked areas with Eurasian water milfoil (EWM) buoys and ensure overall safety of divers and the public,
- Educate boaters on the spread of AIS and distribute brochures and stickers obtained from Lake Champlain Basin Plan to recreational users at the boat access area,
- Distribution of educational material to property owners emphasizing the “do’s and don’t’s” of Eurasian water milfoil control.
- Property owners will be encouraged to share this information with friends and renters, and promote the LDFLA online tools to property owners and public that will highlight LDFLA EWM control efforts, greeter program, EWM mapping tool.

## Outcomes:

- Aquatic invasive species spread prevention and education and outreach.

**Organization:** Lake Dunmore Fern Lake Association

**Contact Person:** Jim Meyersburg

**Mailing Address:** PO Box 14  
Salisbury, VT, 05769

**Phone:** 239-272-5494

**E-mail:** [jimmeyersburg@msn.com](mailto:jimmeyersburg@msn.com)

**Website:** <http://www.ldfla.com/>



**NEIWPCC Code:** L-2017-023

**EPA**

**Start Date:** 4/18/2017

**Grant Amount:** \$14,267.00

**Non-federal Match:** \$ 1,725.00

**Total Amount:** \$15,992.00

# Local Implementation Grant

# 2016

## Boat Launch Steward at Lake Carmi

### Project Summary

The purpose of this project is to prevent the spread of aquatic invasive species by establishing a VT DEC trained Boat Launch Steward at the north beach boat launch at Lake Carmi. Lake Carmi is designated an impaired lake by the State of Vermont. The lake is plagued by a heavy infestation of Eurasian Milfoil (and Curly Leaf Pondweed). Establishing Boat Launch Steward at the boat access to inspect boats will help prevent the spread of Eurasian watermilfoil and other potential invasive species from being transported into and out of Lake Carmi. It will also present the opportunity for the Boat Launch Steward to educate boaters in proper practices that prevent the spread of invasive species.

#### Outputs:

- Number of steward days of coverage
- Number of boaters interacted with
- Data collected from boat inspection
- Invasive species intercepted
- Last body of water visited by watercraft in previous two weeks.

#### Outcomes:

- Aquatic invasive species spread prevention and education and outreach.

**Organization:** Franklin Watershed Committee

**Contact Person:** Peter Benevento

**Mailing Address:** P. O. Box 79  
Franklin, VT 05457

**Phone:** 774-258-0216

**E-mail:** peterben@gmail.com

**Website:** <https://www.franklinwatershed.org/>



**NEIWPCC Code:** L-2017-042  
**EPA**  
**Start Date:** 5/22/2017  
**Grant Amount:** \$4,924.15  
**Non-federal Match:**  
**Total Amount:** \$4,924.15

2016

## Local Implementation Grant

## Control of Yellow Iris in Thorp Brook and Lewis Creek

## Project Summary

In response to Lewis Creek Associations' completed 2015-16 yellow iris study; this grant will fund two priority recommendations from the study regarding ongoing efforts to increase capacity for spread prevention and control of exotic/invasive yellow iris (*Iris pseudacorus*) in Lake Champlain tributaries. Step one will include preparation of a management plan and the identification and treatment of iris in the lower Thorp Brook and associated wetlands. Step two will be meetings with technical consultants and land-owners in the heavily infested lake influenced floodplains of Lewis Creek to identify management and spread prevention options for this area.

## Outputs:

- Site management plan of yellow iris in the Thorp and Lewis Creek area and treatment of all yellow iris stands to 90% control.

## Outcomes:

- Reduce the population of yellow iris in the Lewis Creek watershed to prevent spread and further impact on native species.

**Organization:** Lewis Creek Association

**Contact Person:** Robert Hyams

**Mailing Address:** 442 Lewis Creek Road  
Charlotte, VT 05445

**Phone:** (513) 470 7554

**E-mail:** robert@gmavt.net

**Website:** <http://www.lewiscreek.org/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-017  
**GLFC**  
**Start Date:** 4/10/2017  
**Grant Amount:** \$4,906.00  
**Non-federal Match:** \$ 547.00  
**Total Amount:** \$5453.00

# Local Implementation Grant

# 2016

## Lake Eden Greeter Program

### Project Summary

There are three public boat launches on Lake Eden. Lake Eden Association (LEA) proposes to continue their greeter program established in 2009 at each location to talk to boaters about the invasive species problem in Vermont. Educational materials will be distributed and boaters asked to inspect their boats before and after entering a body of water. A daily log of boater activity will be kept. LEA will also plan to continue to monitor Lake Eden to assist in the early detection of milfoil or other invasive species, a program started in 2008. Working with the State of Vermont DEC Vermont Invasive Patroller program LEA will schedule a training session for the stewards, volunteers and any other public participants who wish to attend.

#### Outputs:

- Number of days of steward coverage
- Number of boats inspected
- Invasive species removed
- Previous body of water visited by water craft in the previous two weeks.

#### Outcomes:

- Aquatic invasive species spread prevention and education.

**Organization:** Lake Eden Association

**Contact Person:** Tracey Morin

**Mailing Address:** PO Box 203  
Eden, VT 05652

**Phone:** 802-635-2528

**E-mail:** sbadmin@eden.vt.org

**Website:** <http://www.edenvt.org/recreation/lake-eden-association-greeter-program/>



**NEIWPCC Code:** L-2017-014

**GLFC**

**Start Date:** 4/10/2017

**Grant Amount:** \$13,600.00

**Non-federal Match:** \$10,729.00

**Total Amount:** \$24,329.00



2016

## Local Implementation Grant

## Lake George AIS Monitoring and Outreach Program

## Project Summary

The Lake George AIS Monitoring and Outreach Program will seek to conduct invasive species public education and outreach throughout the Lake George watershed in order to expand individual and community awareness of the threats of invasive species and ways they can help prevent their spread. Two staff will be hired for the summer to provide education and outreach at events and cartop launches. Outputs will include number of people interacted with about invasive species spread prevention. Through education programming we hope to expand individual and community awareness of the threats of invasive species and ways they can help prevent their spread.

## Outputs:

- Number of events attended by AIS steward interns
- Data on number of nonmotorized boats surveyed and invasive species collected.

## Outcomes:

- Increased invasive species awareness and prevention of invasive species spread.

**Organization:** 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** <https://www.lakegeorgeassociation.org/>



**NEIWPCC Code:** L-2017-015

**GLFC**

**Start Date:** 4/10/2017

**Grant Amount:** \$12,260.00

**Non-federal Match:** \$ 4,205.00

**Total Amount:** \$16,465.00



# Local Implementation Grant

# 2016

## *Lois McClure* Outreach on Aquatic Invasive Species Spread

### Project Summary

Lake Champlain Maritime Museum will use the canal schooner *Lois McClure* to engage the public in an orientation to the concept of invasive species, the role that the region's waterways have played as conduits to their spread, and tactics to prevent further spread. This program will be presented in 38 stops to ports throughout Vermont and New York over the *Lois McClure's* 2017 educational tour.

#### Outputs:

- Aquatic invasive species training for LCMM staff
- An aquatic invasive species education toolkit
- Number of individuals informed about aquatic invasive species issues relevant to the canal system and the Basin.

#### Outcomes:

- Increased awareness of aquatic invasive species spread prevention and issues within the Lake Champlain Basin shared within and in adjoining watersheds.

**Organization:** Lake Champlain Maritime Museum

**Contact Person:** Erick Tichonuk

**Mailing Address:** 4472 Basin Harbor Road  
Vergennes, VT 05491

**Phone:** (802) 475-2022

**E-mail:** [erickt@lcmm.org](mailto:erickt@lcmm.org)

**Website:** <http://www.lcmm.org/>



**NEIWPCC Code:** L-2017-029

**EPA**

**Start Date:** 4/24/2017

**Grant Amount:** \$15,000.00

**Non-federal Match:** \$50,000.00

**Total Amount:** \$65,000.00

2016

## Local Implementation Grant

## Upper Saranac Lake Watershed Stewardship Program

## Project Summary

This project encompasses posting lake stewards at the major points of entry and egress for boat traffic on Upper Saranac Lake with the goal of preventing the spread of Aquatic Invasive Species (AIS). Stewards prevent the spread of AIS by performing careful inspections of all watercraft launched and retrieved at these sites. The steward will supervise cleaning of watercraft when appropriate, utilizing a decontamination wash station at the Back Bay Boat launch site. They will also educate lake users to increase visitor understanding of AIS issues and spread prevention measures that can be utilized by the general public. Stewards will collect detailed data to be used in Paul Smith's College Watershed Stewardship Program's (WSP) comprehensive summary report.

## Outputs:

- Steward coverage
- Number of boats inspected
- Aquatic invasive species intercepted
- Last body of water visited by water craft in the previous two weeks
- Watershed workshop summaries and number of participants.

## Outcomes:

- Aquatic invasive species spread prevention and education.

**Organization:** Upper Saranac Foundation

**Contact Person:** Guy Middleton

**Mailing Address:** PO Box 564  
Saranac Lake, NY 12983

**Phone:** 518 796-1052

**E-mail:** lakemanager@uslf.org

**Website:** <http://usfoundation.net/>



**NEIWPCC Code:** L-2017-021

**EPA**

**Start Date:** 4/12/2017

**Grant Amount:** \$15,000.00

**Non-federal Match:**

**Total Amount:** \$15,000.00

# Healthy Ecosystems Project

## Boat Launch Stewards - LCBP

### Project Summary

The 2017 season was the 11th year of the Lake Champlain Boat Launch Steward Program on Lake Champlain. The Lake Champlain Basin Program'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:

- Twelve lake stewards greeted, interviewed, and shared AIS information with boaters at 12 different launch sites around Lake Champlain, including two new sites on Missisquoi Bay, Québec.
- The stewards spent a total of 534 days at the launches from Memorial Day weekend until the end of September. Stewards talked with 25,636 boaters and inspected 12,314 vessels launching and retrieving, averaging 21 survey records a day per steward.
- Of the 11,148 vessel groups surveyed, 11.5% of their vessels were found to harbor aquatic plants, animals, or detritus, and 2.8% were found to harbor one or more aquatic invasive species. 86.4 percent of all boaters, when interviewed, reported to have taken one or more aquatic invasive species spread prevention measure.

#### 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

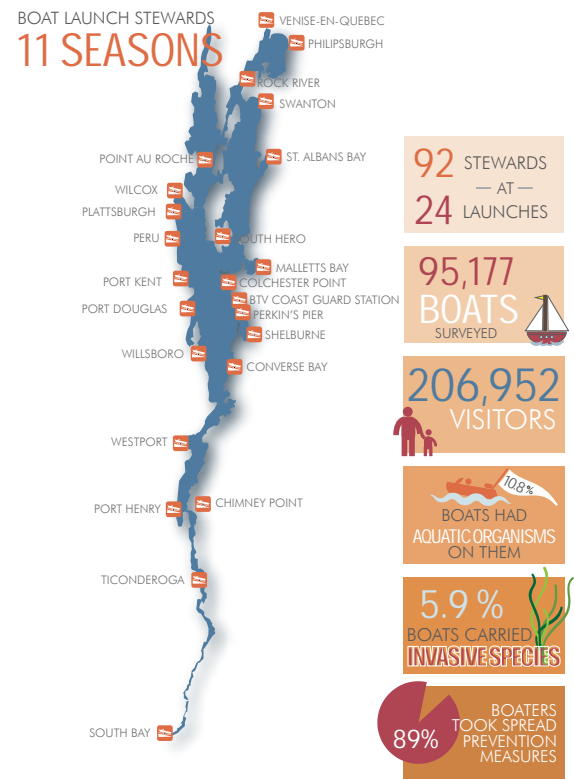
**Contact Person:** Meg Modley

**Mailing Address:** 54 West Shore Road  
Grand Isle, VT 05458

**Phone:** 802 372-3213 x 215

**E-mail:** mmodley@lcbp.org

**Website:** <https://www.lcbp.org>



DATA SOURCE: LCBP Data from 2007-2017 LCBP Boat Launch Steward interactions with visitors at NYS DEC Access Areas, QC \_\_\_\_\_ and VT Fish and Wildlife Access Areas.



**NEIWPCC Code:** N/A

**EPA**

**Start Date:** 2/1/2017

**Grant Amount:** \$73,500.00

**Non-federal Match:**

**Total Amount:** \$73,500.00

# Healthy Ecosystems Project

## Champlain Canal Barrier

### 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 September 2017 NEIWPCC and USACE executed an agreement for design assistance for the Lake Champlain Canal Study, New York. A scope of work is under development.

#### Outputs:

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

#### Outcomes:

- The feasibility study will outline options to reduce the risk of AIS transport through the Champlain Canal.

**Organization:** LCBP/NEIWPCC

**Contact Person:** Meg Modley

**Mailing Address:** 54 West Shore Road  
Grand Isle, VT 05458

**Phone:** 802 372-3213 x 215

**E-mail:** mmodley@lcbp.org

**Website:** <https://www.lcbp.org>



**NEIWPCC Code:** N/A

**GLFC**

**Start Date:** 9/10/1823

**Grant Amount:** \$200,000.00

**Non-federal Match:**

**Total Amount:** \$200,000.00

# Healthy Ecosystems Project

2016

## Missisquoi Bay Boat Launch Stewards

### Project Summary

The seasonal Québec boat launch steward interns will work to prevent the unintentional introduction or spread of aquatic invasive species in and out of Lake Champlain, inform the public of aquatic invasive species issues and how they can help with spread prevention, and gather data on boat launch and boater use of Lake Champlain to better inform resource managers about recreational use of Lake Champlain and vectors of aquatic invasive species introduction. The Québec stewards will be hired by Organisme de bassin versant de la baie Missisquoi (OBVBM) and trained and equipped with supplies by the LCBP. Québec stewards will collect the exact same data as the U.S. boat launch stewards and all data from Québec will similarly be uploaded to a cloud for data management. The Québec stewards will attend the Vermont boat launch steward training program and will use LCBP issued iPads for data collection.

#### Outputs:

- Total number of inspections
- Number of captures on launches and retrievals
- Number of people reached

#### Outcomes:

- Two QC stewards will be stationed at public boat launches around Missisquoi Bay in Québec: (1) Venise-en-Québec at the Pourvoirie Courchesne; (2) Philisburg (Saint-Armand) dock to offer AIS spread prevention messages to users.
- Expanded Lake Champlain boat launch steward program into Québec.

**Organization:** OBVBM

**Contact Person:** Frédéric Chouinard

**Mailing Address:** 2 Adhemar-Cusson  
Bedford, Quebec, Canada, JOJ 1A0

**Phone:** 450-248-0100

**E-mail:** Frederic.chouinard@obvbm.org

**Website:** <http://www.obvbm.org/>



**NEIWPCC Code:** L-2017-030

**GLFC**

**Start Date:** 4/25/2017

**Grant Amount:** \$16,000.00

**Non-federal Match:** \$ 1,200.00

**Total Amount:** \$17,200.00



2015

## Local Implementation Grant

## Backcountry Water Monitors, Year 2

## Project Summary

Working with the Adirondack Park Invasive Plant Program (APIPP), the Backcountry Water Monitors Project educated and trained ADK members and supporters 1) to identify Aquatic Invasive Species in backcountry waters; and 2) to record and report their work (positive and negative findings) to project staff (with volunteers also learning to self-report positive findings through iMapInvasives). The Backcountry Water Monitors Project utilized existing APIPP Aquatic Invasive Species (AIS) workshops in order to train volunteers. However, two AIS workshops were organized specifically to train volunteers in backcountry monitoring protocol and to report other important data about their aquatic and riparian habitat such as the presence/absence of hemlock woolly adelgid. ADK's membership, volunteers, and various print and social media platforms helped increase attendance at these workshops. The Backcountry Water Monitors Project sought to educate and recruit volunteers who can monitor backcountry waters of the Lake Champlain Basin and the Adirondack Park which are currently not effectively surveyed by other efforts.

## Outputs:

- Two trainings, one held at the Albany Pine Bush Discovery Center and the second at ADK's Heart Lake Property.
- Educated 56 volunteers (28 each in Y1 and Y2) and surveyed 29 lakes or ponds (14 in Y1 and 15 in Y2).
- Engaged the public through print and social media and events and outings.
- ADK also continued its work in educating decision makers about the need to stem the spread of invasives through establishing a network of boat-washing and inspection stations throughout the Adirondack Park.

## Outcomes:

- AIS spread prevention, monitoring, and education in the Basin. Monitoring and reporting of AIS presence in high priority backcountry water bodies.

**Organization:** Adirondack Mountain Club

**Contact Person:** Cathy Pedler

**Mailing Address:** 814 Goggins Road  
Lake George, NY 12845

**Phone:** 518 668-4447

**E-mail:** cathypedler.adk@gmail.com

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



**NEIWPC Code:** L-2016-006

**GLFC**

**Date Complete:** 2/2/2017

**Grant Amount:** \$14, 213.00

**Non-federal Match:** \$ 5,072.00

**Total Amount:** \$19,285.00



# Local Implementation Grant

2015

## Boat Access Greeter Program

### Project Summary

The Lake Dunmore Fern Lake Association (LDFLA) greeter and educational program provided complimentary inspections of boats and trailers and distributed Aquatic Invasive Species educational material to prevent/reduce the spread of invasive species. Currently Eurasian watermilfoil is the only known invasive species populating Lake Dunmore and Fern Lake. Neighboring lakes and waterways have known populations of other Aquatic Invasive Species (AIS) including but not limited to, hydrilla, water chestnut, variable leaf watermilfoil, Asian clams and zebra mussels. Keeping these invasives out of Dunmore and Fern lakes is an essential part of the overall control program. The cost to control one invasive species is staggering. Therefore, the prevention of introducing others and spreading EWM is critical to sustaining Vermont's lakes and ponds.

#### Outputs:

- 1231 complimentary inspections of boats and trailers and distributing educational literature to prevent the spread of invasive species.
- Removed: 12 pieces of Eurasian Milfoil, 5 on launch, 7 on retrieval, 9 milfoil species, 6 on launch, 3 on retrieval, 2 Native Pondweed, 1 on launch, 1 on retrieval, 1 possible hydrilla, 1 on launch, and 28 non-aquatic pieces of debris.

#### Outcomes:

- AIS spread prevention and control
- Public education and awareness.

**Organization:** Lake Dunmore Fern Lake Association

**Contact Person:** Jim Meyersburg

**Mailing Address:** PO Box 14  
Salisbury, VT 05769

**Phone:** 239 272-5494

**E-mail:** [jimmeyersburg@msn.com](mailto:jimmeyersburg@msn.com)

**Website:** <http://www.ldfla.com/>



*Freshwater jellyfish specimen collected during the boat launch steward season*



<b>NEIWPCC Code:</b>	L-2016-030
<b>GLFC:</b>	
<b>Date Complete:</b>	11/14/2016
<b>Grant Amount:</b>	\$14,267.00
<b>Non-federal Match:</b>	\$ 1,725.00
<b>Total Amount:</b>	<b>\$15,992.00</b>

2014

## Local Implementation Grant

## Early Detection: Aquatic Invasive Yellow Iris Removal and Spread Prevention Plan for Four Lake Champlain Tributaries

### Project Summary

Aquatic invasive plant control programs are active for the confluence areas of LaPlatte/McCabe's and Thorp/ Kimball watersheds that manage European Frogbit and water chestnut populations. Technical experts for this initiative suggested investigating the feasibility of adding control measures for yellow iris to the current management program, and to expand the long-term management program to the lower Lewis Creek that drains into Lake Champlain. This project investigated hand and herbicide treatment removal techniques for yellow iris in 3 geographic locations to evaluate methods, cost and feasibility. All areas are of statewide ecological significance.

#### Outputs:

- A GIS map of the Yellow Iris infestation areas
- Report on the removal methods, costs and feasibility of preferred removal practices for long term volunteer monitoring and management at a municipal level.

#### Outcomes:

- Evaluation of yellow iris control methods and development of early detection and rapid response protocols.

**Organization:** Lewis Creek Association

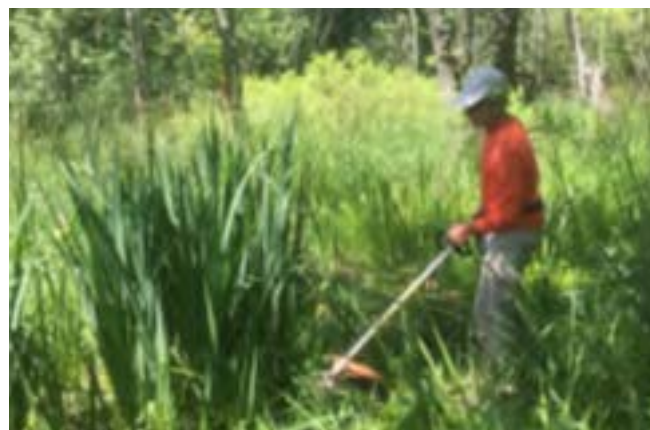
**Contact Person:** Martha Illick

**Mailing Address:** 442 Lewis Creek Rd  
Charlotte, VT 05445

**Phone:** 802 425-2002

**E-mail:** [marty.illick@gmail.com](mailto:marty.illick@gmail.com)

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** L-2015-018

**GLFC**

**Date Complete:** 10/18/2017

**Grant Amount:** \$7,255.00

**Non-federal Match:** \$1,100.00

**Total Amount:** \$8,355.00

# Local Implementation Grant

2015

## Early Detection of Floating-Leaved Invasives

### Project Summary

The Lake Champlain Committee worked with Arrow-wood Environmental to conduct surveys for populations of floating-leaved aquatic invasive species in the northern portion of the Lake Champlain Basin. Surveys targeted European frog-bit and water chestnut, two species that grow in similar habitats, and track the spread of these two species away from Lake Champlain. Any encounters with water chestnut were met with rapid response actions and hand-pulling of the invasive plant. The Early detection of Floating-Leaved Invasives Project was undertaken with the following objectives: 1) remotely identify frog-bit and water chestnut habitat; 2) conduct field inventories in selected habitat areas to identify new infestations; and 3) initiate control on any new, small infestations. The goal of the project was to provide a comprehensive map on the status of frog-bit and water chestnut in the northern lake and coordinate with partners to initiate control on any nascent populations discovered.

#### Outputs:

- Digitized maps of frog-bit and water chestnut in the northern lake,
- Data on the number of plants harvested and the status of current AIS populations. Frog-bit was found to be widespread throughout the northern lake, but at low abundance.
- Two new populations of water chestnut were also discovered in the study area. A small population of 109 plants was mapped and controlled in Lake Alice, NY. A much larger population in Black Creek Marsh, Vermont was also discovered. Partial mapping and control of this infestation occurred in 2016, but could not be completed due to low water levels.

#### Outcomes:

- Reduce the spread of aquatic invasive species within the Lake Champlain Basin.
- Promote the early detection of and rapid response to aquatic invasive species entering Lake Champlain Basin.

**Organization:** Lake Champlain Committee

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



*Sparse cover of frog-bit at the Rock River site*



*Harvesting water chestnut at Black Creek Marsh*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-028

**GLFC:**

**Date Complete:** 7/3/2017

**Grant Amount:** \$15,000.00

**Non-federal Match:** \$ 7,695.00

**Total Amount:** \$22,695.00

2015

## Local Implementation Grant

## Eurasian Watermilfoil Control in the Lake Colby Watershed

## Project Summary

Each year the Colby-Foundation contracts with the Adirondack Watershed Institute at Paul Smith's College (PSAWI) and the Lake Colby Association to provide Eurasian watermilfoil (EWM) eradication services for the Lake Colby watershed (Lake Colby, Little Colby pond, and the connecting waterways). The Foundation, a 501c3 not-for-profit, also reimburses documented expenses incurred by the Lake Colby Association, a 501c4 lake association, and its support volunteers who assist in the collection of harvested milfoil and its disposal in an approved land fill. The 2016 project consisted of a team of divers from PSAWI who hand-harvested and matted pre-mapped (by volunteers) areas of the lake in multiple passes over a six-week period starting in June 2016.

## Outputs:

- The harvesting program began June 6-9 with one week of mapping and harvesting. The Paul Smith's Adirondack Watershed Institute (PSAWI), our sub-contractor, supplied the team of divers, "hookah" rigs (surface air supply sometimes called SNUBA), and surface workers.
- 25 benthic mats were moved from "Trestle Bay" to West Bay. This initial effort was done as a training exercise for the dive team and was therefore a contribution at no cost to the project. The team returned, as part of the billable contract, June 13-16 and hand-harvested 72 bags of EWM in West Bay and 32 bags in North Bay. The remaining hand-harvesting of the main lake took place in two additional sessions, the first July 11-14 resulted in 63 bags removed in a whole-lake swim.
- The project was completed at the beginning of August (8-11), with 32 bags harvested in Trestle Bay, 30 in West Bay, 9 in North Bay, and 17 bags from the south shore (along Moir Road). The team removed 8 mats from North Bay that had reached the end of their useful lives.

## Outcomes:

- Control and contain EWM in Lake Colby to help prevent spread.

**Organization:** Colby Foundation

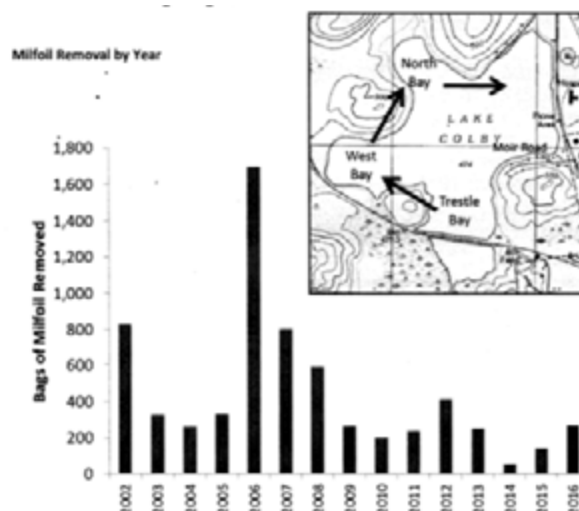
**Contact Person:** Ernest E. [Lee] Kent

**Mailing Address:** PO Box 934  
Saranac Lake, NY 12983

**Phone:** 518 261-6608

**E-mail:** [info@colby-foundation.org](mailto:info@colby-foundation.org)

**Website:** <http://colby-foundation.org/>



**NEIWPCC Code:** L-2016-032

**GLFC:**

**Date Complete:** 11/14/2016

**Grant Amount:** \$11,000.00

**Non-federal Match:** \$ 5,300.00

**Total Amount:** \$16,300.00



# Local Implementation Grant

# 2015

## Install a Full Hot Water Wash Station at the Lake Iroquois Fishing Access

### Project Summary

A growing number of associations on lakes with Vermont State Fishing Accesses support the idea of a wash station for boats entering and leaving the water body. Research has shown that the most thorough way of eliminating invasive organisms from boats is by use of a pressure hose carrying hot water. Because of the Lake Iroquois Fishing Access' proximity to Lake Champlain, which carries the highest number of invasive species in the state, and because the highest percentage of boats visiting the access come from Lake Champlain, the lake is continually vulnerable to taking in invasive species at any time. The goal was to have a fully functioning hot water wash station purchased, permitted, and in place by May of 2016, thus before the next boating season.

### Outputs:

- A fully functioning hot water wash station approximately 200' from shore at the state fishing access on Lake Iroquois. This included a pad for washing with proper drainage from the pad, a storage shed, an auxiliary water pump and storage tank, a hot water pressure washer, a sealed lead-acid battery, a diaphragm pump and appropriate piping to draw water from the lake.

### Outcomes:

- AIS spread prevention
- Provide best available technology for boat decontamination to prevent the spread of AIS.

**Organization:** Lake Iroquois Association

**Contact Person:** Rodger L. Crouse

**Mailing Address:** PO Box 569, Hinesburg, VT 05461

**Phone:** 802 878-5953

**E-mail:** rogercrouse@gmail.com

**Website:** <http://www.lakeiroquois.org/>



*High pressure hot water watercraft decontamination unit being unloaded*



<b>NEIWPCC Code:</b>	L-2016-033
<b>GLFC:</b>	
<b>Date Complete:</b>	9/15/2017
<b>Grant Amount:</b>	\$15,000.00
<b>Non-federal Match:</b>	\$ 8,512.00
<b>Total Amount:</b>	<b>\$23,512.00</b>

2015

## Local Implementation Grant

## Lake Eden Greeter Program

## Project Summary

This project was a continuation of a greeter program established in 2009 at three public boat launches on Lake Eden. Each location had a greeter to talk to boaters regarding the invasive species problem in Vermont. Educational materials were distributed and boaters asked to inspect their boats before and after entering a body of water. A daily log of boater activity was kept.

## Outputs:

- Seven Lake Eden stewards conducted 2113 boat inspections, encountered 2962 visitors, and recorded AIS and type removed, and last body of water visited in previous two weeks.
- Stewards did not detect any invasive organisms during their 151 days of steward coverage during the summer 2016 season.
- Stewards did remove non-invasive plants from four (4) boats during their inspection process.
- Stewards shared with visiting boaters the prevention methods necessary to keep their watercraft clean before entering and after exiting recreational water sources.

## Outcomes:

- AIS spread prevention

**Organization:** Lake Eden Association

**Contact Person:** Gary Durett

**Mailing Address:** PO Box 203, Eden, VT 05652

**Phone:** 802 760-0841

**E-mail:** [gmdurett@myfairpoint.net](mailto:gmdurett@myfairpoint.net)

**Website:** <http://www.edenvt.org/recreation/lake-eden-association-greeter-program/>



**NEIWPCC Code:** L-2016-002

**GLFC**

**Date Complete:** 1/31/2017

**Grant Amount:** \$13,600.00

**Non-federal Match:** \$ 9,543.00

**Total Amount:** **\$23,143.00**



# Local Implementation Grant

2015

## Lake George Invasive Species Spread Prevention Education Interns

### Project Summary

The Lake George Invasive Species Education Interns helped develop and participate in invasive species public education and outreach projects and events throughout the Lake George watershed in order to expand individual and community awareness of the threats of invasive species and ways to help prevent their spread. Interns were hired for the summer and positioned at events, cartop launches, and at strategic locations around Lake George, providing boaters, residents, and visitors with educational information about aquatic invasive species and spread prevention.

#### Outputs:

- AIS educational materials produced and printed, invasive species spread prevention education at boat launches, number of visitors informed about AIS spread prevention at farmer's markets, festivals and visitor centers.
- Interacted with 961 people from May through August 2016. The majority of interactions with people about aquatic invasive species occurred at events throughout the Lake George watershed. Fifty-three of the interactions took place at the Northwest Bay Cartop boat launch.
- Throughout July and August, the interns inspected 9 canoes and 23 kayaks at this boat launch finding no aquatic organism attached to the vessels.
- Assisted with aquatic invasive species monitoring on Lake George. Interns assisted with an Asian Clam Citizen science day, surveyed Rogers Rock Campground to determine effectiveness of Asian clam treatment, and documented Asian clam densities in Lake George Village. They also assisted with surveying of Eurasian watermilfoil sites.

#### Outcomes:

- AIS spread prevention

**Organization:** Lake George Association

**Contact Person:** Kristen Rohne

**Mailing Address:** PO Box 408  
Lake George, NY 12845

**Phone:** 518 668-3558

**E-mail:** [krohne@lakegeorgeassociation.org](mailto:krohne@lakegeorgeassociation.org)

**Website:** <http://www.lakegeorgeassociation.org/>



*Interns set-up at the Bolton Landing Farmer's Market and ready to answer the public's questions.*



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-003

**GLFC**

**Date Complete:** 4/24/2017

**Grant Amount:** \$14,300.00

**Non-federal Match:** \$ 8,815.00

**Total Amount:** \$23,115.00

2015

## Local Implementation Grant

## Monitor Bay AIS Survey and Spread Prevention Plan

## Project Summary

Eurasian watermilfoil has been identified at Monitor Bay. The Town wants to manage the spread of this invasive, as it continues to grow worse. The Town needs to develop a management plan for controlling the spread of this invasive before it spreads to other areas of the Lake. The goal of the project is to hire a consulting firm to conduct an aquatic plant survey of the bay and evaluate options for invasive species spread prevention by boat traffic.

## Outputs:

- Darrin Freshwater Institute conducted an aquatic plant survey that shows populations of Eurasian watermilfoil and Curly leaved pondweed present in the bay.
- Various proposals on invasive species spread prevention were included in the Plan.
- The Town installed an aquatic plant disposal station at the boat ramp and conducted outreach to campground users about aquatic invasive species spread prevention.

## Outcomes:

- Invasive species spread prevention planning and education and outreach.

**Organization:** Town of Crown Point

**Contact Person:** Tiffany Pinheiro

**Mailing Address:** PO Box 407  
Westport, NY 12993

**Phone:** 518 962-8225

**E-mail:** [tpinheiro@westelcom.com](mailto:tpinheiro@westelcom.com)

**Website:** <http://townofcrownpoint.com/>



*AIS disposal station installed at Town of Crown Point boat launch.*



**NEIWPCC Code:** L-2016-034

**GLFC**

**Date Complete:** 6/21/2017

**Grant Amount:** \$6,000.00

**Non-federal Match:**

**Total Amount:** \$6,000.00

# Local Implementation Grant

2015

## Upper Saranac Lake Watershed Steward Program

### Project Summary

This grant helped to underwrite the full cost of the Watershed Stewardship Program's watercraft inspection and Aquatic Invasive Species (AIS) monitoring efforts at locations in the head- waters of the Lake Champlain Basin, including Upper Saranac Lake and Fish Creek Ponds. Stewards prevent the spread of AIS by performing careful inspections of all watercraft launched and retrieved at these sites, as well as educating the public in order to increase visitor understanding of AIS issues and spread prevention measures that they can take themselves. The one steward position funded by the LCBP grant produced four days of boat ramp stewardship and one day of education outreach time. The stewards interacted with all visitors during their shifts and inspected boats both entering and leaving the waterways, removing plant and animal fragments, while educating users about AIS.

#### Outputs:

- Two stewards inspected 2539 watercraft for aquatic invasive species May 27th through October 10th
- 5610 visitors informed of AIS ecology and spread prevention measures.
- Intercepted 139 watercraft with some type of plant or animal fragments attached, indicating that 5.5% of boats inspected harbored some type of organism.
- Stewards discovered and removed AIS including, Eurasian watermilfoil (*Myriophyllum spicatum*), Variable-Leaf milfoil (*Myriophyllum heterophyllum*), Curry-leaf pondweed (*Potamogeton crispus*), Spiny Waterflea (*Bythotrephes longimanus*) and Zebra Mussels (*Dreissena polymorpha*).

#### Outcomes:

- Reduce the introduction and spread of aquatic invasive species in the Adirondack region and protect the many lakes currently not infested by aquatic invasive species
- Educate the public about AIS spread prevention methods.

**Organization:** Upper Saranac Lake Association

**Contact Person:** Guy Middleton

**Mailing Address:** PO Box 564  
Saranac Lake, NY 12983

**Phone:** 518 796-1052

**E-mail:** lakemanager@uslf.org

**Website:** <http://www.uppersaranac.com/>



**AWI Steward at the USL Back Bay wash station.**  
**Photo: Guy Middleton**



Lake Champlain  
Basin Program

<b>NEIWPCC Code:</b>	L-2016-029
<b>GLFC</b>	
<b>Date Complete:</b>	2/2/2017
<b>Grant Amount:</b>	\$15,000.00
<b>Non-federal Match:</b>	
<b>Total Amount:</b>	\$15,000.00

2014

## Local Implementation Grant

## Warren County Purple Loosestrife Management Program

## Project Summary

Warren County as with many other counties in the Champlain Watershed, has a tremendous explosion in its purple loosestrife population. Purple loosestrife beetles (*Galerucella calmarensis* and *G. pusilla*) were collected by the District and bred for dispersal along the wetlands of Halfway Brook and Lake George. While in the wetlands, the District and volunteers used GPS mapping to record invasive species for the Capital Mohawk PRISM database.

A hatchery system was built with small wading pools, using potted purple loosestrife and cover netting to rear the beetles. The increased number of beetles were used to manage the purple loose- strife populations. The education and outreach components included volunteers, presentations, and educational site visits.

## Outputs:

- During the two year project, the District and volunteers collected 890 Purple Loosestrife beetles from a historic release site in Essex County, then successfully reared and released approximately 12,200 beetles into three major wetlands of the Champlain Basin sub watersheds of Halfway Brook and Lake George.
- The Adirondack Park Invasive Plant Program (APIPP) instructed the District and the three volunteer organizations how to identify and collect the beetles at the collection site. Once the beetles and loosestrife plants were placed in the hatcheries WCSWCD constructed, the Lake George Association, Queensbury Parks & Recreation Department and three Glens Falls Middle School students cared for the hatcheries during the rearing process.
- Along with the educational field work, the District also held six presentations and created a Purple Loosestrife brochure that included additional wetland invasive plants commonly found in the Champlain Basin.

## Outcomes:

- AIS containment and control using biological control method

**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:** <http://www.warrenswcd.com/>



**Beetle hatcheries**



**NEIWPCC Code:** L-2015-017

**GLFC**

**Date Complete:** 1/27/2017

**Grant Amount:** \$14,800.00

**Non-federal Match:** \$ 2,540.00

**Total Amount:** \$17,340.00



SECTION THREE:

# THRIVING COMMUNITIES









# THRIVING COMMUNITIES

**GOAL: Lake Champlain Basin 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 these resources while maintaining strong local economies.**

The LCBP continues to work on the premise that strong communities are a keystone of healthy watersheds. Our efforts in this area focus on providing financial and technical support to community and management partners, supporting and informing business practices that promote clean water, increasing awareness of cultural heritage, and enhancing recreation opportunities.

The spirit of the Thriving Communities goal was captured in the Champlain Valley National Heritage Partnership's (CVNHP) support of the Lake Champlain Maritime Museum's 650-mile journey through New York State's canal system with its replica canal schooner *Lois McClure*. During the four-month tour commemorating the centennial of construction of the Erie and Champlain Canals, more than 12,000 visitors in 37 communities learned about forest ecosystems, the history of forestry, wood products, and the crucial role the forest plays in fostering clean water, soil health, and rich habitat. Students along the route planted seedlings to establish stream-side buffers that protect water quality. CVNHP staff developed interpretive materials and provided outreach support to visitors at the World Canals Conference in Syracuse, NY.

## Program Highlights

- » The CVNHP hosted the 6th annual **International Heritage Summit** in Québec. The summit resulted in the creation of the first Regional Stakeholder Group in Québec, an effort to more effectively gather input from Canadian partners.
- » The CVNHP developed and installed 12 new exhibits as part of the award-winning **Wayside Exhibit Program**. The CVNHP provided free design, editing, and French translation.
- » LCBP staff managed more than 150 **local implementation grants** that provided organizational support, financial, and technical assistance to watershed groups, municipalities, natural resource conservation districts and other organizations (local grants begin on page 7).
- » The CVNHP hosted the **"One NPS" workshop**, where participants identified opportunities for collaboration and communications and explored opportunities for financial and technical assistance through the National Park Service's numerous community assistance programs.
- » LCBP coordinated, hosted, and published a webinar series based on the **Green Infrastructure for Stormwater Management** manual developed under contract with a consulting firm. The manual and series covered implementation of green infrastructure in a variety of settings, including streets in developed areas, rural roads, parking lots and hardscapes, and buildings.

## CVNHP Key Partnerships

### Lake Champlain Maritime Museum

The Lake Champlain Maritime Museum (LCMM) continues to serve as the sole key partner of the CVNHP. LCMM undertook several projects that supported the CVNHP Management Plan, including: a National Park Service (NPS) funded *Conservation and Community* Interpretive Theme Grant; participation in the 2016 CVNHP International Summit; and serving on the Addison County Regional Stakeholder Group. The LCMM also hosts a CVNHP/NPS passport stamp station at its campus in Ferrisburgh, Vermont. LCMM provided the \$300,000.00 in non-federal match for the \$300,000.00 NPS award to the CVNHP.

### CVNHP Federal, State, Regional and Local Partnerships

#### National Park Service

In addition to the strong relationship between Marsh-Billings-Rockefeller National Historic Park and the CVNHP, the NPS provides technical assistance, training and networking opportunities through workshops offered by the Northeast Region. The staff of the CVNHP participated in the NPS Centennial planning activities, attended a trails workshop in Baltimore in April 2016, and implemented a One NPS Workshop in Plattsburgh, New York that centered around the CVNHP.

#### Saratoga National Historical Park

Staff and volunteers from the Saratoga National Historical Park served on the Washington/Saratoga counties regional stakeholder group and the Historic Hudson-Hoosic Partnership, which provided input in the CVNHP workplans and budget during portions of this reporting period. The Park also hosts a CVNHP/NPS passport stamp station at its visitor center.

#### U.S. Fish and Wildlife Service

A representative of the U.S. Fish and Wildlife Service is a member of the LCBP Steering Committee, the managing entity of the CVNHP. In addition, the Director of the Missisquoi National Wildlife Refuge is a member of the Franklin County Regional Stakeholder Group, providing insight into potential initiatives in the northeast portion of the CVNHP. The refuge also hosts a CVNHP/NPS passport stamp station at its visitor center.

#### U.S. Forest Service

The Supervisor's Office of the Green Mountain National Forest in Rutland, Vermont hosts a CVNHP/NPS passport stamp station.

#### The National Heritage Areas of New York State

The waterways of the CVNHP connect it to other NHAs in New York. The CVNHP regularly communicates with the Hudson River Valley National Heritage Area (HRVNHP), Erie Canalway National Heritage Corridor, and the Niagara Falls National Heritage Area on workplan development, looking for potential collaborative projects that can collectively highlight their shared interpretive themes. Jim Brangan, the LCBP Culture, Heritage and Recreation Coordinator, serves on the management committee of the HRVNHA and the New York NHAs. The directors of these two NHAs were invited to the CVNHP International Summit in 2015 and 2016.

#### New York State Department of Environmental Conservation

The Lake Champlain Visitors Center in Crown Point, New York, hosts CVNHP interpretive displays and promotional items. Located at the western edge of the new Lake Champlain Bridge, the visitor center is a prime location for showcasing the CVNHP interpretive themes and the environmental health of Lake Champlain. The New York State Department of Environmental Conservation (NYSDEC) owns and maintains the Lake Champlain Visitors Center, which is managed by the Essex County Regional Office of Sustainable Tourism. The visitor's center also hosts a CVNHP/NPS passport stamp station and is the ending point for the popular Lake Champlain Bridge Quest. The Director of NYSDEC Region 5 serves as a co-chair of the LCBP Steering Committee, the managing entity of the CVNHP.

#### New York State Department of Transportation

The Valcour Rest Area on I-87 in Peru, New York—managed by the New York Department of Transportation (NYDOT)—displays four interpretive panels that focus on the agricultural heritage of Clinton County and highlight the Conservation and Community interpretive theme of the CVNHP. The NYDOT also permits the distribution of CVNHP interpretive and promotional materials.



**New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP)**

Crown Point State Historic Site, managed by the NYSOPRHP, distributes Quest maps, and is a passport stamp location for the terminus of the North Country National Scenic Trail. A representative of the NYSOPRHP is a member of the LCBP Steering Committee, the managing entity of the CVNHP.

**Plattsburgh State Art Museum, State University of New York (SUNY)**

A representative from the museum serves on the Clinton County regional stakeholder group and the art museum at SUNY-Plattsburgh hosts a CVNHP/NPS passport stamp station at its Rockwell Kent Gallery and Collection facility.

**Upper Housatonic River National Heritage Area (UHRNHA)**

The CVNHP and the UHRNHA are leading efforts among stakeholders in Connecticut, Massachusetts, Vermont and Québec to promote the Western New England Greenway (WNEG), a contiguous network of bicycle routes that connect New York City with Montreal. The WNEG route meets the East Coast Greenway in Norwalk, Connecticut and connects with Québec's Route Verte at the Canada border. The CVNHP and UHRNHA collaborate with partners to develop programs and implement projects along the route.

**Vermont Agency of Commerce and Community Development**

The Vermont Agency of Commerce and Community Development (VTACCD) is represented on the LCBP Steering Committee. During the first half of the reporting period, the Vermont Department of Tourism and Marketing (VDTM) represented the VTACCD on the LCBP Steering Committee. The VDTM representative who served on the LCBP Steering Committee retired in 2016, but continues to serve as the vice-chair of the HAPAC. The Vermont State Historic Preservation Officer (who also manages the Vermont Division for Historic Preservation) now represents the VTACCD on the LCBP Steering Committee. The VDTM continues to work closely with the CVNHP by promoting events, announcing grant programs, and providing advice in the marketing of the heritage area.

**Vermont Department of Fish and Wildlife**

The headquarters of the CVNHP and LCBP are in the historic Gordon-Center House in Grand Isle, Vermont. Located near the Grand Isle/Cumberland Head ferry landing, the building, constructed in 1824 using locally quarried Isle La Motte limestone, is owned by the Vermont Department of Fish and Wildlife. The facility's conference room hosts many CVNHP meetings throughout the year. The CVNHP uses the ground floor of the Gordon-Center House as an interpretation and information center, which features a NPS/CVNHP passport stamp station.

**Vermont Division for Historic Preservation**

Chimney Point State Historic Site, managed by the Vermont Division for Historic Preservation (VDHP), is a focal point for the new Quest Map program. The director of VDHP serves on the LCBP Steering Committee, representing the VTACCD, in which the VT DHP resides.

## CVNHP Collaborative Partnerships

**American Museum of Fly Fishing**

Located in Manchester, Vermont, the museum hosts a CVNHP/NPS passport stamp station.

**The Champlain Valley International Wine Trail**

The Champlain Valley International Wine Trail was inaugurated in 2012 at Snow Farm Vineyards in South Hero, Vermont. Linking wineries from Middlebury, Vermont, to Plattsburgh, New York to Dunham, Québec, the Champlain Valley International Wine Trail provides information to casual travelers, wine aficionados and agritourists through a website ([www.champlainvalleynhp.org/winetrail](http://www.champlainvalleynhp.org/winetrail)) that hosts an interactive map. A promotional rack card with a QR code directs people to the website.

**Clinton County Historical Association**

The Clinton County Historical Association (CCHA) continues to distribute the Valcour Island Heritage Trail. Using the guide, visitors can follow a heritage trail that interprets the rich history of a vibrant camp culture that spanned most of the 20th century. Valcour Island, home to the Bluff Point Lighthouse and several farms, became a summer destination for people trying to escape the heat in the days before air conditioning in the early 1900s. A 7.5-mile loop trail guides hikers to 14 historic and archeologic sites across the island.

## Program Highlights

## LCBP Resource Room at ECHO, Leahy Center for Lake Champlain

The LCBP Resource Room at the ECHO, Leahy Center for Lake Champlain on the Burlington Waterfront welcomes more than 25,000 annual visitors who learn more about the natural and cultural resources of Lake Champlain. The knowledgeable Resource Room staff distribute CVNHP materials and answer questions about the national heritage area. A CVNHP/NPS passport stamp station is located at the ECHO front desk.

## Essex County Regional Office of Sustainable Tourism (ROOST)

ROOST maintains Lake Champlain Visitors Center in Crown Point, New York, which maintains interpretive displays for the CNVHP and distributes the Lake Champlain Bridge Quest Map. ROOST staff member Suzanne May serves on the HAPAC.

## Lake Champlain Bikeways

LCBP staff continues to serve as an advisor to the Lake Champlain Bikeways Board of Directors and its chairman, Lou Bresee, serves on the HAPAC.

## Lake George Historical Association and Museum

Museum staff coordinates the regional stakeholder group for Warren County, New York. The facility, located in the heart of Lake George Village, serves as a CVNHP/NPS passport stamp station.

## Pember Museum of Natural History

A CVNHP/NPS passport stamp station is housed at this museum located in Granville, NY.

## Wayside Exhibit Program

Started by the LCBP in 2001, the program provides free design services (a \$600-\$700 value) to communities and organizations that wish to utilize the interpretive sign content detailed in the LCBP Wayside Exhibit Manual. This award-winning program has provided design services for more than 320 wayside exhibits since it began. The CVNHP provided design services for 12 new wayside exhibits. The exhibits listed received CVNHP Wayside Exhibit design assistance and all but two have English-French translation—an estimated \$1,000 value each.

## Conservation and Community

- Local Motion: *The Waters of the Champlain Valley*, Alburgh, VT
- Local Motion: *Agriculture Then and Now in Shelburne*, Shelburne, VT
- Local Motion: *Welcome to Wine Country*, South Hero, VT
- Wiawaka Center for Women: *Georgia O'Keeffe at Wakonda*, Lake George, NY

## Corridor of Commerce

- Local Motion: *Colchester Causeway*, Colchester, VT
- Local Motion: *The Arts in the Islands*, Grand Isle, VT
- Local Motion: *Hall Home Place*, Isle La Motte, VT
- Local Motion: *Alburgh Pump House*, Alburgh, VT
- Town Of Champlain: *Bill Earl Park*, Champlain, NY
- Town of Champlain: *Shipwrights of Champlain*, Champlain, NY
- Town of Keene: *Bridging the Ausable*, Keene, NY

## Making of Nations

- Ville de Clarenceville: *Saint-George's Church*, Clarenceville, QC





2016

## Corridor of Commerce

*Battenkill Inspired***Project Summary**

*Battenkill Inspired* draws upon the research done for a much-acclaimed exhibition by the same name that ran in the Library's Folklife Gallery from January to June 2015. We will reformat the stories, art and objects from the exhibition into a digital media version that will be made available to the public via iPad stations strategically placed within public institutions of the Battenkill Corridor running through Bennington County, Vermont and southern Washington County, New York.

**Outputs:**

- 6 iPad stations loaded with the digital media version of exhibition *Battenkill Inspired* placed in libraries and other public institutions along the Battenkill Corridor of Vermont and New York State.

**Outcomes:**

- Connect, promote, and improve cultural and natural heritage sites through interpretation.

**Organization:** Crandall Public Library

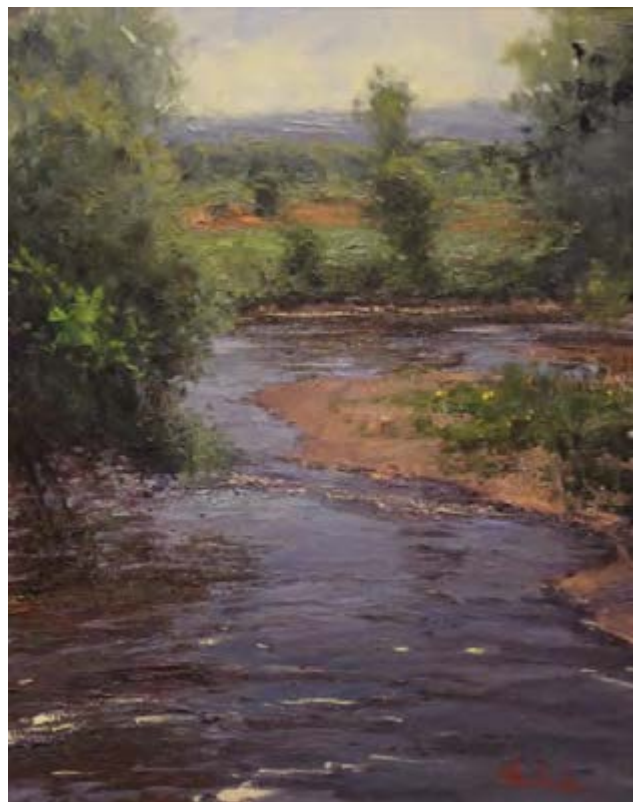
**Contact Person:** Todd DeGarmo

**Mailing Address:** 251 Glen Street,  
Glens Falls, NY 12801

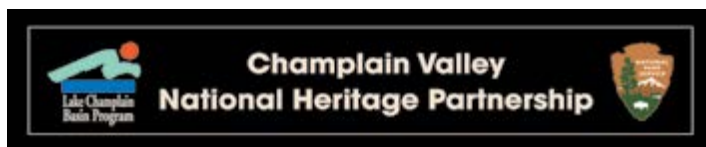
**Phone:** 518-792-6508 x237

**E-mail:** degarmo@crandalllibrary.org

**Website:** <http://www.crandalllibrary.org/>



**NEIWPCC Code:** PO 12469  
**GLFC**  
**Start Date:** 4/1/2017  
**Grant Amount:** \$5,000.00  
**Non-federal Match:**  
**Total Amount:** \$5,000.00





# Corridor of Commerce

2016

## Boats, Travel & Trains: The Kent-Delord House and Lake Champlain

### Project Summary

Using primary materials associated with the Delord Family and other regional repositories, develop interpretative materials that tell the story on how the Delords used Lake Champlain for business and travel. Also, using the work of William Swetland, Betsey Delord's second husband, explain the development and implementation of the Plattsburgh & Montreal Railroad and its connection to that Canadian city via rail plus its link to Burlington by steamboat. Teens will be heavily involved in the research and formulation of materials.

#### Outputs:

- 3-5 interpretive panels illustrating the various aspects of the research: the use of local goods to be sold at a village store; early 19th Century travel on the lake; and Plattsburgh becoming a transportation hub with the building of a railroad and docking facilities.
- Three brochures will be produced explaining one facet of the project.
- During Museum Days in June 2017 a garden railway will be set up at the Kent-Delord House that will attract spectators and serve as a link for individuals to ask about the Plattsburgh and Montreal Railroad.

#### 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 Champlain Valley National Heritage Partnership.
- support the use of interpretive themes to link resources within the Champlain Valley National Heritage Partnership

**Organization:** Kent-Delord House

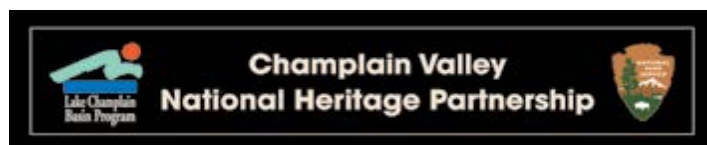
**Contact Person:** Don Wickman

**Mailing Address:** 17 Cumberland Avenue  
Plattsburgh, NY 12901

**Phone:** 518 561-1035

**E-mail:** kdhmdirector@gmail.com

**Website** <http://www.kentdelordhouse.org/>



<b>NEIWPCC Code:</b>	PO 12446
<b>GLFC</b>	
<b>Start Date:</b>	4/1/2017
<b>Grant Amount:</b>	\$1,875.00
<b>Non-federal Match:</b>	\$3,265.70
<b>Total Amount:</b>	\$5,140.70

2016

## Corridor of Commerce

Establishment of Infrastructure for the *US LaVallee* Historic Dive Preserve

## Project Summary

Funding of this project will be used to establish the infrastructure required for divers to safely visit the wreck site of the *US LaVallee*. This well preserved tugboat shipwreck was thoroughly examined during the summer of 2015 and is prepared for addition to the Vermont State Underwater Dive Preserve System once the infrastructure is in place. The additional equipment required to open this site will protect the wreck from ongoing hazardous diving practices while safely providing access to this historic resource for the community.

## Outputs:

The primary physical outcome of this project will be the placement of professionally installed mooring hardware and basic interpretive materials at the site of *US LaVallee*. This infrastructure will allow reasonable access to the site while increasing safety for both the wreck and visiting divers.

## Outcomes:

- To build on existing knowledge; to make new discoveries of the history, culture, and special resources of the CVNHP, and make this information accessible.
- Use new and existing research and documentation to support the evaluation, conservation and interpretation of natural and cultural heritage resources
- Support initiatives that promote sustainable recreational activities that feature the natural, cultural and historical resources in the CVNHP for diverse recreational activities
- Continue to support regional programs that promote accessible and sustainable use of resources
- Continue to develop and maintain the Lake Champlain Underwater Historic Preserve Program

**Organization:** Lake Champlain Maritime Museum

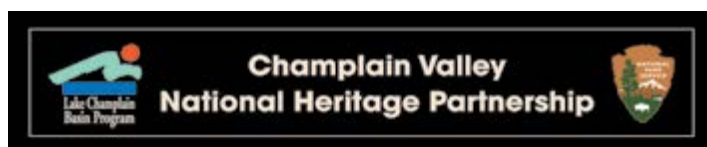
**Contact Person:** Christopher Sabick

**Mailing Address:** 4472 Basin Harbor Road  
Vergennes, VT 05491

**Phone:** 802 475-2022

**E-mail:** [chriss@lcmmm.org](mailto:chriss@lcmmm.org)

**Website:** <http://www.lcmmm.org/>



<b>NEIWPCC Code:</b>	PO 12442
<b>GLFC</b>	
<b>Start Date:</b>	2/10/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$2,272.00
<b>Total Amount:</b>	\$7,272.00

# Corridor of Commerce

2016

## Missisquoi River Corridor of Commerce - Swanton Heritage Water Trail

### Project Summary

Development of public access to historical locations along the Missisquoi River that highlight the waterway's historical role in the region's economic development. The project includes the engagement of students in site improvements, and development of new resources for visitors.

#### Outputs:

- Improved access at the Missisquoi River access associated with Marble Mill Park (also the put-in used to portage around the historical Swanton Dam).
- An interpretive panel at the Marble Mill foundation site.
- Trail signage linking interpretive elements of a .5-mile land/water heritage trail through the heart of Swanton
- an online CVNHP public access guide.

#### Outcomes:

- Support initiatives that promote sustainable recreational activities that feature the natural, cultural, and historical resources in the CVNHP
- Increase and improve public access opportunities to the interconnected waterways of the Champlain Valley National Heritage Partnership for diverse recreational activities
- Support a public information program that emphasizes recreational ethics, public safety, sustainable use, and stewardship of cultural and natural resources
- Support the use of interpretive themes to link resources within the Champlain Valley National Heritage Partnership
- Produce coordinated education programs for students

**Organization:** Northern Forest Canoe Trail

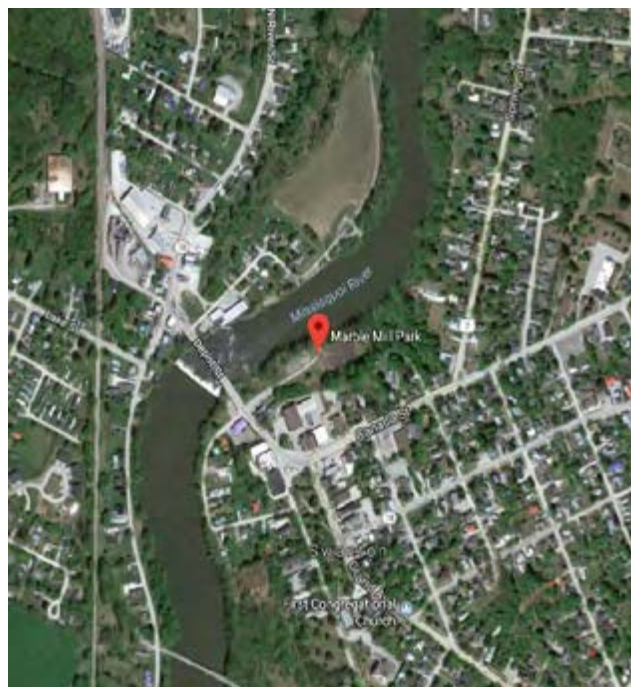
**Contact Person:** Walter Opuszynski

**Mailing Address:** PO Box 565  
Waitsfield, VT 05673

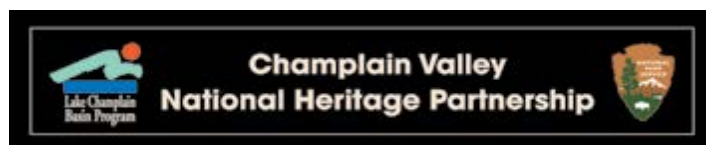
**Phone:** 802 496-2285, ext. 2

**E-mail:** [walter@northernforestcanoetrail.org](mailto:walter@northernforestcanoetrail.org)

**Website:** <https://www.northernforestcanoetrail.org/>



<b>NEIWPCC Code:</b>	PO 12454
<b>GLFC</b>	
<b>Start Date:</b>	2/22/2017
<b>Grant Amount:</b>	\$ 5,000.00
<b>Non-federal Match:</b>	\$ 7,214.00
<b>Total Amount:</b>	<b>\$12,214.00</b>



2016

## Corridor of Commerce

## Steamboats in the Champlain Valley - A Bicentennial Project for Students

## Project Summary

This project creates an interactive website and arts competition to commemorate the 200th anniversary of steamboat operations in the Champlain Valley and surrounding area. Using primary source materials, area students will research the history of steamboating and the impact of maritime commerce in our region and write an original skit or short story related to the theme. Students' projects and awards will be presented at a public reception at the conclusion of the program.

The website will provide information and interactive activities designed to present the history in an engaging manner and strengthen students' understanding, while aligning with common-core and STEM standards for primary source learning objectives.

## Outputs:

- an interactive website and arts competition

## Outcomes:

- Develop and/or improve natural and cultural heritage interpretative trails using wayside exhibits and other informative media.
- Support pilot projects that utilize emerging interpretive technologies.
- Encourage the development of new website technologies for use on the CVNHP and stakeholder websites.
- 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.
- Connect, promote, and improve cultural and natural heritage sites through interpretation.

**Organization:** Ticonderoga Historical Society

**Contact Person:** William G. Dolback

**Mailing Address:** 6 Moses Circle  
Ticonderoga, NY 12883

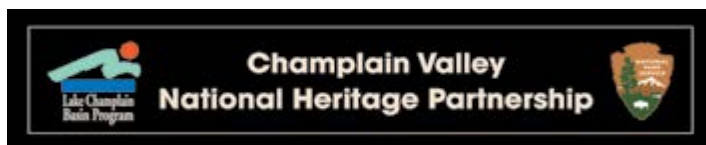
**Phone:** 518-585-7868

**E-mail:** [tihistory@bridgepoint1.com](mailto:tihistory@bridgepoint1.com)

**Website:** <http://ticonderogahistoricalsociety.org/>



**NEIWPCC Code:** PO 12457  
**GLFC**  
**Start Date:** 2/24/2017  
**Grant Amount:** \$ 5,000.00  
**Non-federal Match:** \$ 7,571.76  
**Total Amount:** \$12,571.76





# Corridor of Commerce

2016

## The Feeder Canal Story

### Project Summary

The Glens Falls/Queensbury Historical Association, d/b/a The Chapman Historical Museum, and the Feeder Canal Alliance are collaborating to bring educational programs to students and adults to expand knowledge and understanding of the Feeder Canal. Through our work with schools and adult centers, it is clear that the significant role the Feeder Canal played in the development of our region is greatly underappreciated. The programs will feature Core/STEM based curriculum using hands-on activities, games, photographs, maps, and other primary documents and re-enactors to bring to life the story of the Feeder Canal and the men, women and children who worked on it.

#### Outputs:

- Through research we will identify and tell the story of some of the men, women and children who lived and worked on the Feeder Canal. We will present those stories and the story of the Feeder Canal's importance to the burgeoning prosperity of this region to approximately 1,000 school children and 120 adults in 2017. We will also have a working model of a canal lock, costumes and scripts to enable us to continue engaging programming beyond 2017.

#### Outcomes:

- Increased public knowledge and appreciation for our unique heritage

**Organization:** Glens Falls/Queensbury Historical Association

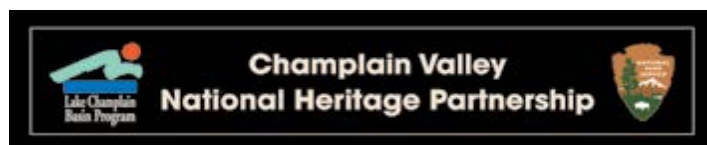
**Contact Person:** Kimberly Harvish

**Mailing Address:** 348 Glen Street  
Glens Falls, NY 12801

**Phone:** 518-793-2826

**E-mail:** [educator@chapmanmuseum.org](mailto:educator@chapmanmuseum.org)

**Website:** <http://www.chapmanmuseum.org/>



<b>NEIWPCC Code:</b>	PO 12458
<b>GLFC</b>	
<b>Start Date:</b>	3/3/2017
<b>Grant Amount:</b>	\$ 5,000.00
<b>Non-federal Match:</b>	\$10,950.00
<b>Total Amount:</b>	\$15,950.00

2016

## Local Heritage

*A Guide to the Architecture of the Adirondacks***Project Summary**

This project will produce *A Guide to the Architecture of the Adirondacks* by Richard Longstreth, a “field guide” to regional architecture and communities. The project brings together the talents and experience of author Richard Longstreth with Adirondack Architectural Heritage’s extensive knowledge of the Adirondack region and *Adirondack Life* magazine’s pre-production and marketing skills to create and distribute an informative, accessible, and richly illustrated volume that can be used by nearly anyone to explore and understand the region’s diverse architecture, communities, and rich history.

**Outputs:**

- 5000 copies of a comprehensive and easy-to-use guide to the built environment of the region.

**Outcomes:**

- interpret the architecture and history of the region
- cultivate an historic preservation stewardship ethic in the region through public education and awareness.
- connecting people to publically accessible, or visible from a public road, buildings, structures, complexes or neighborhoods and cultural heritage sites.

**Organization:** Adirondack Architectural Heritage

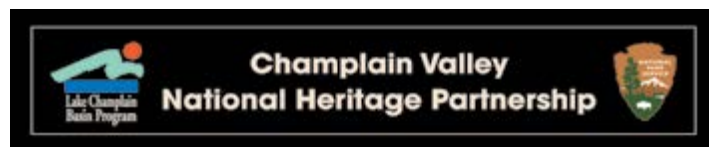
**Contact Person:** Steven Engelhart

**Mailing Address:** 1745 Main Street  
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**Phone:** (518) 834-9328

**E-mail:** steven@aarch.org

**Website:** <https://www.aarch.org/>



**NEIWPCC Code:** PO 12316

**NPS**

**Start Date:** 12/2/2016

**Grant Amount:** \$ 5,000.00

**Non-federal Match:** \$59,460.00

**Total Amount:** \$64,460.00



# Local Heritage

2016

## History Comes Alive: Youth Engagement in Local History through the Arts

### Project Summary

For fifteen years, the Flynn Center has integrated youth engagement, the study of local history and heritage and creative, dramatic self-expression through our signature History Comes Alive arts integration program. Through improvisation, students develop real and fictional characters who respond to the challenges of the time, a process that augments understanding of and passion for the cultural and historical heritage of our region. The Center will conduct a region-wide school program for 2017 focusing on Vermont during the time of the American Revolution—looking at the rich heritage of commerce, the evolution of transportation, and how both were impacted by geographical and political events at the end of the 18th century. Along with 24 educators from 19 schools in 10 districts in the Champlain Valley—plus dozens of homeschool families—the Center is designing an innovative, participatory series to deepen student engagement through research of local history & application of the arts.

#### Outputs:

- Production of a coordinated education program for students.

#### Outcomes:

- Utilize new and existing research and documentation to support the evaluation, conservation, and interpretation of natural and cultural heritage resources.
- Provide opportunities for teachers and students to participate in CVNHP-related field trips and restoration projects.
- Produce coordinated education programs for students

**Organization:** Flynn Center for the Performing Arts

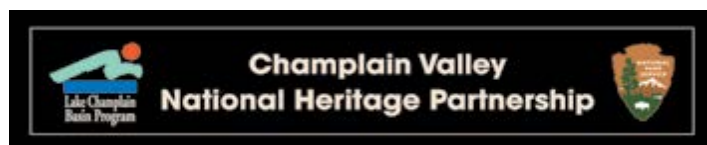
**Contact Person:** Gina Haddock

**Mailing Address:** 153 Main Street  
Burlington, VT 05401

**Phone:** (802) 652-4500

**E-mail:** rhaddock@flynncenter.org

**Website:** <https://www.flynncenter.org/>



<b>NEIWPCC Code:</b>	PO 12434
<b>NPS</b>	
<b>Start Date:</b>	2/11/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$3,199.20
<b>Total Amount:</b>	<b>\$8,199.20</b>

2016

## Local Heritage

## Kids to the Homestead

## Project Summary

The Ethan Allen Homestead Museum seeks to continuously preserve the influence of Ethan Allen on Vermont and the making of our nation through tours of his historic homestead, as well as educational programs for students of all ages. Fourth graders in Vermont follow a curriculum focused on state history, and the Ethan Allen Homestead Museum will partner with local schools in Chittenden County to transport fourth graders to the Homestead for educational tours and programming designed to bring their classroom learning to life. The Homestead will prospectively collaborate with partners at these local schools (i.e. music and art departments) to create an interdisciplinary program for fourth grade students to incorporate learning they have done in each discipline.

## Outputs:

- A comprehensive CVNHP Resource Guide for educators to use in developing teaching units focused on the natural and cultural heritage of the region with an emphasis on conserving and protecting those resources
- School trips to Ethan Allen Homestead Museum.
- brochure focused on educational programming

## Outcomes:

- Support historical and archeological research and documentation.
- Provide CVNHP-related presentations to schools.
- Produce coordinated education programs for students.
- Connect, promote, and improve cultural and natural heritage sites through interpretation.

**Organization:** Ethan Allen Homestead

**Contact Person:** Jillian Casey

**Mailing Address:** 1 Ethan Allen Homestead  
Burlington, VT 05408

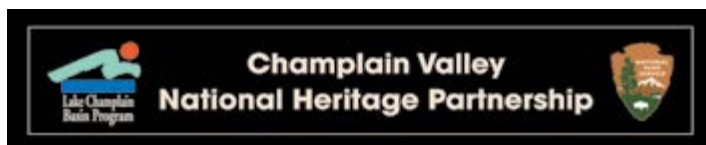
**Phone:** (802) 865-4556

**E-mail:** ethanallenhomestead@gmail.com

**Website:** <http://www.ethanallenhomestead.org/>



<b>NEIWPCC Code:</b>	PO 12435
<b>NPS</b>	
<b>Start Date:</b>	1/26/2017
<b>Grant Amount:</b>	\$ 2,500.00
<b>Non-federal Match:</b>	\$ 7,607.00
<b>Total Amount:</b>	\$10,107.00



# Local Heritage

2016

## Lake George Shipwreck Tours

### Project Summary

Aware that most people are unable to experience the benthic world directly, the Lake George Association will aim to make that world and its human artifacts “come alive” through shipwreck tours on Lake George aboard the Floating Classroom. Program participants will “dive” with a Remotely Operated Vehicle (ROV) on a shipwreck at the bottom of Lake George. The program will include information on the history and archaeology of the lake and a live viewing with the ROV. The Floating Classroom shipwreck tours will expand interest and understanding of local, military and marine history, of aquatic biology and biodiversity, of commerce and cultural folklore, for a stronger vision of the nature and traditions that make up the Lake George region.

#### Outputs:

- Creation of the Lake George Shipwreck Tours program which will feature the natural, cultural, and historical resources in the Champlain Valley National Heritage Partnership region.

#### Outcomes:

- Creating a well-informed public that values the unique heritage of the CVNHP and understands the threats to its resources.

**Organization:** Lake George Association

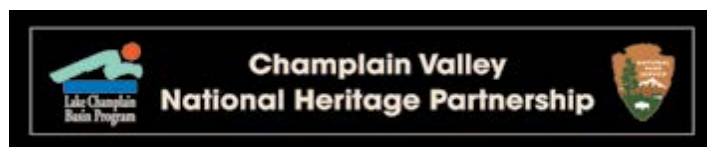
**Contact Person:** Kristen Wilde

**Mailing Address:** P.O. Box 408  
Lake George NY 12845

**Phone:** 518-668-3558

**E-mail:** [krohne@lakegeorgeassociation.org](mailto:krohne@lakegeorgeassociation.org)

**Website:** <https://www.lakegeorgeassociation.org/>



**NEIWPCC Code:** PO 12433

**NPS**

**Start Date:** 2/11/2017

**Grant Amount:** \$ 2,500.00

**Non-federal Match:** \$51,290.00

**Total Amount:** \$53,790.00

2016

## Local Heritage

## “Logging Along the Bend of the River”

## Project Summary

The Logging at the Bend in the River project will develop a traveling exhibit interpreting the history of logging in Warren County, New York. The exhibit will depict the different procedures needed to cut the tree, remove branches, move the tree, moving to the mill, milling it and transporting the finished lumber. Each panel will have a descriptive narrative which will also showcase the oral histories acquired during the project period. The Warren County Historical Society will work with the Feeder Canal Alliance to emphasize the canal's importance to the development of the logging industry in the region. The society is researching possible interviewees for this project and would like to video record them, and possibly make a short video. High school students would help with this portion of the grant and learning how to video record and edit it into a viable video.

## Outputs:

- an interpretive travelling exhibit **with accompanying** documentary video/brochure for educators

## Outcomes:

- Support historical and archeological research and documentation.
- Support ethnographic research and documentation of the cultures within the CVNHP.
- Support tourism information centers, marketing organizations, regional byway initiatives and the Non-motorized Tourism Clearinghouse, to coordinate and disseminate information on opportunities for year-round use of recreational, natural, cultural, and historic resources of the CVNHP.
- Support the use of new information technology to provide quality information on heritage and recreation resources.
- Provide opportunities for teachers and students to participate in CVNHP-related field trips and restoration **projects**.

**Organization:** Warren County Historical Society

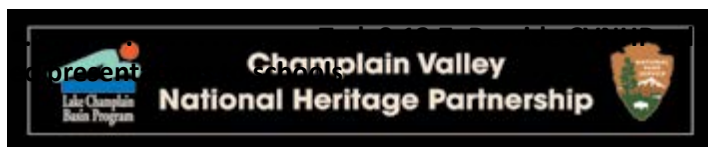
**Contact Person:** Faith Bouchard

**Mailing Address:** 195 Sunnyside Road  
Queensbury, NY 12804

**Phone:** 518-743-0734

**E-mail:** mail@warrencountyhistoricalsociety.org

**Website:** <http://www.wchsmuseum.org/>



**NEIWPCC Code:** PO 12447  
**GLFC**  
**Start Date:** 2/16/2017  
**Grant Amount:** \$3,244.00  
**Non-federal Match:** \$1,045.00  
**Total Amount:** \$4,289.00

# Local Heritage

2016

## New York's Franco-American Heritage through Song: *From Warfare to Workplace*

### Project Summary

Under the theme *From Warfare to Workplace*, students will research the lyrics of French-Canadian and Franco-American songs. They will discover how popular songs reflect the historical and cultural events of the North Country from before French Canadian immigration until today. Local music teachers will assist with the performance of the songs researched. A trip to Fort Chambly or other local cultural and historic sites is also planned.

#### Outputs:

- teacher-training workshops
- a comprehensive CVNHP Resource Guide for educators to use in developing teaching units focused on the natural and cultural heritage of the region with an emphasis on conserving and protecting those resources.
- opportunities for teachers and students to participate in CVNHP-related field trips and restoration projects
- CVNHP-related presentations to schools.
- bus transportation grants to improve school access to heritage sites and events within the CVNHP.

#### Outcomes:

- Support historical and archeological research and documentation.
- Support ethnographic research and documentation of the cultures within the CVNHP.
- Use new and existing research and documentation to support the evaluation, conservation, and interpretation of natural and cultural heritage resources.

**Organization:** Pays du Nord Chapter,  
American Association of Teachers of French

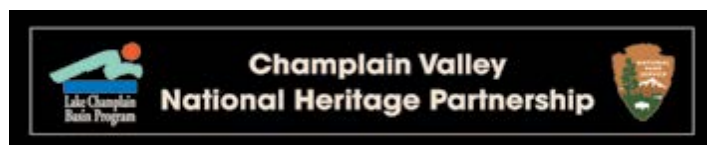
**Contact Person:** David B. Graham

**Mailing Address:** 344 Trim Road  
Morrisonville, NY 12962

**Phone:** 518-563-1779

**E-mail:** mrquebec@gmail.com

**Website:**



<b>NEIWPCC Code:</b>	PO 12448
<b>NPS</b>	
<b>Start Date:</b>	2/16/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$ 150.00
<b>Total Amount:</b>	\$5,150.00

2016

## Local Heritage

## Waterway Stage Collaborative

## Project Summary

Waterway Stage combines the power of the performance arts with the joy of scientific investigation to engage students and their communities in their local watersheds. 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. During the 2016 – 2017 school year, we expect 8 – 10 schools to participate, reaching a total of 160 – 240 students. Last, the program's pilot, year, its geographic reach extended as far south as Brandon and east as Calais, VT.

## Outputs:

- watershed curriculum support materials with emphasis on aquatic invasive species and spread prevention measures
- a comprehensive CVNHP Resource Guide for educators to use in developing teaching units focused on the natural and cultural heritage of the region with an emphasis on conserving and protecting those resources.
- 8-10 original student plays performed

## Outcomes:

- Promote cultural exchanges and international scholarship programs.
- Prevent the introduction of new aquatic invasive species and limit the spread of established aquatic invasive species (AIS) in the Champlain Valley National Heritage Partnership region.
- **Focus on land-use changes and effects of stormwater runoff on water quality.**

**Organization:** ECHO, Leahy Center for Lake Champlain

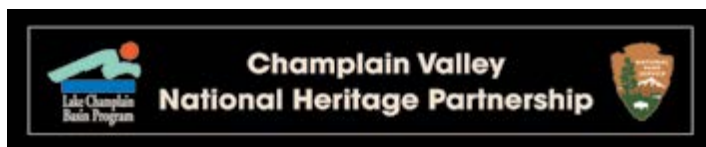
**Contact Person:** Nina Ridhibhinyo

**Mailing Address:** 1 College Street  
Burlington, VT 05401

**Phone:** 802-864-1848 x 142

**E-mail:** [nina@echovermont.org](mailto:nina@echovermont.org)

**Website:** <http://www.echovermont.org/>



<b>NEIWPCC Code:</b>	PO 12315
<b>NPS</b>	
<b>Start Date:</b>	12/15/2016
<b>Grant Amount:</b>	\$ 5,000.00
<b>Non-federal Match:</b>	\$ 5,000.00
<b>Total Amount:</b>	\$10,000.00



# Local Implementation Grant

2016

## Building Membership and Managing Projects through Database Support

### Project Summary

The Farmer's Watershed Alliance (FWA) requests funds for set-up and maintenance of an online database management provider. This will enable the Farmer's Watershed Alliance to more easily track membership, send membership dues notifications, and promote outreach materials and events. With database management support the Farmer's Watershed Alliance will be able to expand membership and keep members better informed in a timely manner of water quality regulations, upcoming events, and deadlines. With increased membership, more funds will be available to the Farmer's Watershed Alliance to invest in water quality projects. The Farmer's Watershed Alliance will be able to show success through increased membership, number of emails promoting agricultural news, and generating more funds available for water quality projects or outreach materials.

#### Outputs:

- database management system
- staff training - CCV data management course 26 hours
- membership drive

#### Outcomes:

- increased membership, wider audience
- enhanced communication with members about water quality preserving practices and learning opportunities
- connecting with the farming community to help encourage change in perception and agricultural management.

**Organization:** Farmer's Watershed Alliance

**Contact Person:** Darlene Reynolds

**Mailing Address:** PO Box 298  
St. Albans, VT 05478

**Phone:** (802) 752-5156

**E-mail:** farmerswatershedallianceNW@gmail.com

**Website:** <http://farmerswatershedalliance.org/>



**NEIWPCC Code:** PO 12416

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$3,988.00

**Non-federal Match:** \$ 890.00

**Total Amount:** \$4,878.00

2016

## Local Implementation Grant

## Capacity for AmeriCorps Support

## Project Summary

An AmeriCorps member will further develop the Friend's educational programs and assist the organization with project scoping, project owner outreach, and various field work projects to advance some of the identified stormwater projects in the region. Increasing the capacity of FNLC will: help identify agricultural and stormwater projects aimed to reduce the contribution of phosphorous and other pollutants to the watershed; and increase our education and outreach capacity to encompass a greater understanding around water quality and resiliency.

## Outputs:

- list of educational readings and meetings attended
- up to 4 rain gardens designed and built.
- list of teaching sites for students
- list of project and contact information of people that need to be contacted

## Outcomes:

- increased education and outreach support to citizens

**Organization:** Friends of Northern Lake Champlain

**Contact Person:** Kent Henderson

**Mailing Address:** PO Box 58  
Swanton, VT 05488

**Phone:** 802-373-1998

**E-mail:** directorfnlc@gmail.com

**Website:** <http://www.northernlakechamplain.org/>



**NEIWPCC Code:** PO 12411  
**GLFC**  
**Start Date:** 1/10/2017  
**Grant Amount:** \$4,000.00  
**Non-federal Match:**  
**Total Amount:** \$4,000.00

# Local Implementation Grant

2016

## Champlain Watershed Improvement Coalition of New York (CWICNY)

### Project Summary

The Champlain Watershed Improvement Coalition of New York continues to promote watershed protection on the New York side of Lake Champlain. CWICNY proposes to utilize the support grant to assist with the yearly operations of CWICNY (i.e. financial audit, website maintenance, computer upgrades, new display for education and outreach, reproduction of documents such as the better Backroads manual and the 2016 NYS Bluebook), and other watershed protection programs. With this support, CWICNY will be able to provide information and assistance to local communities and landowners to assist in making informed decisions on issues such as water quality, streambank protection, and invasive species prevention.

#### Outputs:

- Revamped display,
- website maintenance,
- reproduction of RRAMP guides and NYS Blue Book (2016)

#### Outcomes:

- better informed public on issues pertaining to water quality, streambank protection, and invasive species prevention.

**Organization:** CWICNY

**Contact Person:** Dave Reckahn

**Mailing Address:** 394 Schroon River Road  
Warrensburg, NY 12885

**Phone:** 518-962-8225

**E-mail:** dreckahn@westelcom.com

**Website:** <https://www.cwicny.org/>



**NEIWPCC Code:** PO 12414

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$4,000.00

**Non-federal Match:**

**Total Amount:** \$4,000.00

2016

## Local Implementation Grant

## ECO AmeriCorps Member Sponsor Match

## Project Summary

The Franklin Watershed Committee (FWC) goal is to improve water quality of Lake Carmi and all the waters of the Town of Franklin. We work with residents to reduce run off of sediment and phosphorus into the lake and other waterways. This grant provides the much-needed match for an AmeriCorps member to work 20 hours/week under the supervision of the FWC Coordinator and board. The primary tasks will be assisting in the "Lakewise" planting projects and creating multi layered boundary maps of the town of Franklin.

## Outputs:

- a multi-layered boundary map series
- A public presentation of the mapping project will be made upon completion.
- Lakewise planting project implementation

## Outcomes:

- reduce run off of sediment and phosphorus into the lake and other waterways.

**Organization:** Franklin Watershed Committee

**Contact Person:** John Barrows

**Mailing Address:** PO Box 82  
Franklin, VT 05457

**Phone:** 802- 363-3503

**E-mail:** johnbarrowsvt@yahoo.com

**Website:** <https://www.franklinwatershed.org/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** PO 12418

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$ 4,000.00

**Non-federal Match:** \$ 8,500.00

**Total Amount:** \$12,500.00

# Local Implementation Grant

# 2016

## Essex County WQCC Organizational Support

### Project Summary

The Essex County WQCC helps to coordinate water quality programs and projects over the entirety of the county. Funds received from LCBP will be used to expand the knowledge of various school aged students as well as adults within the Lake Champlain watershed community. Educational events may include Environmental Field Days, WAVE trainings, rain barrel workshops, stream bank training, and other related workshops and trainings. These educational events address nonpoint source control programs County wide as well as assisting with targeting issues.

#### Outputs:

- sponsorship of the NARE Envirothon providing Environmental Education to local high school students.
- rain barrel education
- promotion of the CWICNY tour of project sites.

#### Outcomes:

- Enhance environmental education throughout the Lake Champlain watershed in Essex County

**Organization:** Essex County SWCD

**Contact Person:** Dave Reckahn

**Mailing Address:** PO Box 407, Westport  
NY 12993

**Phone:** (518) 962-8225

**E-mail:** dreckahn@westelcom.com

**Website:** <http://www.essexcountyswcd.org/>



**NEIWPCC Code:** PO 12415

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$2,000.00

**Non-federal Match:** \$ 500.00

**Total Amount:** \$2,500.00

2014

## Local Implementation Grant

## Friends of the Winooski River Organizational Support

## Project Summary

In recent years, the Friends have taken steps to increase online and community outreach by content management system upgrades and by hiring a part-time outreach coordinator. However, many of the tools available (primarily online) go underutilized due to a lack of expertise with various tools and an integrated strategy for their use. Under this project, the Friends will hire a communications consultant to work with the outreach coordinator to conduct an assessment of current communications and provide advice and resources to help increase the organization's outreach. This assessment will help volunteer recruitment and engagement efforts and determine training for staff and board in order to implement the new practices.

## Outputs:

- communications strategy
- improved volunteer recruitment and engagement
- staff and board training
- detailed volunteer job descriptions

## Outcomes:

- increased awareness about watershed issues and resources.

**Organization:** Friends of the Winooski River

**Contact Person:** Larry Montague

**Mailing Address:** PO Box 777  
Montpelier VT 05601

**Phone:** 802-882-8276

**E-mail:** [info@winooskiriver.org](mailto:info@winooskiriver.org)

**Website:** <https://winooskiriver.org/>



**NEIWPCC Code:** PO 12419

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$4,000.00

**Non-federal Match:** \$ 750.00

**Total Amount:** \$4,750.00



# Local Implementation Grant

2015

## Lake Champlain Committee Capacity Building

### Project Summary

LCC will undertake a high priority project that will strengthen LCC's organizational capacity, educational reach and financial stability. LCC will replace it's display board and educational posters with more durable updated designs that better showcase LCC's mission of a clean, accessible lake and foster citizen engagement in stewardship.

#### Outputs:

- a new educational display and photo board

#### Outcomes:

- effectively communicate LCC's goal of clean, accessible water and the collective stewardship necessary to achieve it

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** PO 10984

**GLFC**

**Start Date:** 3/27/2015

**Grant Amount:** \$4,000.00

**Non-federal Match:**

**Total Amount:** \$4,000.00

2016

## Local Implementation Grant

## LCA Website and Organizational Capacity Enhancement

## Project Summary

Lewis Creek Association requests funding to strengthen its organizational capacity by: a) purchasing a laptop computer for recently hired LCA staff now managing LCA programs and communications; and b) creating a new website that works properly, contributes to the face and branding of LCA, reduces the time it takes to manage and update the website, and allows users to more easily download reports to have access to current information on the Lewis Creek and LaPlatte River and direct to lake watersheds.

## Outputs:

- up to date new website
- laptop for managing LCA programs and communications

## Outcomes:

- increased credibility associated with Lewis Creek Association leading to data having a further reach
- increased volunteers, and increased funding and donations
- more optimal impact in the Lake Champlain Basin.

**Organization:** Lewis Creek Association

**Contact Person:** Krista Hoffsis

**Mailing Address:** 442 Lewis Creek Road,  
Charlotte, VT 05445

**Phone:** 513-470-7554

**E-mail:** kristahoffsis@yahoo.com

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** PO 12423

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$3,898.00

**Non-federal Match:** \$ 981.00

**Total Amount:** \$4,879.00

# Local Implementation Grant

2016

## LCC Education and Outreach Capacity Building

### Project Summary

The organizational support grant will offset costs for an ECO AmeriCorps Education and Outreach Coordinator to help engage citizens in environmental stewardship in protecting and improving water quality. While education and civic engagement are important components of LCC's work there is no dedicated staff position. Having an in-house person focused on education and outreach will increase development and implementation of effective programming and strengthen long-term institutional capacity. The Education & Outreach Coordinator will focus on three areas: general outreach, the Lake Champlain Paddlers' Trail, and cyanobacteria monitoring.

#### Outputs:

- calendar of events housed on the LCC website
- series of April Stools' Day and Scoop the Poop events
- stormwater assessments at four schools in the Lake Champlain watershed (two in VT, two in NY)
- list of high priority monitoring locations for follow-up contact throughout the monitoring season
- photo acquisition and data gathering for three weekly cyanobacteria reports distributed to LCC monitors and partners, interested citizens, and the media

#### Outcomes:

- educating and involving people in lake protection.
- reduction of phosphorus inputs and reduction of contaminants that pose a risk to public and ecosystem health
- promote and increase access to the lake's cultural and recreational heritage

**Organization:** Lake Champlain Committee

**Contact Person:** Lori Fisher

**Mailing Address:** 208 Flynn Avenue, Bldg.3  
Studio 3F, Burlington, VT 05401

**Phone:** 802-658-1421

**E-mail:** [lorif@lakechamplaincommittee.org](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org>



**NEIWPCC Code:** PO 12420  
**GLFC**  
**Start Date:** 1/9/2017  
**Grant Amount:** \$4,000.00  
**Non-federal Match:** \$2,500.00  
**Total Amount:** \$6,500.00

2016

## Local Implementation Grant

## MRBA Database

## Project Summary

The Missisquoi River Basin Association (MRBA) is lacking follow-up data for many of the projects done over the last 20 years. MRBA is also lacking a convenient and useful way to track data and other information, such as membership and volunteer lists. MRBA's current method of tracking information is ungainly at best and the organization lacks the skills to build even a basic database. MRBA is seeking funds for a database to manage project files and assess success rates, and for a database system course to acquire the skills to track data and multiple contact lists.

## Outputs:

- database management system
- proficiency in database software

## Outcomes:

- awareness and understanding among residents and visitors about Lake Champlain resources and behaviors that contribute to pollution
- improve communication and cooperation among the diverse groups involved in Lake Champlain Basin education and outreach
- identify research and monitoring projects that can improve management programs and conduct when funding resources become available.

**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:** MRBA@pshift.com

**Website:** <https://www.mrbavt.com/>



**NEIWPCC Code:** PO 12424

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$2,962.00

**Non-federal Match:** \$1,280.00

**Total Amount:** \$4,242.00

# Local Implementation Grant

2016

## Organizational Support for the Franklin County NRCD

### Project Summary

This project will build capacity for the Franklin County Natural Resources Conservation District (FCNRCD, or District), by identifying gaps in service where the FCNRCD might expand its water quality work. With few existing water quality programs managed by the District and a new Manager installed this fall, identifying FCNRCD's role within the existing body of work is the first step to a more active and effective District.

The project also seeks support for The outcome of this organizational support will be that the.

#### Outputs:

- a list of watershed needs within the mission of the FCNRCD and a list of gaps in service
- two specific areas of potential work identified with partners
- digitization of historical photos and documents of early conservation efforts in the county, and an initial assessment to see if a larger collaborative project with the St. Albans Museum is warranted.

#### Outcomes:

- Conservation District will be more capable of implementing water quality projects in coordination with Franklin County partners

**Organization:** Franklin County NRCD

**Contact Person:** Jeannie Bartlett

**Mailing Address:** 27 Fisher Pond Rd  
St. Albans, VT 05478

**Phone:** 802-524-6505 ext. 120

**E-mail:** jeanne.bartlett@vt.nacdnet.net

**Website:** [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/vt/about/?cid=nrcs142p2\\_010666](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/vt/about/?cid=nrcs142p2_010666)



**NEIWPCC Code:** PO 12417  
**GLFC**  
**Start Date:** 1/9/2017  
**Grant Amount:** \$4,000.00  
**Non-federal Match:** \$ 944.00  
**Total Amount:** \$4,944.00

2016

## Local Implementation Grant

## Project Tracking and Documentation

## Project Summary

Central to the protection of Lake George are the Lake George Association (LGA) Lake-Saving Projects, which focus on correcting nonpoint-source pollution and runoff; repairing eroding shorelines; protecting the Lake from debris that form deltas; and managing stream corridors. As part of many of grant awards and historical records, LGA is required to document the conditions before a project begins and after work is completed. This project would allow the LGA to purchase a drone package that will allow the LGA to survey and document Lake-Saving Projects (as well as educational programs) in a more complete way; and a reliable underwater camera that will allow us to document invasive species removal projects and surveys visually, as well as be used for training purposes. The equipment will make the documentation of our work easier, broader and more thorough.

## Outputs:

- better imagery of work for documentation
- better access to areas not readily available
- underwater surveying of invasive plant and animal surveys/removal
- remote viewing of area to see problems concurrent with work
- ability to investigate further upstream and see cause/effect up and down stream.

## Outcomes:

- broader understanding of current problems in the watershed and lead toward a more comprehensive solution
- document the effects on the environment from issues over time and how that change may affect use and investment in the Lake.
- prevent the spread and control the impact of non-native species.

**Organization:** Lake George Association

**Contact Person:** Patrick Dowd

**Mailing Address:** P.O. Box 408  
Lake George NY 12845

**Phone:** 518-668-3558

**E-mail:** pdowd@lakegeorgeassociation.org

**Website:** <https://www.lakegeorgeassociation.org/>



**NEIWPCC Code:** PO 12422

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$3,100.00

**Non-federal Match:** \$ 616.00

**Total Amount:** \$3,716.00



# Local Implementation Grant

2016

## South Lake Partnership Support

### Project Summary

Poultney Mettowee Natural Resources Conservation District (PMNRCD) is applying for grant funds to reach across political boundaries and revitalize previous partnerships with New York agencies and individuals, in order to participate more fully in bi-state prioritization and cooperation around water quality issues in the South Lake Champlain watershed.

#### Outputs:

- two meetings with bi-state partners

#### Outcomes:

- more participation from PMNRCD at the bi-state level in the South Lake watershed.
- Improving communication and cooperation among diverse groups within the Lake Champlain Basin through education and outreach.
- Building awareness and understanding by communicating progress made by the District.
- Providing hands-on citizen action opportunities to improve the watershed through communication and outreach.
- Increase collaboration with New York partners (River Associations, TU, TNC, CWICNY, NY Rivers, etc.) with a goal of improving the effectiveness of stream projects authorized under New York's Protection of Water Law.
- Facilitate meetings among NY and VT partners to develop a phosphorus load reduction management strategy
- Develop appropriate strategies for coping with projected changes in precipitation and runoff in collaboration with other partners in the Basin (this is an issue in the Mettowee watershed)

**Organization:** Poultney-Mettowee NRCD

**Contact Person:** Hilary Solomon

**Mailing Address:** PO Box 209  
Poultney, VT 05764

**Phone:** (802) 287-8339

**E-mail:** [hilary@pmnrcd.org](mailto:hilary@pmnrcd.org)

**Website:** <http://www.pmnrcd.org/>



**NEIWPCC Code:** PO 12425

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$4,000.00

**Non-federal Match:** \$1,528.00

**Total Amount:** \$5,528.00

2016

## Local Implementation Grant

## Strengthening efforts to improve water quality on Assembly Point

## Project Summary

The purpose of this project is to modify the behavior of residents and discourage practices which have contributed to the decline in Assembly Point water clarity and quality. There is a constant need to encourage and assist seasonal residents to adopt sustainable practices which protect the Lake. Properties on Assembly Point constantly change hands and new residents are unfamiliar with the threats to water quality. This requires undertaking continuous efforts to provide information on how property owners can maintain their properties in a lake-friendly manner by avoiding fertilizers, by stopping septic seepage and by curbing storm water runoff. The degradation to water quality caused by septic seepage will be emphasized.

## Outputs:

- newsletters
- welcome packet for new residents
- informational flyer on septic issues

## Outcomes:

- promote a better understanding of threats to water quality as well as an understanding of one's personal responsibility for curbing pollution

**Organization:** Assembly Point Water Quality Coalition

**Contact Person:** Beverly Pozzi

**Mailing Address:** 66 Bay Parkway  
Lake George, NY 12845

**Phone:** 518 656-9440

**E-mail:** bjpozzi@hotmail.com

**Website:** <https://www.assemblypt.com/>



<b>NEIWPCC Code:</b>	PO 12412
<b>GLFC</b>	
<b>Start Date:</b>	1/9/2017
<b>Grant Amount:</b>	\$ 980.00
<b>Non-federal Match:</b>	\$2,190.00
<b>Total Amount:</b>	<b>\$3,098.00</b>

# Local Implementation Grant

# 2016

## Warren County SWCD Lake and Pond Assessment Program

### Project Summary

The Warren County Soil & Water Conservation District's "Lake and Pond Assessment Program" works with municipal and private landowners on assessing waterbodies and watersheds for both water quality and potential sources of contaminants that may have an adverse effect on the health of the smaller waterbodies within Warren County. Pond sampling consists of physical measurements of water conditions including dissolved oxygen, temperature, conductivity, pH and water transparency; evaluations of the watershed are for both point and non-point pollution sources of nutrients, contaminants and sediment. Currently the District is borrowing the basic equipment from a local source to complete surveys requested by local municipalities or county residents. This grant request is for the purchase of a canoe, paddles and PFD's, YSI dissolved oxygen and temperature meter (sensor cable and probe), Van Dorn Sampler Bottle and cable, Secchi disc, zooplankton net and 6- 2liter Nalgene sample bottles.

#### Outputs:

- increased capacity to complete surveys requested by local municipalities or county residents

#### Outcomes:

- Promote a better understanding and appreciation of Lake Champlain Basin resources and threats as well as personal responsibilities that leads to behavioral changes and actions to reduce pollution
- Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake

**Organization:** Warren County SWCD

**Contact Person:** Jim Lieberum

**Mailing Address:** 394 Schroon River Rd.  
Warrensburg, NY 12885

**Phone:** 518-623-3119

**E-mail:** rbombard123@nycap.rr.com

**Website:** <https://www.warrenswcd.org/>



**NEIWPCC Code:** PO 12426

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$3,244.00

**Non-federal Match:** \$ 420.00

**Total Amount:** \$3,664.00

2016

## Local Implementation Grant

## Watersheds United Vermont Website Redesign

## Project Summary

Watersheds United Vermont (WUV) was formed in 2013 to empower and support watershed groups to protect and restore Vermont's waters. WUV provides resources, information, and training for watershed groups to have the tools they need to accomplish watershed goals. One of the primary ways WUV seeks to provide resources and information to watershed groups is via its website. The website was set up at the inception of the organization, and while it contains valuable information and content, the basic structure and layout of the website does not make the content easily accessible. It is critical for WUV to have a website where watershed groups and partners can find relevant water related resources including documents, funding information, mentor contacts, a calendar of important events, and policy updates. For the WUV site to be useful to watershed groups, the website needs to have easily accessible information that is current, searchable and usable. WUV is seeking an LCBP organizational support grant to work with a web designer to create a website that will be a robust resource to all our watershed groups and partners.

## Outputs:

- website will provide groups with up-to-date information and allow watershed groups to draw on the most recent research and best practices so they can engage in projects that are utilizing the latest knowledge and information.
- measure the use of the site and the use of specific documents and resources by our partners and members

## Outcomes:

- more informed and connected watershed groups and partners, providing groups the knowledge and connections needed to accomplish clean water goals

**Organization:** Watershed United Vermont

**Contact Person:** Lyn Munno

**Mailing Address:** 29 Main Street, Suite 11  
Montpelier, VT 05602

**Phone:** (802) 585-3569

**E-mail:** watershedsunited@gmail.com

**Website:** <https://watershedsunitedvt.org/>



**NEIWPCC Code:** PO 12427

**GLFC**

**Start Date:** 1/9/2017

**Grant Amount:** \$ 4,000.00

**Non-federal Match:** \$ 6,100.00

**Total Amount:** \$10,100.00

# Local Implementation Grant

# 2015

## Private Road Education and Technical Assistance

### Project Summary

Due to the rate of land conversion from agriculture or forest to residential, rural stormwater, whether in the village centers or more rural settings, is being recognized as a concern. Road infrastructure has been noted as a particular issue. This project will focus reducing erosion and runoff from private roads and driveways. Through workshops and technical assistance, landowners will be educated about the road runoff issue and provided with information as to how to correct problems.

#### Outputs:

- Two case study workshops
- Publish 'how to' materials/public outreach
- Technical assistance site visit and written report for 6-10 locations

#### Outcomes:

- Implementation of a suite of best management practices for roadways that specifically address drainage, maintenance, and erosion control.
- technical assistance that supports sharing information on water-quality impacts and suggests techniques to reduce impacts

**Organization:** Friends of the Winooski

**Contact Person:** Ann Smith

**Mailing Address:** PO Box 777  
Montpelier VT 05601

**Phone:** 802 882-8276

**E-mail:** [info@winooskiriver.org](mailto:info@winooskiriver.org)

**Website:** <http://www.winooskiriver.org/>



**NEIWPCC Code:** L-2015-069

**EPA**

**Start Date:** 1/1/2016

**Grant Amount:** \$13,965.00

**Non-federal Match:**

**Total Amount:** \$13,965.00

# 2015 Conservation and Community Grant

## Brownway Conservation Area Access Enhancement Project

### Project Summary

The project took place in the Village of Enosburg Falls, Vermont, on property conserved by the Brown Family, referred to as the Brownway. With support from the Enosburgh Conservation Commission, the parcel was transformed from a farm field back to a riparian forest with more than 5,000 trees planted and trails built. The CVNHP Conservation & Community grant allowed the community to complete the last phase of this project: paddler access along the 3,800 feet of riverfront and a primitive campsite for use by boaters on overnight trips.

Working in concert with the Vermont Department of Conservation Wetlands, Floodplains, and Streambank Alteration and within the local permitting process, the NFCT established the Brownway Campsite including picnic table, sign-in box, composting privy, signage, trail corridor and tread improvements, and two access points in July 2016. The NFCT worked with the Enosburgh Conservation Commission to develop a 30" x 40" interpretive panel for the site.

#### Outputs:

- A new primitive campsite for paddlers
- Enhanced access to the Brownway Conservation Area
- One new interpretive sign showcasing conservation and restoration efforts underway

#### Outcomes:

- promote sustainable recreational activities that feature the natural, cultural, and historical resources in the CVNHP.
- Increase and improve public access opportunities to the interconnected waterways

**Organization:** Northern Forest Canoe Trail (NFCT)

**Contact Person:** Walter Opuszynski

**Mailing Address:** PO Box 565  
Waitsfield, VT 05673

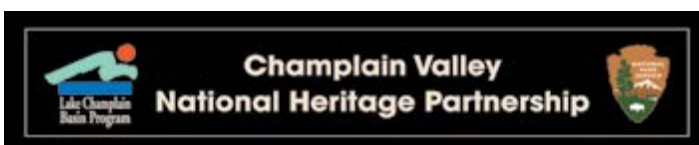
**Phone:** 802 496-2285 x2

**E-mail:** [walter@northernforestcanoetrail.org](mailto:walter@northernforestcanoetrail.org)

**Website:** <http://www.northernforestcanoetrail.org/>



*Volunteers on a newly installed log ladder at the Brownway Campsite access.*



<b>NEIWPCC Code:</b>	PO 12150
<b>NPS</b>	
<b>Date Complete:</b>	1/19/2017
<b>Grant Amount:</b>	\$ 5,000.00
<b>Non-federal Match:</b>	\$13,976.70
<b>Total Amount:</b>	\$18,976.00



# Conservation and Community Grant 2015

## Collections and and Recollections: Preserving Peter Barranco's Legacy

### Project Summary

Donated to LCMM in 2014-15, the Barranco Collection includes some 288 cubic feet of materials related to Lake Champlain's sailing vessels, naval vessels, steamboats, ferries, and canal boats, and the people who build, owned, and operated them. Barranco (born 1937, active 1953-2012) has devoted his life to gathering comprehensive information on Lake Champlain's maritime heritage and sharing it with others. Early in his career, Barranco worked for Lorenzo F. Hagglund (1894-1960), who conducted search and salvage operations on many important Lake Champlain shipwrecks, including the 1776 Philadelphia (now at the Smithsonian), and Royal Savage (returned to the U. S. Navy in July, 2015), and the lake's first steamboat, Vermont (launched 1808). Hagglund's records, given to Barranco to continue this research, were included in the gift to LCMM.

#### Outputs:

- inventory the collection, assess its condition, create a Finding Aid and rehouse the most fragile materials in newly purchased archival storage materials
- create a Working Plan for Preservation and Access, and a Plan for Digital Stewardship of LCMM's collections
- highlights of the collection were made available to the public through interpretation of the archival processing; a mini-exhibition; an Oral History video and copies of the were deposited in the Vermont Folklife Center Archives.

#### Outcomes:

- accelerate the identification, evaluation, protection and interpretation of heritage resources.
- support historical and archaeological research and documentation.
- support the evaluation, conservation and interpretation of cultural heritage resources.

**Organization:** Lake Champlain Maritime Museum

**Contact Person:** Eloise Beil

**Mailing Address:** 4472 Basin Harbor Road  
Vergennes, VT 05491

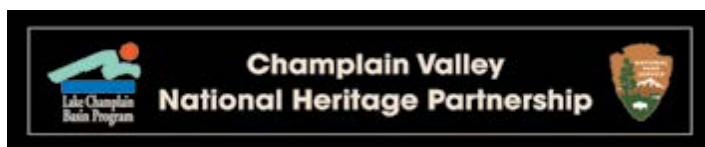
**Phone:** 802 475-2022

**E-mail:** [eloiseb@lcmm.org](mailto:eloiseb@lcmm.org)

**Website:** <http://www.lcmm.org/>



*Peter Barranco interviewed by Eloise Beil.*



**NEIWPCC Code:** PO 12127

**NPS**

**Date Complete:** 2/16/2017

**Grant Amount:** \$ 5,000.00

**Non-federal Match:** \$26,457.00

**Total Amount:** \$31,457.00

# 2015 Conservation and Community Grant

## Connecting Communities to Conserved Lands Along the Gihon and Lamoille Rivers

### Project Summary

The Vermont River Conservancy (VRC) improved access to conserved lands along the Gihon and Lamoille Rivers in Lamoille County, Vermont. This project highlights a unique set of conserved riparian lands along the Upper Lamoille and provides new opportunities for residents and visitors to visit and appreciate the interconnected waterways of the CVNHP. Work included the VRC worked with professional trail builders, community volunteers, and other community partners to successfully complete these projects during the summer and fall field season. The Gihon access trail was completed in May 2016. The Wolcott and Elmore River access projects were completed in September 2016. Maps were installed at the sites in December 2016.

#### Outputs:

- construction of a stone staircase to provide access to a swimming hole on the Gihon River in Johnson
- rebuilding a flood-ravaged access to the Lamoille River in Morrisville
- establishing a new river access on public land in Wolcott
- river maps and etiquette guidelines were created and installed at these access points.

#### Outcomes:

- new opportunities for residents and visitors to visit and appreciate the interconnected waterways of the CVNHP
- Support initiatives that promote sustainable recreational activities that feature the natural, cultural, and historical resources in the CVNHP
- Increase and improve public access opportunities to the interconnected waterways of the Champlain Valley National Heritage Partnership for diverse recreational activities

**Organization:** Vermont River Conservancy

**Contact Person:** Noah Pollock

**Mailing Address:** 29 Main Street, Suite 11  
Montpelier, VT 05602

**Phone:** 802 229-0820

**E-mail:** noah.pollock@gmail.com

**Website:** <http://www.vermontriverconservancy.org/>



*Seven Volunteers gave 57 hours to the project*



**NEIWPCC Code:** PO 12118

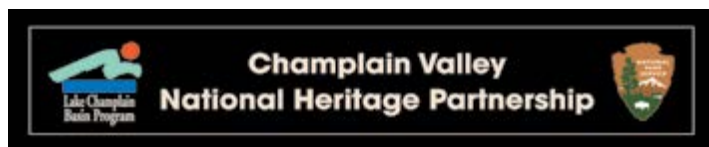
**NPS**

**Date Complete:** 12/29/2016

**Grant Amount:** \$ 5,000.00

**Non-federal Match:** \$ 5,530.00

**Total Amount:** \$10,530.00



# Community and Conservation Grant

# 2015

## Permanent Collection Conservation

### Project Summary

The CCHA purchased archival supplies to aid in the conservation of the Association/Museum's permanent collection in storage, and on exhibition. The permanent collection includes a variety of approximately 30,000 artifacts related to Clinton County's history. Artifacts within the permanent collection include portraits, textiles, documents, glass & celluloid negatives, glassware, tools, furniture, maps, advertising ephemera, Native American lithics, original artwork, diaries, and much more.

#### Outputs:

- Three priorities were identified: shelving, lighting and locks, and packaging for the photo and negative collection.
- 3,300 photos and negatives were packaged and stored using standard conservation methods.

#### Outcomes:

- CCHA exhibit areas are properly lighted, collection rooms are secured, and more items are stored on shelves.
- Provide support for needed historical and archaeological research and accelerate the identification, evaluation, protection, and interpretation of heritage resources, including ethnographies of the cultures within the Champlain Valley National Heritage Partnership.
- Connect, promote, and improve cultural and natural heritage sites through interpretation.

**Organization:** Clinton County Historical Association

**Contact Person:** Melissa Peck

**Mailing Address:** 98 Ohio Avenue  
Plattsburgh, NY 12903

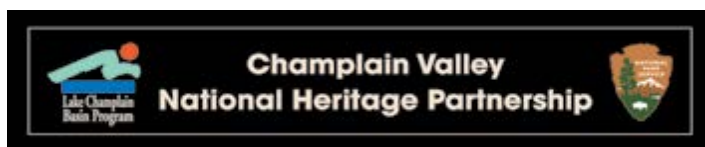
**Phone:** 518 561-0340

**E-mail:** [director@clintoncountyhistorical.org](mailto:director@clintoncountyhistorical.org)

**Website:** <http://www.clintoncountyhistorical.org/>



***Approximately 3,200 negatives/photos were processed (scanned, indexed, accessioned, packaged, and stored) during the Permanent Collection Conservation project. An additional 100 artifacts were repackaged and boxed.***



**NEIWPCC Code:** PO 12132  
**NPS**  
**Date Complete:** 5/25/2017  
**Grant Amount:** \$ 5,000.00  
**Non-federal Match:** \$42,492.00  
**Total Amount:** \$47,492.00



# 2015 Community and Conservation Grant

## Reclaiming Lost Centuries of Native American Presence in Lake George

### Project Summary

The Lake George Historical Association (LGHA) expanded its Native American exhibition room collaborating with area scholars, Native American historians, story tellers, clan mothers, Native residents and museums. The aim for the exhibition is to hone and expand the LGHA's artifact collection, to research missing Native American history, and to offer the public an expanded Native American exhibit room with stunning new interpretive graphics, large wall maps and a digital kiosk noting the presence of various Indian tribes in the region (including waterways, trails, ceremonial and burial sites, homes, wigwams, long houses, encampments, military actions, etc).

The museum's networking with the Iroquois, Mohican and Abenaki tribes and Nations has expanded significantly from this work. Over the years the LGHA hopes to expand the interpretation further, providing the public with a growing collection of oral histories, bringing additional Native American stories to light. At least five First Nations speakers were engaged in preliminary oral histories, small sections of which are included in the digital presentation supported by the CVNHP Conservation & Community grant.

#### Outputs:

- layered area wall map charting presence and types of activity, migrations, dwellings, events occurring in the vicinity from prehistory to the present day.
- 2-4 large photographic/collage wall panels
- exhibit pamphlet and rack cards
- talks by Native American leaders, story tellers and white and Native scholars

#### Outcomes:

- support for needed historical and archeological research and accelerate the identification, evaluation, interpretation of heritage resources including ethnographies of the cultures with the CVNHP.

**Organization:** Lake George Historical Association

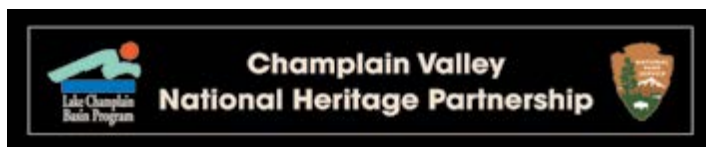
**Contact Person:** Lisa Adamson

**Mailing Address:** Box 472  
Lake George, NY 12845

**Phone:** 518 668-5044

**E-mail:** lgha@verizon.net

**Website:** <http://www.lakegeorgehistorical.org/>



<b>NEIWPCC Code:</b>	PO 12136
<b>NPS</b>	
<b>Date Complete:</b>	3/10/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$3,985.00
<b>Total Amount:</b>	<b>\$8,985.00</b>

# Local Heritage Grant

# 2015

## Flim-a-Lim-a-Lee: Local Heritage Through Music

### Project Summary

Traditional Arts of Upstate New York (TAUNY) worked with North Warren Central School in Chestertown, NY, and Peru Elementary School in Peru, NY, on a pilot project to use regional traditional music as a means to teach local history to 4th graders. Students were taught how to interview family members, learned songs in their music class that teachers selected from a regional song list, wrote a song with teaching artists John Kirk and Trish Miller, and put on a public performance at the end of the semester.

#### Outputs:

- education programs for 130 4<sup>th</sup> graders
- oral history instruction and family interview
- recorded online event

#### Outcomes:

- support for needed historical and archeological research and accelerate the identification, evaluation, protection and interpretation of heritage resources
- encourage communication and enhance cooperation among partners within the CVNHP

**Organization:** TAUNY

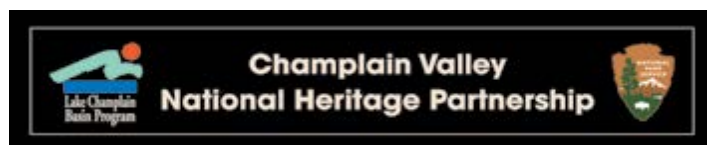
**Contact Person:** Jill Breit

**Mailing Address:** 53 Main St.  
Canton, NY 13617

**Phone:** 315 386-4289

**E-mail:** [jill@tauny.org](mailto:jill@tauny.org)

**Website:** <http://tauny.org/>



**NEIWPCC Code:** PO 12128

**NPS**

**Date Complete:** 2/3/2017

**Grant Amount:** \$ 5,000.00

**Non-federal Match:** \$ 8,750.00

**Total Amount:** \$13,750.00

2015

## Local Heritage Grant

## Indigenous Champlain Basin Horticulture: A Student Experience

## Project Summary

The ECHO, Leahy Center for Lake Champlain (ECHO) implemented the *Indigenous Champlain Basin Horticulture: A Student Experience* project. The effort was a collaboration of The Seeds of Renewal Project, a grass-roots indigenous food systems revitalization program located in Swanton, VT, and Frelighsburg, QC; the Shelburne Community School (science and art departments); and Sugarsnap, a catering business located in Williston, VT. This partnership had developed from relations developed among many of the principals dating back to the 2009 Lake Champlain Quadri-centennial Celebration.

## Outputs:

- Seeds of Renewal Director Prof. Fred Wiseman visited the Shelburne Community School to teach Abenaki history, culture, worldview and technology. Traditional Abenaki seeds were planted on the school's campus and were harvested the following fall
- students were encouraged to use graphic arts and social media to translate the data from Abenaki crops, culture and cuisine, into paintings, prints or other media. The art chosen by the students was displayed at ECHO in a contest
- project partners collaborated to develop two meals based on traditional, locally grown Abenaki foods. A lunch at ECHO for the students and the ECHO Harvest Celebration dinner, where the award winners for the art contest were announced.

## Outcomes:

- Encourage cooperation and enhance communication among partners within the CVNHP
- support historical and archeological research and accelerate the identification, evaluation, protection, and interpretation of heritage resources

**Organization:** ECHO, Leahy Center for Lake Champlain

**Contact Person:** Phelan Fretz

**Mailing Address:** One College Street  
Burlington, VT 05401

**Phone:** 802 864-1848 x 126

**E-mail:** pfretz@achovermont.org

**Website:** <http://echovermont.org/>

- Promote sustainable agriculture practices in the Champlain Valley National Heritage Partnership.
- Promote cultural exchanges and international scholarship programs.

**NEIWPCC Code:** 12129

**NPS**

**Date Complete:** 2/21/2017

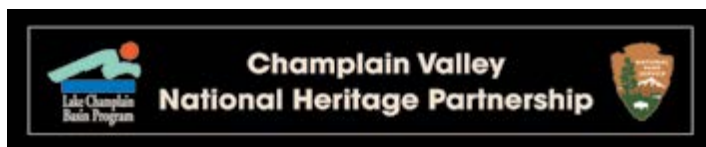
**Grant Amount:** \$5,000.00

**Non-federal Match:**

**Total Amount:** \$5,000.00



Lake Champlain  
Basin Program





# Local Heritage Grant

# 2015

## Interpreting the Champlain Valley Trapping Boat

### Project Summary

The Patricia A. Hannaford Career Center had students research, write, design and develop interpretive signage on trapping boats on Lake Champlain. The project was the direct outgrowth of a research project funded through a 2014 CVNHP Local Heritage Grant to Middlebury's Henry Sheldon Museum where Hannaford's Engineering Design class studied the traditions of muskrat trapping and specifically boatbuilding in the Champlain Valley. During that project, historic boats were brought into the classroom where students measured and drew them, finally building replicas. Students also interviewed trappers and visited historic trapping sites, including a family trapping camp, possibly the last in existence in the region.

This project utilized that body of student-generated materials with an eye toward designing interpretive materials to allow for wider, more effective dissemination of this research through exhibitions and publications. Students also sourced vendors, eventually recommending local firms, for the production of these materials. Looking forward, the project will use the interpretive panels in area events like boat shows, sportsmen rendezvous, and museum exhibitions.

#### Outputs:

- publication of a boat-building monograph that was an overview of the two years of research with a specific focus on the construction of one particular historic trapping boat.

#### Outcomes:

- support for historical and archeological research and accelerate the identification, evaluation, protection, and interpretation of heritage resources, including ethnographies of the culture within the CVNHP
- Increase and improve public access opportunities to the interconnected waterways of the CVNHP for diverse recreational activities. Produce coordinated education programs for students.

**Organization:** Patricia A. Hannaford Career Center

**Contact Person:** Lisa Rader

**Mailing Address:** 51 Charles Avenue  
Middlebury, VT 05753

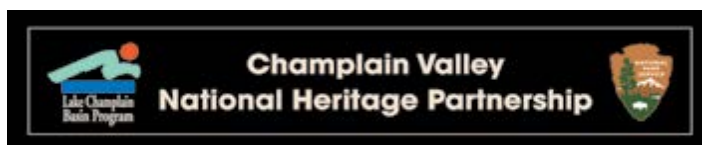
**Phone:** 802 382-1012

**E-mail:** lrader@pahcc.org

**Website:** <http://www.hannafordcareercenter.org/>



**NEIWPCC Code:** PO 12149  
**NPS**  
**Date Complete:** 3/17/2017  
**Grant Amount:** \$ 5,000.00  
**Non-federal Match:** \$ 8,950.00  
**Total Amount:** \$13,000.00



2015

## Local Heritage Grant

## Prehistoric Ecology and Culture of the Northern Lake Champlain Basin

## Project Summary

The Friends of the Missisquoi National Wildlife Refuge developed a very successful 1-week Summer Science Experience for youth that focused on the cultural and natural history of the Northern Lake Champlain. Using the Next Generation Science Standards as a rubric for teaching, the Friends developed and delivered an integrated program that interwove paleoclimate, paleogeomorphology and paleo-ethnobotany into a coherent story of human/environment interaction during the Terminal Pleistocene and Holocene Periods. The morning lecture/demonstration was supplemented by afternoon field and laboratory experiences, which were interpreted by the students using the visual as their final projects.

## Outputs:

- course syllabus w/4 field trips and 6 participants.
- Press releases and school announcements regarding the Summer Institute

## Outcomes:

- support for historical and archeological research and accelerate the identification, evaluation, protection, and interpretation of heritage resources, including ethnographies of the cultures within the CVNHP
- focus on land-use changes and effects of stormwater runoff on water quality.
- produce coordinated education programs for students.

**Organization:** Friends of the Missisquoi Wildlife Refuge

**Contact Person:** Rich Kelley

**Mailing Address:** 29 Tabor Road  
Swanton, VT 05488

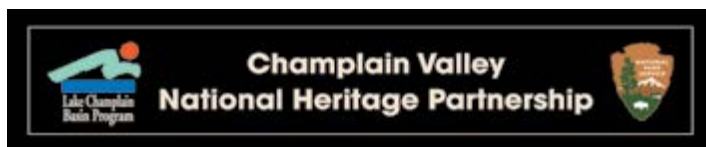
**Phone:** 802 868-4781

**E-mail:** [info@friendsofmissisquoi.org](mailto:info@friendsofmissisquoi.org)

**Website:** <http://friendsofmissisquoi.org/>



*The Summer Science Experience was the first time several of the students from the community had been on the Missisquoi River.*



<b>NEIWPCC Code:</b>	PO 12131
<b>NPS</b>	
<b>Date Complete:</b>	1/11/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$1,158.00
<b>Total Amount:</b>	\$6,158.00

# Local Heritage Grant

# 2015

## The Farming Project

### Project Summary

Hubbard Hall Center for the Arts and Education partnered with the Agricultural Stewardship Association and Young Playwrights' Theater of Washington, DC, to implement a series of creative writing workshops in public schools throughout Washington and Rensselaer counties and with farming families throughout the region on themes of contemporary farming life, history of the region and our connection to the land.

These workshops produced short plays, scenes and monologues that were then professionally produced for a regional audience as part of Hubbard Hall's Winter Carnival of New York to showcase and highlight the importance of the region. The play, a tapestry of poetry, stories, scenes and monologues culled from approximately 20 hours of interviews and over 60 hours of free workshops in Cambridge, Greenwich and Hoosick Falls Public Schools, was performed by an ensemble of ten local artists, including members of the farming community. Running approximately 55 minutes, each performance was accompanied by a post-show discussion about issues found and not found in the play.

#### Outputs:

- 14 families interviewed, 54 workshops and 650 students
- an original play based on these students' writing and engaging the local farming community to also write and contribute personal storytelling to the final project

#### Outcomes:

- promote cultural exchanges and international scholarship programs.
- produce coordinated education programs for students
- engaging local youth in an in-depth discussion of issues and history relating to their region and landscape

**Organization:** Hubbard Hall Center for the Arts and Education

**Contact Person:** David Snider

**Mailing Address:** 122 West Main St  
Cambridge, NY 12816

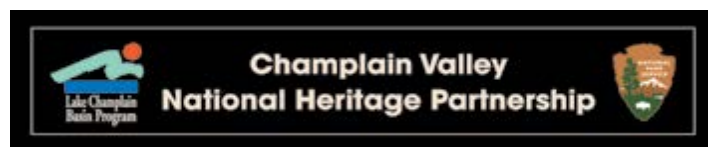
**Phone:** 518 677-2495 x 313

**E-mail:** david@hubbardhall.org

**Website:** <http://hubbardhall.org/>



**NEIWPCC Code:** PO 12130  
**NPS**  
**Date Complete:** 7/3/2017  
**Grant Amount:** \$ 5,000.00  
**Non-federal Match:** \$ 5,863.00  
**Total Amount:** \$10,863.00



2015

## Local Heritage Grant

## Vermont Music Heritage Accessibility Project

## Project Summary

Big Heavy World transferred its vast collection catalogue to a web-administrated platform to expand public access and improve interaction with collection materials. The organization's experienced staff worked with eight young people to develop a data scheme for the archive catalogue. The team also developed a custom audio player. The data, image, and audio content of 25 recordings was entered into the system to pilot and demonstrate the improved archive catalogue system. The Vermont music archive may now be searched from other library systems and can contribute to statewide efforts to aggregate information about archive holdings.

## Outputs:

- scanning, processing audio, and entering data from hundreds of other Vermont recordings
- sharing the 115 images of our 'Sound Proof' photography exhibit of musician portraits from the 1990s, with audio interpretation for most of them
- formal repository for artifacts from the 30+ year history of 242 Main, a Vermont music venue of national historic significance
- Engaged Code for BTV, the official Code for America Brigade of volunteer civic technologists, to begin converting the custom audio player code into an Omeka plugin that will be shared with the open source community
- short video overview of the project

## Outcomes:

- support for historical and archeological research and accelerate the identification, evaluation, protection, and interpretation of heritage resources, including ethnographies of the cultures within the CVNHP

**Organization:** Big Heavy World Foundation

**Contact Person:** James Lockridge

**Mailing Address:** PO Box 428  
Burlington, VT 05402

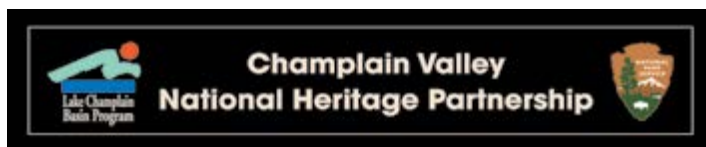
**Phone:** 802 865-1140

**E-mail:** jim@bigheavyworld.com

**Website:** <https://www.bigheavyworld.com/>



**NEIWPCC Code:** PO 12119  
**NPS**  
**Date Complete:** 9/25/2017  
**Grant Amount:** \$ 5,000.00  
**Non-federal Match:** \$ 6,465.00  
**Total Amount:** \$11,465.00





# Local Heritage Grant

# 2015

## Women's Suffrage in Lake George, Lake Champlain Basin

### Project Summary

The Lake George Historical Association (LGHA) worked with Lake George High School (LGHS) to produce a grant-supported play about women's suffrage in the Lake George, NY. The high school allotted a semester class to produce the play, "Forward Into the Light." The play was performed on December 14, 2016, and was advertised by the LGHS to the teachers, parents and student body. The LGHA also used grant funds to display visual components of the play and create an informational digital exhibition for the public in LGHA's museum.

#### Outputs:

- scripts written by students and area script writers based on historical events relating to suffrage printed and displayed
- student performance
- graphics, costume and set designs by NCCC students and/or the LGHA Curator for participating partners and museum display
- video of historic images/art graphics along with drama vignettes in performance, displayed on kiosk in the LGHA 2017 suffrage exhibit, script transcripts on view.
- Presence on the state wide Centennial online heritage trail
- Speakers (historians) at NCCC and in Lake George (Museum or high school)

#### Outcomes:

- support for historical research and accelerate the interpretation of heritage resources
- Produce coordinated education program

**Organization:** Lake George Historical Association

**Contact Person:** Lisa Adamson

**Mailing Address:** PO Box 472  
Lake George, NY 12845

**Phone:** (518) 668-5044

**E-mail:** lgaha@verizon.net

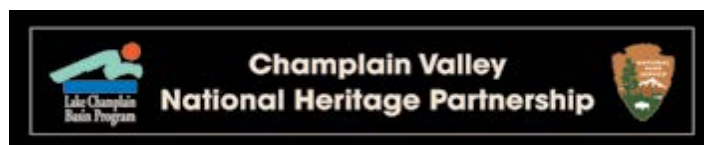
**Website:** <http://www.lakegeorgehistorical.org/>



**An exhibit panel displayed in the LGHA Museum**



**More than 40 costumes were created for the play**



<b>NEIWPCC Code:</b>	PO 12125
<b>NPS</b>	
<b>Date Complete:</b>	3/3/2017
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$2,180.00
<b>Total Amount:</b>	\$7,180.00

2016

## CVNHP Project

## Franco-American Heritage in the Champlain Valley

## Project Summary

The project was to create and publish a book of images documenting Franco-American heritage in the Champlain Valley. The French, largely through immigration from Quebec to New York and New England, have left an indelible mark on the Northeastern corner of the country. There has been documentation of Franco-American heritage in some of the New England states, but very little exists to document the unique circumstances of the French who settled on both sides of Lake Champlain. Most of the counties that make up the Champlain Valley have strong ties to a distinctive French culture that still echoes today through cuisine, folklore, family traditions, language, community celebrations and religion. The resulting book, *Franco-Americans in the Champlain Valley* includes 193 photographs or images documenting the history of the French in the Champlain Valley. In 180 pages, the book outlines Franco-American contributions to all aspects of life in the northernmost counties of Vermont and New York. Chapters covering French leaders and citizens, work life, culture, religion, and the particularly French city of Winooski, Vermont provide a better understanding of the extent of Franco-American influence in the region.

- Research was conducted in Clinton, Essex, Washington, and Saratoga Counties in New York, and Grand Isle, Franklin, Chittenden, Addison, Rutland Counties in Vermont to uncover photographic evidence of Franco-American lifestyles, traditions and cultural contributions to the area resulting in a collection of approximately 200 images
- a printed book

## Outcomes:

- 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 Champlain Valley National Heritage Partnership.
- promote cultural exchanges and international scholarship programs.

**Organization:** Samuel de Champlain History Center

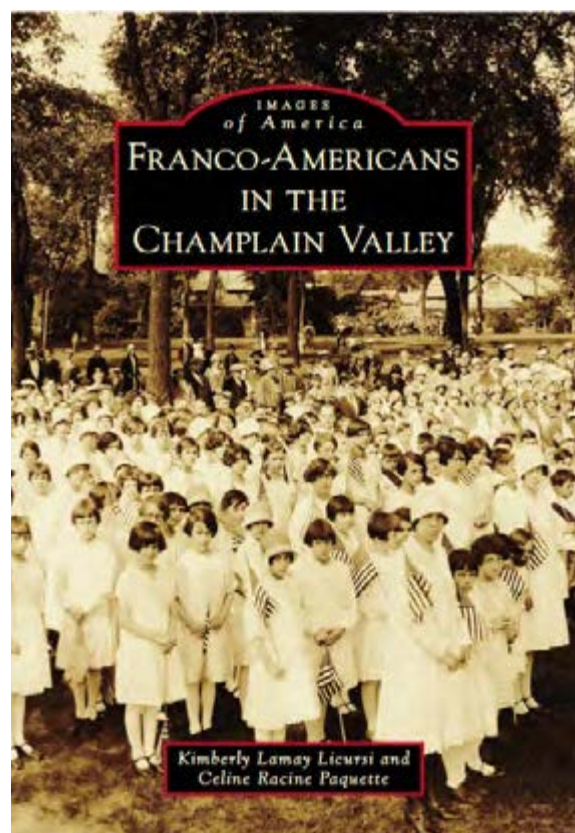
**Contact Person:** Kimberly Lamay Licursi, Ph.D  
Celine Racine Paquette, Ed.D

**Mailing Address:** P.O.Box 3333  
Champlain, NY 12919

**Phone:** (518)298-1609

**E-mail:** cpaquette@primelink1.net

**Website:** [http://moorsfieldpress.com/hc/samuel\\_de\\_champlain\\_history\\_center.html](http://moorsfieldpress.com/hc/samuel_de_champlain_history_center.html)



Lake Champlain  
Basin Program

<b>NEIWPCC Code:</b>	PO 12449
<b>NPS</b>	
<b>Date Concluded:</b>	9/20/2017
<b>Grant Amount:</b>	\$ 9,995.00
<b>Non-federal Match:</b>	\$17,033.00
<b>Total Amount:</b>	\$27,028.00



# CVNHP Project

# 2016

## Stem to Stern Curriculum Guide Development

### Project Summary

Lake Champlain Maritime Museum educators, working with AmeriCorps members and regional experts, developed an interactive and discovery-based curriculum that integrates the themes of forest stewardship, boat-building, waterways and commercial history of the Champlain Basin. During the grant period, pilot program assessment and extensive research were synthesized into a curriculum that was reviewed by Vermont Family Forests and presented in six area schools.

The curriculum is now available online and can be used by classroom teachers in the Champlain Valley, and by students who want to explore these important themes through personalized learning plans. Background research is presented with bibliographic references, and interactive activities for students in grades K-12. Lesson plans include applicable learning standards.

In 1817 ground was broken on one of the largest and most successful public works projects in the history of the United States; the Erie and Champlain canals. Perhaps no other event had a larger economic, social or ecological impact on the Champlain Valley, the basis for CVNHP's interpretive theme; *Corridor of Commerce*. The 2017 Legacy Voyage of the Schooner *Lois McClure*, culminating in the World Canals Conference in September, 2017 presented the content from the *Stem to Stern* program in on-board exhibits, an educational brochure, port visit interpretation, and public events in communities along the tour route.

#### Outputs:

- the curriculum will be the basis for continuing educational programs at the Lake Champlain Maritime Museum.

#### Outcomes:

- Produce coordinated education programs for students.

**Organization:** Lake Champlain Maritime Museum

**Contact Person:** Elizabeth Lee

**Mailing Address:** 4472 Basin Harbor Road  
Vergennes, VT 05491

**Phone:** (802) 475-2022 x102

**E-mail:** Elizabethl@lcmmm.org

**Website:** <https://www.lcmmm.org/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-001

**NPS**

**Date Concluded:** 7/3/2017

**Grant Amount:** \$17,500.00

**Non-federal Match:** \$ 2,250.00

**Total Amount:** \$19,750.00

2015

## Local Implementation Grant

## ACRWC Organization Capacity Improvements

## Project Summary

The Addison County River Watch Collaborative recognized the need to formalize its organizational operations to increase the effectiveness and capacity of the organization to carry out its mission and goals. The ACRWC sought funding to develop organizational bylaws which would articulate management roles and responsibilities, to train and recruit new volunteers, and to retain and increase its membership. This work supported a separate initiative to evaluate the merits of establishing independent 501(c)3 status rather than relying on the present arrangement with Lewis Creek Association as fiscal agent.

## Outputs:

- ACRWC mission statement bylaws were revised, which were unanimously approved on September 14, 2016
- expanded and updated database of volunteers and held an annual training session on March 19, 2016
- held 3 special meetings to work on bylaws in addition to the once/month board meetings
- Two press releases were written and sent to the local newspaper (Addison Independent).
- ACRWC recognized and celebrated volunteers at a season wrap-up event at Stark Mountain Woodworking on October 19, 2016
- Annual Report was drafted

## Outcomes:

- Support of watershed groups furthers watershed protection and restoration efforts

**Organization:** Lewis Creek Association (ACRWC)

**Contact Person:** Deb Healey

**Mailing Address:** 442 Lewis Creek Road  
Charlotte, VT 05445

**Phone:** 802-425-2002

**E-mail:** marty.illick@gmail.com

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** PO 12133  
**EPA**  
**Date Complete:** 1/17/2017  
**Grant Amount:** \$3,591.00  
**Non-federal Match:** \$5,080.00  
**Total Amount:** \$8,671.00

# Local Implementation Grant

# 2015

## Americorps Sponsor Match

### Project Summary

The Friends of Northern Lake Champlain was awarded a full-time ECO Americorps Member through the Department of Environmental Conservation. This member worked to develop educational programs and assist in project scoping, project owner outreach, and conducting various field work projects to advance some of the identified stormwater projects in the region. This grant was used to support FNLC's match of this person's salary.

#### Outputs:

- By increasing the capacity of FNLC, further development of agricultural and stormwater projects that contribute phosphorus and other pollutants to the watershed can occur. It will also boost the education and outreach capacity encompassing a greater understanding around water quality and resiliency.
- The ECO Americorps member completed 8 projects with the Champlain Valley Equipment Cistern Project treating 1000 square feet of impervious surface and 4 rain gardens installed 4 residential properties.

#### Outcomes:

- promote a better understanding and appreciation of Lake Champlain Basin resources and threats as well as personal responsibility that leads to behavioral changes and actions to reduce pollution
- reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake.

**Organization:** Friends of Northern Lake Champlain

**Contact Person:** Kent Henderson

**Mailing Address:** PO Box 58, Swanton, VT 05488

**Phone:** 802 355-0694

**E-mail:** hugamoo@comcast.net

**Website:** <http://www.northernlakechamplain.org/>



*The Sheldon School class is being taught the proper way to dig a hole and plant a tree.*



<b>NEIWPCC Code:</b>	PO 12139
<b>EPA</b>	
<b>Date Complete:</b>	1/10/2017
<b>Grant Amount:</b>	\$4,000.00
<b>Non-federal Match:</b>	
<b>Total Amount:</b>	\$4,000.00

2015

## Local Implementation Grant

## Expansion of the Assembly Point Water Quality Coalition Inc. (APWQC)

## Project Summary

This grant was used to expand and solidify an active membership base through informational and educational activities and for support of ongoing and new projects which showcase, map, monitor, train in water quality stewardship, and reflect the goals of our mission.

## Outputs:

- Spring, Summer, Winter (3) newsletters
- edited and added to the historical manuscript by the late Robert Adamson, by his daughters Lisa and Judith, printed and distributed to all interested residents
- wrote/printed/distributed Sealcoat flyer
- developed/printed/distributed Snorkel Swim announcement with location, date, time. Solicited neighborhood for volunteers, contracted with expert water quality consultant to collect/photograph algal and water samples; all samples analyzed/reported on by aquatic biologist; data electronically stored as benchmark for future reference; photo inventory over 1,000. Purchased camera, necessary sample containers
- Photoshop training; researched “go to meeting” software and Skype and Dropbox programs for meetings.
- developed “Welcome Package” for new residents, containing twelve documents, newsletters, plus a booklet on the history of Assembly Point, and a “Clean Boat” sticker and distributed to new residents.
- engaged residents willing to install rain gardens, buffer planting of trees and shrubs.
- communicated with other grass roots groups around the lake.
- held Annual APWQC Meeting with 27 attendees

## Outcomes:

- recruit and retain membership, plan leadership development with the greater goal of more active membership involvement

**Organization:** Assembly Point Water Quality Coalition, Inc

**Contact Person:** Elizabeth C. Adamson

**Mailing Address:** 128 Lake Parkway  
Lake George, NY 12845

**Phone:** 518 656-9794

**E-mail:** apwqc7@gmail.com

**Website:** <http://www.assemblypt.com/>



<b>NEIWPCC Code:</b>	PO 12126
<b>EPA</b>	
<b>Date Complete:</b>	4/5/2017
<b>Grant Amount:</b>	\$4,000.00
<b>Non-federal Match:</b>	
<b>Total Amount:</b>	<b>\$4,000.00</b>

# Local Implementation Grant

2015

## Lake Champlain Committee 2015/2016 Capacity Building

### Project Summary

This organizational support grant helped fund three high priority projects to strengthen the organization's capacity:

- A) Review and update of organizational guidance policies;
- B) Update of office management and accounting manuals;
- C) Develop volunteer guidance and support tools. These projects help improve management, provide greater staff guidance and support, and increase capacity to effectively engage and expand our volunteer network.

#### Outputs:

- Review and update policies on Board governance, accounting and financial oversight, corporate support, records retention, whistle blower, and conflict of interest policies to be provided through a website hub
- Review and update office management and accounting procedures.
- Volunteer guidance manual and policies with some online hub access.
- Assessments of effectiveness for governance and transparency, accounting procedures and guidance policies will be undertaken.
- An additional assessment will look at whether the approaches are helping to better expand and utilize volunteers.

#### Outcomes:

- Strong, effective non-governmental partners are viewed as essential to implementing *OFA*. Expanding the volunteer network and tools and updating the governance and accountability procedures will strengthen LCC's capacity to assist with all the priority tasks outlined in the "Influence and Involve the Public" chapter. Additionally, LCC's program focus covers all the areas identified in *OFA* and is committed to marshalling resources to raise awareness of and help address these challenging issues.

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <https://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** PO 12122

**EPA**

**Date Complete:** 2/21/2017

**Grant Amount:** \$ 4,000.00

**Non-federal Match:** \$ 6,720.00

**Total Amount:** \$10,720.00

2015

## Local Implementation Grant

## Missisquoi River Basin Association Organizational Support

## Project Summary

Funding supported current projects and the long-term effectiveness of the Association's efforts to reduce the phosphorus load flowing into Lake Champlain. The funds were used for general operating expenses and a portion of the part-time coordinator's salary during calendar year 2016. Each of these items is essential to the overall function of the organization and will provide support for the wide-ranging activities aimed at water quality improvement within the Missisquoi watershed.

## Outputs:

- Organization of a public forum
- Organization of a river clean-up
- Educational tools for teachers in local elementary and high schools to raise awareness around water quality issues.
- Publication of two newsletters and exploration of additional opportunities for water quality outreach through social media.
- Twelve monthly planning meetings for members of the MRBA Board of Directors and the public.
- Developed water sampling training guide.

## Outcomes:

- Reduction of the amount of phosphorus entering the Lake.

**Organization:** Missisquoi River Basin Association

**Contact Person:** Cynthia Scott

**Mailing Address:** 75 Fairfield Street  
Saint Albans, VT 05478

**Phone:** 802-827-3360

**E-mail:** MRBA@pshift.com

**Website:** <http://mrbavt.com/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** PO 12124

**EPA**

**Date Complete:** 12/29/2016

**Grant Amount:** \$2,750.00

**Non-federal Match:** \$3,160.00

**Total Amount:** \$5,910.00



# Local Implementation Grant

# 2015

## PMNRCD Office and Outreach Support

### Project Summary

Poultney Mettowee NRCDC used funds to broaden its outreach by creating brochures, newsletters, blogs and the first mailing for an annual tree and plant sale. Additionally, the District is used funds for office technology upgrades which included a new office computer and software.

#### Outputs:

- Four brochures to illustrate its Educational Programs, District Overview and Partnerships, and Water Quality Projects and Stormwater Planning Initiatives. Built into each brochure will be language specific to climate change.
- An e-newsletter.
- Annual tree and plant sale event.
- Office technology upgrade - new computer and software

#### Outcomes:

- Building awareness and understanding of resources and behaviors that contribute to pollution by increasing understanding of climate change and Lake Champlain Basin ecosystem management, and communicating progress made by the District.
- Improving communication and cooperation among diverse groups within the Lake Champlain Basin through education and outreach.
- Providing local groups with financial and technical resources to strengthen administrative, technical, communication, and field skills, and to keep the public informed about financial and educational support pertaining to water-quality issues available through LCBP.

**Organization:** Poultney Mettowee NRCDC

**Contact Person:** Hilary Solomon

**Mailing Address:** PO Box 209, Poultney, VT 05764

**Phone:** 802 287-8339

**E-mail:** pmnrcd@gmail.com

**Website:** <http://www.pmnrcd.org/>



**NEIWPCC Code:** PO# 12121  
**EPA**  
**Date Complete:** 8/1/2017  
**Grant Amount:** \$3,995.00  
**Non-federal Match:**  
**Total Amount:** \$3,995.00

2015

## Local Implementation Grant

## Strategic Watershed Plan

## Project Summary

Grand Isle County Natural Resources Conservation District's (GICNRCD's) Strategic Watershed Plan will provide a three-year strategic plan for GICNRCD to align Grand Isle County's natural resource concerns with the Water Quality Management Plan for the Northern Lake Champlain Direct Drainages and Vermont's state water quality concerns. The goal of the project is to build a foundation of deliverables for GICNRCD to complete based on relevant and up to date technical and informational resources

## Outputs:

- A three-year strategic plan that lists action items and goals, objectives or strategies for each year that will move GICNRCD towards its goals, and a workplan that implements the objectives

## Outcomes:

- Support of watershed groups furthers watershed protection and restoration efforts.

**Organization:** Grand Isle County NRC

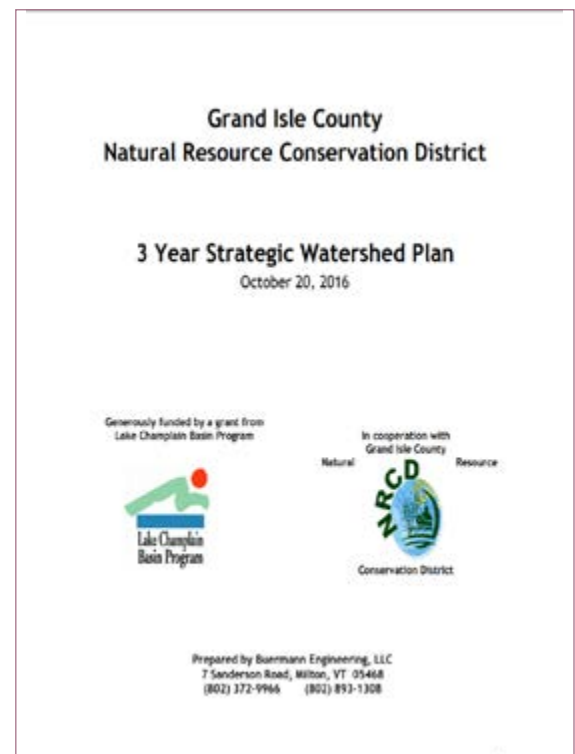
**Contact Person:** Sherri Potvin

**Mailing Address:** PO Box 212, Grand Isle, VT 05474

**Phone:** 802 372-8400

**E-mail:** sherri@champlainislands.com

**Website:** <http://www.vacd.org/conservation-districts/grand-isle-county>



<b>NEIWPCC Code:</b>	PO# 12141
<b>EPA</b>	
<b>Date Complete:</b>	1/30/2017
<b>Grant Amount:</b>	\$4,000.00
<b>Non-federal Match:</b>	\$ 600.00
<b>Total Amount:</b>	<b>\$4,600.00</b>

# Local Implementation Grant

# 2014

## Streamlining and Freshening Communications to Build FMR Organizational Stability

### Project Summary

In 2012, with organizational sustainability as a main objective, Friends of the Mad River (FMR) drafted a Fundraising Plan to address an annual gap between income and expenses and identify opportunities for closing it. With this funding, FMR developed a Communications Plan that ensures thoughtful and strategic communications reflecting the organization's mission. FMR paired this planning with a suite of design work to streamline and freshen the communications forming the backbone of our relationship with members.

#### Outputs:

- FMR developed a communications plan, streamlined communications designs (including updated paper newsletter template, three to five member e-mail templates, and one organizational brochure), and incorporated these designs into 2015 fall communications and onward.

#### Outcomes:

- Support of watershed groups furthers watershed protection and restoration efforts

**Organization:** Friends of Mad River

**Contact Person:** Corrie Miller

**Mailing Address:** PO Box 255  
Waitsfield, VT 05673

**Phone:** 802 496-9127

**E-mail:** friends@madriver.com

**Website:** <http://www.friendsofthemadriver.org/>



**NEIWPCC Code:** PO 10976

**GLFC**

**Date Complete:** 7/17/2017

**Grant Amount:** \$3,893.00

**Non-federal Match:**

**Total Amount:** \$3,893.00

2015

## Local Implementation Grant

## Increasing Resiliency on Vermont's Backroads

## Project Summary

The Lake Champlain watershed is experiencing preventable, yet highly problematic, levels of pollution from Class 4 road erosion. While the research is conclusive, Vermont needs a coordinated effort and funding to complete the work that has been identified and prioritized in recent studies.

This project fostered collaboration among regional planning commissions (RPCs), watershed groups, state agencies, and municipal select boards and road crews, to employ successful backroad flood and erosion mitigation using best management practices (BMPs). The vision created a comprehensive and sustainable system that implements the Vermont Department of Environmental Conservation's (DEC) road erosion risk assessment inventory and relied on Vermont Youth Conservation Corps (VYCC) crews to remedy gravel road erosion issues.

## Outputs:

- VYCC worked with a new coordinator to create five new partnerships
- 25 VYCC members treated and improved sixty road stretches
- During the 2016 field season, VYCC crews spent 4 weeks on road erosion projects. Also during this time, Daniel Schmidt worked with 3 additional towns to plan for 10 weeks of road erosion work for 2017. VYCC anticipates being able to further increase the number of weeks that devoted to road erosion projects for 2018.

## Outcomes:

- Road erosion reduction and community outreach

**Organization:** Vermont Youth Conservation Corps

**Contact Person:** Daniel Schmidt

**Mailing Address:** 1949 East Main St  
Richmond VT 05477

**Phone:** 802 434-3969

**E-mail:** daniel.schmidt@vycc.org

**Website:** <http://www.vycc.org/>



**NEIWPCC Code:** L-2016-018

**EPA**

**Date Complete:** 2/15/2017

**Grant Amount:** \$ 20,000.00

**Non-federal Match:** \$250,032.00

**Total Amount:** \$270,032.00



SECTION FOUR:

# INFORMED AND INVOLVED PUBLIC









# INFORMED AND INVOLVED PUBLIC

**GOAL: Basin residents and visitors will 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.**

A public that understands water quality science and management challenges as well as possible solutions can make informed choices about protection and restoration of Basin resources. For this reason, public information and outreach efforts have been a core function of the LCBP's work since our establishment in 1992. The LCBP works in formal learning settings and in less structured public events and outreach avenues.

Many of these efforts came together with the 2017 World Water Day event hosted by the Champlain Basin Education Initiative (CBEI) at the ECHO, Leahy Center for Lake Champlain in Burlington, VT. This public event featured artwork, writing, photography, and videography from 18 classrooms in New York and Vermont to celebrate the importance of water resources. Many of the participating educators were also enrolled in CBEI's *Watershed for Every Classroom* (WEC) professional development program. World Water Day entries from these teachers' students were closely tied to classroom lessons that were developed through WEC. Keynote speaker Becky Tharp from Lake Champlain Sea Grant shared her work in using green infrastructure to improve water quality in the Basin, and awards were presented for student artwork.

## Program Highlights

- » LCBP produced two new videos in the **Diving In** series focusing on opportunities for citizens to get involved in protecting the watershed.
- » Staff greeted 31,609 visitors and hosted multiple classes and organizations at the **LCBP Resource Room** at ECHO, Leahy Center for Lake Champlain.
- » Twelve teachers completed the year-long **Watershed for Every Classroom** professional development program in watershed education and place-based learning.
- » Staff and partners continued the **Healthy Soils** outreach campaign, creating infographics and conducting public education sessions to inform the public of lake-friendly lawn care practices.
- » The **Boat Launch Steward Program** surveyed more than 25,000 boaters and inspected 12,314 watercraft, intercepting 315 invasive species at launches in New York and Vermont.
- » The Champlain Basin Education Initiative hosted two workshops— **State of the Lake: Explore Basin Issues** and **Love the Lake for Educators**—to enhance instruction of lake issues in K-12 classrooms.
- » Staff presented **water quality programs** at classroom, camp, and field days sessions throughout the watershed.
- » Recruited new VTDEC **ECO-AmeriCorps Service member** to develop water quality units for summer youth camp programs in the Lake Champlain islands.

## LCBP Resource Room at ECHO, Leahy Center for Lake Champlain

Education and Outreach staff operated the **Lake Champlain Resource Room** all 362 days that ECHO was open last year. In addition to day-to-day outreach and interaction with the public, Resource Room staff tailored programs on Lake and Basin issues for classes and other school and community groups, and developed interpretive signage and exhibit materials. Activities included:

- Engaged multiple **school and camp groups** on field trips to ECHO with both formal and informal **science inquiry activities and discussions**.

## Program Highlights

- Presented many **custom educational programs for student and camp groups throughout the year** including, for example, the University of Vermont, Champlain College and the Community College of Vermont. **Staff also presented short programs for many professional organizations. Examples include:** Vermont DEC ECO AmeriCorps, Clarkson University, US-China Partnership with Vermont Law School, Montshire Museum and Rennselaer Polytechnic Institute.
- Increased **collaboration with area colleges and universities** including presentations for **170 students** in UVM's "Natural Resources 1", Champlain College "Ethics and the Environment" class, SUNY Plattsburgh and Bard College environmental policy courses and a growing network of student volunteers.
- Interpreted zooplankton and phytoplankton using **weekly plankton tows** in the summer from the Burlington waterfront. Assisted visitors with identifying live specimens under the microscope.
- Presented **daily public programs on wetlands, sea lamprey, invasive species, bird behavior, and water quality.**
- Developed **eight new exhibits** for the Resource Room and **six seasonal exhibits** for ECHO's main exhibit floor.
- Installed several new exhibits featuring **"Attracting Butterflies with Native Plants", "Fish Friendly Skiing", "Lake Shorelines and Erosion Prevention", "Raise the Blade for Healthier Soil", "Soak it For Schools (Stormwater)"** and **"Tracking Fish"**.

## Champlain Basin Education Initiative (CBEI)

Education and Outreach staff coordinated and supported the efforts of the Champlain Basin Education Initiative (CBEI), a consortium of environmental and place-based education groups throughout the Lake Champlain Basin. In addition to the highlights listed on the previous page, activities included:

- **Lake Champlain Watershed.** Hosted an in-service watershed professional development workshop for 13 teachers in St Albans, VT.
- **State of the Lake:** A scientific briefing for nine Vermont educators was completed in Burlington, VT.

## Meetings, Workshops and Conferences

Education and Outreach staff participated in numerous professional events. Activities included:

- Facilitated **discussions and meetings of the Healthy Soils Initiative** designed to decrease erosion and stormwater runoff, and launched the Raise the Blade social marketing campaign.
- Participated in the **Vermont Agricultural Communications Work Group** to improve communication among agency and local partners leading to a communications workshop in January 2017.
- Facilitated **off-site technical and media assistance** during LCBP meetings and events.
- Coordinated four **Education and Outreach Advisory Committee meetings.**



- Organized and co-hosted a **multi-track, capacity building Local Watershed Group Conference** with Watersheds United Vermont
- Participated in **LCBP Executive and Steering Committee meetings**, continually updating the states, EPA and other partners on progress.
- Continued participation in the **Vermont Clean Water Network** launched by ECHO, Leahy Center for Lake Champlain and All Souls Interfaith Gathering.
- Attended and facilitated sessions of the **CVNHP Summit**.
- Co-hosted the **Vermont Boat and Marina Association annual workshop** for marina managers.

## Print publications (brochures, flyers, reports and other outreach materials)

Education and Outreach staff developed, designed, and produced numerous outreach pieces for multiple audiences and events:

- **2016 LCBP/CVNHP Annual Report of Activities Summary and Appendix**, highlighting LCBP projects.
- **AIS outreach materials/brochures, poster, and LCBP agricultural exhibit materials** for the Vermont Farm Show
- **Table and display banners** for education and outreach events.
- **Agendas, flyers, brochures** in support of **Watershed for Every Classroom** and the **Champlain Basin Education Initiative**
- **GLFC/LCBP Partnership outreach summary**
- Posters and other outreach materials for meetings and press/media events, including Steering Committee and press events with **Senator Patrick Leahy**.
- Released summary and full plan versions of ***Opportunities for Action - An Evolving Plan for the Future of the Lake Champlain Basin*** in June 2017.

## Programs and Events

Education and Outreach staff participated in public outreach events, both as the principal organizer and host, or as exhibitors, including:

- Assisted with small group **watershed discussions for the public advisory group of the Vermont Clean Water Network**
- **Camp Ingall's** Summer Program, North Hero, VT
- **Clinton Community College Career Fair**
- **Confidential review committees** to evaluate Local Implementation grant proposals and submitted recommendations for funding to the Executive and Steering Committees for consideration. Circulated award notification letters, reviewed and approved workplans, and worked with NEIWPCC to execute **21 new contracts**. Five reviewers were recruited for this process.
- **LCBP Love the Lake 5-Part Lecture Series**, Grand Isle, VT featuring natural and cultural heritage programs for 205 participants.

- **Lake Champlain Maritime Festival**, Burlington, VT
- **Northeastern Clinton School Camp Programs** (10)
- **St Albans Watershed Association Waterfront day**
- **Student Field Days** with Clinton County Cooperative Extension, and Winooski Natural Resource Conservation District
- **Vermont Center for Geographic Information Art exhibit** at the Vermont State House
- **Vermont Farm Show**, Essex, VT, a three-day event
- **Vermont Flower Show**, Essex, VT, a three-day event
- **Vermont Free Fishing Day**, Grand Isle, VT
- More than **40 school programs** about the watershed or the *State of the Lake* report were completed for K-12 classes, field days, and colleges in Vermont and New York



## Online/Electronic Media

Education and Outreach staff maintained electronic media and communications tools, including all LCBP websites (*LCBP*, *CVNHP*, *Lake Champlain Basin Atlas*, *Lawn to Lake*, *Watershed Matters*, *Opportunities for Action*, *State of the Lake*) and social media (Facebook, Twitter, Pinterest). Staff also maintained IT and telecommunications equipment and infrastructure in the Grand Isle office and at the Resource Room. Activities included:

- Coordinated development of new website contents and components.
- Coordinated **development of five online videos of the *Diving In* series**, highlighting the ways that the public are learning about and helping to protect Basin resources. Two were posted to the LCBP site.
- Created additional french language content for the ***State of the Lake 2015*** web version.
- Developed content for **4 radio Public Service Announcements** for WEDV Radio One Network regarding stormwater runoff, *Raise the Blade for Healthy Soils*, invasive species and *Scoop the Poop*.
- Published **three editions of *Casin' the Basin*** e-newsletter.
- Developed **web maps** for lcbp.org and **Lake Champlain Basin Atlas**, including population density, land cover, sub-watersheds, and cultural heritage and recreation sites.



<http://www.lcbp.org/2016/10/planting-for-the-future/>

2015

## Local Implementation Grant

## ACRWC Water Quality Education Programs

## Project Summary

With help from LCBP, Lewis Creek Association hopes to further its ability to inform and involve volunteers, residents, and visitors to Champlain Basin waterways. At the town level, forums called "Water Quality Chats" will be held and new signs that show recent sampling results will be installed at seven popular access areas. A newly completed training video of proper water sampling techniques will be made available on-line; the video (supported already in part by LCBP) is to be used for public information as well as for in-house training purposes. A projector will be purchased to provide showings at community events without high-speed internet.

## Outputs:

- 4 water quality chats, 7 new sampling results signs
- an online water sampling training video

## Outcomes:

- Informing and involving the public
- provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.

**Organization:** Lewis Creek Association

**Contact Person:** Deb Healey

**Mailing Address:** 442 Lewis Creek Road  
Charlotte, VT 05445

**Phone:** 802 425-2002

**E-mail:** marty.illick@gmail.com

**Website:** <http://www.lewiscreek.org/>



**NEIWPCC Code:** L-2016-049

**EPA**

**Start Date:** 4/11/2017

**Grant Amount:** \$ 9,877.00

**Non-federal Match:** \$ 5,010.00

**Total Amount:** \$14,887.00



# Local Implementation Grant

# 2014

## Barre Town and City Stormwater Education

### Project Summary

One acre of developed land typically sends three times as much phosphorus to the Lake as one acre of agricultural land. Barre City and Barre Town are highly urbanized municipalities that dominate the Stevens Branch subwatershed. Stormwater runoff reduction in these communities will require mitigation practices to be executed by the municipalities and private property owners alike. Education is important to move both of these constituencies forward and to build public support for municipal actions. This program will use three specific neighborhoods in Barre Town and Barre City to illustrate how the cumulative impact of homeowner actions can reduce stormwater runoff that will protect the local stream and in some cases reduce property damage.

#### Outputs:

- Friends of the Winooski River will develop three neighborhood stormwater maps; a list of stormwater mitigation opportunities; deliver two municipal presentations; host three neighborhood walks; conduct three civic meeting presentations and provide online dissemination of information and resources.

#### Outcomes:

- Use education to empower the general public to reduce phosphorus contributions.
- Reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin.

**Organization:** Friends of the Winooski River

**Contact Person:** Ann Smith

**Mailing Address:** PO Box 777  
Montpelier, VT 05601

**Phone:** 802 882-8276

**E-mail:** [info@winooskeriver.org](mailto:info@winooskeriver.org)

**Website:** <http://winooskiriver.org/>



**NEIWPCC Code:** L-2015-053

**GLFC**

**Start Date:** 6/1/2015

**Grant Amount:** \$7,364.00

**Non-federal Match:** \$1,500.00

**Total Amount:** **\$8,864.00**

2015

## Local Implementation Grant

## Clean Water Education and Training

## Project Summary

Clean Water Education and Training is an initiative of the Conservation District Capacity Building Program which has engaged multiple partners including VACD, State and Federal Agencies and NRCDs in building the capability, capacity and performance of Vermont's Natural Resources Conservation Districts. This initiative will focus on the education and training of thirty NRCD supervisors and staff in the Lake Champlain Basin on the Vermont Clean Water Act and Lake Champlain water quality priorities in order to improve their knowledge, engagement and ability to develop and implement targeted water quality education and outreach activities in the Lake Champlain Basin. As a result of this training, each District will plan and implement at least one education and outreach activity in the District focusing on water quality concerns in the Lake Champlain Basin and what can be done to address them.

## Outputs:

- 3 training days for District supervisors and staff
- education and outreach activities to educate landowners and community members
- attendance counts, program locations and program descriptions.

## Outcomes:

- Build awareness and understanding among residents and visitors about Lake Champlain resources and behaviors that contribute to pollution.
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.
- Improve communication and cooperation among the diverse groups involved in Lake Champlain Basin education and outreach.

**Organization:** Vermont Association of Conservation Districts

**Contact Person:** Jill Arace

**Mailing Address:** PO Box 566  
Waitsfield, VT 05673

**Phone:** 802 496-5162

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**Website:** <http://www.vacd.org/>



**NEIWPCC Code:** L-2016-048

**EPA**

**Start Date:** 4/1/2016

**Grant Amount:** \$3,500.00

**Non-federal Match:** \$3,500.00

**Total Amount:** \$7,000.00

# Local Implementation Grant

2016

## Discovering the Ausable: An Aquatic Stewardship Program

### Project Summary

This program will inspire area youth to have a passion for the environment and our water resources while also giving them practical hands-on skills in the field of aquatic ecology. Both the Adirondack Mountain Club and the Ausable River Association believe that today's youth are tomorrow's environmental leaders and that a connection to the natural world, built through significant experiences, is a critical step in building a stewardship ethic. Over the past two years, sixteen participants have been excited to learn about water quality monitoring and be a part of data collection that has furthered our understanding of the threats facing the Ausable River.

#### Outputs:

- ten area youth introduced to responsible recreation while providing them an experiential education in aquatic ecology.
- Participants will:
  - 1) conduct water quality tests of both Heart Lake and Mirror Lake and compare the two;
  - 2) learn about aquatic macroinvertebrate identification;
  - 3) assess the water quality of the West Branch of the Ausable River;
  - 4) learn aquatic invasive species identification to survey Taylor Pond for the presence of AIS.
- students will develop an action plan for how they can use this knowledge to protect and improve the water resources in their hometown.

#### Outcomes:

- provide watershed and water quality educational program for youth ages 15-17.

**Organization:** Adirondack Mountain Club

**Contact Person:** Julia Goren

**Mailing Address:** 814 Goggins Road  
Lake George, NY 12845

**Phone:** 518-523-3480 x 19

**E-mail:** [summit@adk.org](mailto:summit@adk.org)

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



**NEIWPCC Code:** L-2017-053

**GLFC**

**Start Date:** 6/15/2017

**Grant Amount:** \$ 7,409.00

**Non-federal Match:** \$ 7,656.00

**Total Amount:** **\$15,065.00**

2016

## Local Implementation Grant

## Fish On! - Connecting Vermont Food System Professionals to the Health of Lake Champlain

## Project Summary

The FishOn! project will create a culture of stewardship for clean water among Vermont's food professionals. The Vermont Fresh Network (VFN) will partner with Lake Champlain International (LCI) to organize fishing trips for farmers, chefs, food advocates and environmentalists. Through fishing and guided conversation during fishing trips, a hands-on illustration of the link between on-land growing practices and the Lake's water quality will be built. VFN's goal is to use Lake Champlain's historic and potential role as a local food source as a vehicle to look for solutions for current threats to the Lake's health.

## Outputs:

- eight fishing trips
- direct education for the 40 professionals
- an educational dinner program for the general public, paid through admission.

## Outcomes:

- increase Vermont food system professionals' understanding of the range of issues facing Lake Champlain and their role within those issues, as well as teach them about the lake's fish—their historical importance and current/future potential as a local protein source.
- increase communication and understanding between environmental advocates and local food advocates.
- support lake conscious farming practices.

**Organization:** Vermont Fresh Network

**Contact Person:** Helen Labun

**Mailing Address:** PO Box 895  
Richmond VT 05477

**Phone:** 802.434.2000

**E-mail:** helen@vermontfresh.net

**Website:** <http://www.vermontfresh.net/>



**NEIWPCC Code:** L-2017-050  
**GLFC**  
**Start Date:** 6/1/2017  
**Grant Amount:** \$10,000.00  
**Non-federal Match:** \$ 6,960.00  
**Total Amount:** \$16,960.00

# Local Implementation Grant

# 2016

## Green Stormwater Infrastructure Training for Conservation Managers

### Project Summary

Green Stormwater Infrastructure Training for Conservation Managers will focus on the education and training of at least fifteen conservation managers on the Vermont Clean Water Act, and Green Stormwater Infrastructure (GSI) Practices to improve their knowledge, engagement and ability to develop and implement targeted GSI projects within their communities including the Lake Champlain Basin. The conservation managers include professionals from VT Natural Resources Conservation Districts, watershed groups, or municipal planning or conservation commissions. As a result of this training, each participating conservation manager will identify and plan at least one GSI project in their region to remediate a stormwater concern identified in a VT ANR Stormwater Mapping Project, Tactical Basin Plan, or a similar technical document.

#### Outputs:

- two training events will be held within Lamoille County in the Lamoille Watershed, and in Rutland County in the Otter Creek and Poultney Mettowee Watersheds

#### Outcomes:

- provide annual technical assistance and training for municipalities seeking to take greater steps to protect water quality
- provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution
- reduce the nonpoint source phosphorus load that is being generated by runoff from developed lands in the Basin
- provide education and technical support to municipalities and homeowners to increase use of rain gardens, rain barrels, and other stormwater reduction techniques

**Organization:** Lamoille County NRCD

**Contact Person:** Stacey Waterman

**Mailing Address:** 109 Professional Drive, Suite 2  
Morrisville, VT 05661

**Phone:** (802) 888-9218 ext.113

**E-mail:** [stacey.waterman@vt.nacdnet.net](mailto:stacey.waterman@vt.nacdnet.net)

**Website:** <http://www.lcnrcd.com/>



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2017-052

**GLFC**

**Start Date:** 4/22/2017

**Grant Amount:** \$ 9,800.00

**Non-federal Match:** \$ 4,200.00

**Total Amount:** \$14,000.00

2016

## Local Implementation Grant

## Junior Scientists Implementing Native Planting Projects in the Community

## Project Summary

PMNRCD will be offering a week of camp for ages eight and up focusing on native plants, their habitats and growth, various uses in the landscape, and the identification of invasive plants. Participants in the camp will have the opportunity to be involved at the Poultney Nature Trail, Champlain Valley Native Plant Restoration Nursery (CVNPRN), Slate Valley Bike Trail, and with individual landowners in Poultney by helping to install a rain garden and informational signage along a trail.

Through this grant with LCBP, PMNRCD will continue its commitment, promoting the value of tree and shrub plantings for erosion and pollution control, while focusing on the positive effect individuals and communities can have by participating in restoration practices.

## Outputs:

- a one-week summer camp focusing on native plants and native plant-related implementation projects
- one invasive plant removal/native planting demonstration project
- native plant and riparian buffer education and outreach

## Outcomes:

- reduce phosphorus pollution by enrolling forested riparian buffer.
- restore communities of native plants and high-priority habitats to benefit riparian restoration in the Lake Champlain Basin by supporting native nurseries in the Basin for restoration plantings.
- volunteer opportunities

**Organization:** Poultney-Mettowee NRCD

**Contact Person:** Hilary Solomon

**Mailing Address:** PO Box 209  
Poultney, VT 05764

**Phone:** (802) 287-8339

**E-mail:** hilary@pmnrcd.org

**Website:** <http://www.pmnrcd.org/>



**NEIWPCC Code:** L-2017-007

**EPA**

**Start Date:** 2/24/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 2,220.00

**Total Amount:** \$12,220.00



# Local Implementation Grant

2016

## *Keeping Lake Champlain Beautiful*

### Project Summary

Vermont PBS is collaborating with the University of Vermont's EPSCoR Program, and eighteen grassroots organizations to produce a multimedia series that addresses the ongoing water quality issue and the future of Lake Champlain. This program includes a robust educational and outreach component aimed to inform and encourage citizens, from a broad spectrum, to help reduce the amount of pollutants that reach Lake Champlain.

#### Outputs:

- produce three 30-minute documentary programs through EPSCoR
- produce a series of three longer (60-90-minute) town hall/town meeting programs to further discuss the issues raised in the documentary programs and designed to engage people in this conversation. Locations, panelists, participants, and outreach strategies will be identified in collaboration with partner organizations involved with this project through EPSCoR.
- produce 6-12 short videos approximately 7-10 minutes in length derived from the documentary programs. These shorter format webisodes and curriculum materials developed to accompany them will be utilized for educational purposes and social media outreach. These will be made available to schools, colleges, libraries and other community engagement and educational venues and digital platforms. The Lake Champlain Basin Program grant specifically supports development and delivery of middle and high school curricula that integrates the full-length documentary programs and the shorts.

#### Outcomes:

- engage public awareness of public regulations, and necessary funding, to clean up Lake Champlain while driving an economy that protects and restores healthy waters and all the life that depends on it.

**Organization:** Vermont PBS

**Contact Person:** Stacie Fagan

**Mailing Address:** 204 Ethan Allen Avenue  
Colchester, VT 05446

**Phone:** 802.654.3669

**E-mail:** [sfagan@vermontpbs.org](mailto:sfagan@vermontpbs.org)

**Website:** <https://www.vermontpbs.org/>



**NEIWPCC Code:** L-2017-049

**GLFC**

**Start Date:** 6/15/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:**

**Total Amount:** \$10,000.00

2016

## Local Implementation Grant

## Lake George Floating Classroom 2017

## Project Summary

The hands-on Floating Classroom program is central to the mission of the Lake George Association, and a core element of its educational program. The Floating Classroom program takes place aboard the *Rosalie Anna Ashby*, a 40' Corinthian Catamaran custom-built for the program and is for all ages to learn about the Lake George watershed and the quality of the lake's water. It provides a real-world learning experience on environmental topics. The project continues to reach new audiences and adapts the curriculum to educate Lake users about watersheds and water quality.

## Outputs:

- Participants will investigate different aspects of the lake's ecosystem through sampling techniques and learn how to protect and preserve this living water body.

## Outcomes:

- raise awareness about water quality issues
- affect behavioral change that will help protect the Lake Champlain Basin
- create stewards for today and future generations.

**Organization:** 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](mailto:kwilde@lakegeorgeassociation.org)

**Website:** <https://www.lakegeorgeassociation.org/>



**NEIWPCC Code:** L-2017-006

**GLFC**

**Start Date:** 2/24/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$33,597.00

**Total Amount:** \$43,597.00

# Local Implementation Grant

2016

## Lamoille River Paddler's Trail

### Project Summary

This project builds upon an emerging initiative to establish a paddlers' trail for the Lamoille River. The conservancy seeks to engage community members in a series of educational and outreach projects that will lead to improved water-based recreational opportunities, address water quality issues, provide education about water quality issues, and cultivate long-term site stewards. Planned tasks include the restoration of an access in Johnson, an educational community paddle, the recruitment and training of site stewards, and a river clean-up.

#### Outputs:

- a community paddle with a focus on water quality education
- two volunteer work days to develop new recreational and storm water retention infrastructure
- recruitment and training of 5+ campsite and access point stewards
- implementation of a river clean-up.

#### Outcomes:

- build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution.
- provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.

**Organization:** Vermont River Conservancy

**Contact Person:** Noah Pollock

**Mailing Address:** 29 Main St, Suite 11  
Montpelier VT 05602

**Phone:** (802) 540-0319

**E-mail:** [noah@vermontriverconservancy.org](mailto:noah@vermontriverconservancy.org)

**Website:** <http://www.vermontriverconservancy.org/>



**NEIWPCC Code:** L-2017-009

**GLFC**

**Start Date:** 3/1/2017

**Grant Amount:** \$ 5,923.00

**Non-federal Match:** \$ 2,300.00

**Total Amount:** \$ 8,223.00

2015

## Local Implementation Grant

## Lamoille Watershed Quests

## Project Summary

Watershed quests are community-based treasure hunts that help educate the community about local water resources and aim to foster stewardship of the featured habitat and its various aspects. Curriculum components include hands-on investigations of water resources and elements, mapping the assets, and creating an actual “treasure hunt” that allows the community to engage with the resource. Each quest concludes with a special questing box featuring a log book, site-specific stamp, and additional information about the area and resources. Lamoille Watershed Quests will raise public awareness, understanding, and appreciation of Lake Champlain Basin resources within Lamoille County by facilitating the creation of student-designed watershed quests at four schools and at Elmore State Park.

## Outputs:

- The creation of five watershed quests in Lamoille County that will be available to community members through school websites, classroom blogs, state park outreach methods, and LCCD’s community connections and outreach networks. The purchase of supporting components such as questing boxes, stamps and journals.

## Outcomes:

- Engage students and teachers in watershed stewardship
- Promote a better understanding and appreciation of Lake Champlain Basin resources and threats as well as personal responsibility that leads to behavioral changes and actions to reduce pollution

**Organization:** Lamoille County NRCD

**Contact Person:** Stacey Waterman

**Mailing Address:** 109 Professional Drive, Suite 2,  
Morrisville, VT 05661

**Phone:** 802 888-9218 ext.113

**E-mail:** [stacey.waterman@vt.nacdn.net](mailto:stacey.waterman@vt.nacdn.net)

**Website:** <http://www.lcnrcd.com/>



**NEIWPCC Code:** L-2016-064

**GLFC**

**Start Date:** 6/19/2016

**Grant Amount:** \$5,000.00

**Non-federal Match:** \$2,500.00

**Total Amount:** \$7,500.00

# Local Implementation Grant

# 2014

## LCC April Stool's Day - Pick Up the Parks Campaign

### Project Summary

LCC will coordinate a series of "April Stools' Day" events at parks, recreation areas and trail sites around the watershed to clean parks of dog doo. April Stools' Day will use a fun event to help raise awareness of the environmental and health effects of left behind pet waste, enlist citizens in taking care of their public parks, and reduce the nutrients and bacteria going into our waterways with spring melt.

#### Outputs:

- The April Stools' Day program will result in a community toolkit for co-hosting an April Stools' Day event and at least ten park clean-ups throughout the watershed that help raise awareness of the environmental and public health problems associated with left behind dog waste. Citizens will enlist in cleaning up public parks and recreation areas, foster positive behavior and reduce the amount of nutrients and bacteria running off into our waterways.

#### Outcomes:

- reduce nutrient and bacteria runoff.

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <http://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** L-2015-039

**GLFC**

**Start Date:** 4/15/2015

**Grant Amount:** \$ 7,500.00

**Non-federal Match:** \$ 5,605.00

**Total Amount:** \$13,105.00

2016

## Local Implementation Grant

## LCC Cyanobacteria Outreach Campaign

## Project Summary

The Lake Champlain Committee will develop an outreach campaign to educate citizens about cyanobacteria and actions to take to keep people and pets safe and reduce future bloom frequency. While there is strong public concern about cyanobacteria, many people don't know the triggers for blooms, how to recognize the algae and/or how to assess risks from exposure. This educational effort will build on LCC's successful cyanobacteria monitoring program which has run since 2003. While LCC will make information available to all communities in the Lake Champlain watershed, it will concentrate efforts in New York where fewer public resources have been focused on this issue.

## Outputs:

- informational posters, rack cards, fact sheets
- weekly reports distributed via mailings, emailings, social media, and presentations.

## Outcomes:

- educate and inform citizenry about cyanobacteria.

**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](mailto:lorif@lakechamplaincommittee.org)

**Website:** <http://www.lakechamplaincommittee.org/>



**NEIWPCC Code:** PO 12349  
**GLFC**  
**Start Date:** 7/24/2017  
**Grant Amount:** \$ 9,800.00  
**Non-federal Match:** \$ 5,900.00  
**Total Amount:** \$15,700.00



# Local Implementation Grant

2016

## MRBA Educational Outreach Programs

### Project Summary

The Missisquoi River Basin Association (MRBA) has been offering the Bugworks program for nine years, with growing popularity. The MRBA is delighted to continue to offer this program to watershed schools although it is time to restructure to better meet the needs of the community, school curriculum and time constraints. In addition, the MRBA plans to expand programming to watershed schools and community groups and increase the available programming that is focused on the watershed and water health.

#### Outputs:

- two educators to reach numerous watershed residents of varying ages with important messages about stream health and collective role in the watershed, through programs in schools, in other classroom settings, and at community gatherings and events.
- develop new watershed related educational outreach programs

#### Outcomes:

- increase community understanding of the importance of rivers, and how we can protect them.

**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:** MRBA@pshift.com

**Website:** <https://www.mrbavt.com/>



**NEIWPCC Code:** L-2017-005

**EPA**

**Start Date:** 2/24/2017

**Grant Amount:** \$ 8,692.00

**Non-federal Match:** \$ 1,400.00

**Total Amount:** \$10,092.00

2016

## Local Implementation Grant

## Natural Heritage &amp; Head Start Education Tank

## Project Summary

ECHO, Leahy Center for Lake Champlain proposes to increase up to 300,000 Burlington Waterfront visitors' awareness of the Lake Champlain Basin's natural heritage through the presentation and interpretation of aquatic species in decline in their museum's free public lobby. The centerpiece of this project will be a 200 gallon, natural heritage and head start education tank, which will host a variety of aquatic species of concern.

## Outputs:

- a 200 gallon, natural heritage and head start education tank, which will host a variety of aquatic species in decline

## Outcomes:

- increase public awareness of the historic decline and on-going restoration efforts of the Basin's natural, aquatic heritage
- increase success of "head started" species in decline, as identified by state or federal Fish & Wildlife departments

**Organization:** ECHO, Leahy Center for Lake Champlain

**Contact Person:** Nina Ridhibhinyo

**Mailing Address:** 1 College St  
Burlington, VT 05401

**Phone:** (802) 864-1848 x 142

**E-mail:** [nina@echovermont.org](mailto:nina@echovermont.org)

**Website:** <http://www.echovermont.org/>



**NEIWPCC Code:** L-2017-012  
**GLFC**  
**Start Date:** 3/25/2017  
**Grant Amount:** \$ 9,800.00  
**Non-federal Match:** \$ 7,521.00  
**Total Amount:** \$17,321.00

# Local Implementation Grant

# 2016

## Reducing Sodium Chloride Application Rates; Lake Champlain Basin-Wide, through Contractor and Public Education

### Project Summary

The WNRCD with partner organizations will undertake education targeting those who apply salt within the private sector to reduce sodium chloride impacts to local waterbodies.

#### Outputs:

- conduct a workshop focusing on salt contractors in the fall of 2017
- a technical training by Snow-Pro and a review of available technology
- a multi-media interactive, online presentation showcasing road salt reduction strategies, the impact salt has on the environment, success stories and resources available.
- four factsheets will be drafted focusing on Best Management Practices for those who maintain their own driveways or who contract with businesses; a social marketing campaign will be launched.

#### Outcomes:

- reduce sodium chloride in water bodies

**Organization:** Winooski NRC

**Contact Person:** Corrina Parnapy

**Mailing Address:** 617 Comstock Rd, Suite 1  
Berlin, VT 05602

**Phone:** (802) 778-3178

**E-mail:** [corrina@winooskinrcd.org](mailto:corrina@winooskinrcd.org)

**Website:** <http://winooskinrcd.org/>



**NEIWPCC Code:** L-2017-010

**GLFC**

**Start Date:** 3/15/2017

**Grant Amount:** \$ 9,944.00

**Non-federal Match:** \$ 2,200.00

**Total Amount:** \$12,144.00

2016

## Local Implementation Grant

## Restoration Education and Training with Homegrown Natives

## Project Summary

This project will educate the general public about the myriad benefits of plants and planting-related restoration. Multiple classes at Green Mountain College, Poultney High School, and local elementary schools will participate in seed collection, seedling care, and implementing a variety of pollution-mitigating planting projects, which will demonstrate the effectiveness of trees and shrubs in reducing pollution and supporting healthy ecosystems.

## Outputs:

- creation of an education and outreach program to include plant-based remediation options, including stormwater, agricultural, and restoration applications.
- students volunteers at the nursery will learn about native plants, seeds, habitat, with an emphasis on plant-based ecological services.

## Outcomes:

- reduce pollution and support a healthy ecosystem
- make volunteers feel comfortable speaking with the public about the importance of planting native species
- complete multiple native plantings resulting in less sediment in local streams

**Organization:** Champlain Valley Native Plant  
Restoration Nursery

**Contact Person:** Natalie Coe

**Mailing Address:** One Brennan Circle  
Poultney, Vermont, 05764-1199

**Phone:** (802) 287-8392

**E-mail:** coen@greenmtn.edu

**Website:** [http://www.pmnrcd.org/  
champlain-valley-native-plant-restoration-nursery/](http://www.pmnrcd.org/champlain-valley-native-plant-restoration-nursery/)



**NEIWPCC Code:** L-2017-008

**GLFC**

**Start Date:** 3/1/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 4,020.00

**Total Amount:** \$14,020.00

# Local Implementation Grant

# 2015

## Saranac River Trail 2016: Talks, Treks and Tasks

### Project Summary

Friends of Saranac River Trail is requesting funds to facilitate two talks about current trail issues here and around the world, run six themed Treks on the Saranac River Trail, and coordinate a community Trail cleanup on National Trails Day. The talks will help engage and educate the community on the work of the Friends group which hopes to identify more volunteers through the series.

#### Outputs:

- SRT will organize and conduct a 2-part lecture series (the Talks), 6 themed Treks, and continue to maintain an event mailing list and database that with an estimated 500 names of volunteers and colleague organizations.

#### Outcomes:

- Build awareness and understanding about Saranac River and Lake Champlain resources and behaviors that contribute to pollution by providing watershed and educational materials.

**Organization:** Friends of the Saranac River

**Contact Person:** Jesse Feiler

**Mailing Address:** 32 MacDonough Street, #1  
Plattsburgh, N.Y. 12901

**Phone:** 518 335-5915

**E-mail:** [jfeiler@saranacrivertail.org](mailto:jfeiler@saranacrivertail.org)

**Website:** <http://saranacrivertail.org/>



**NEIWPCC Code:** L-2016-057

**EPA**

**Start Date:** 5/15/2016

**Grant Amount:** \$5,360.00

**Non-federal Match:**

**Total Amount:** \$5,360.00



2014

# Local Implementation Grant

## Skidder Bridge Free Loaner Program

### Project Summary

The proposed project will continue to provide technical assistance and personnel support to the wood products industry in the New York portion of Lake Champlain and within the Lake Champlain Basin. Efforts will include educational programming in the form of hands-on workshops on bridge placement and construction provided to loggers and others interested in skidder bridges use. In addition, on-going programming will continue to provide a professional forester as a subcontractor to coordinate workshop schedules, conduct workshops, coordinate a skidder bridge loaner program that incorporates wood products industry host sites at wood processors ie. International Paper, Ward Lumber etc., maintain records of bridge loans, location, timber harvested over each bridge, transportation logistics and marketing/outreach.

#### Outputs:

- Training for loggers and others interested in learning how to construct timber skidder bridges for use in implementing BMP stream crossings for timber harvest. Two workshops held in conjunction with NYS DEC, BOCES and NYS Logger Training. Bridge inventory loaned out to loggers or farmers/landowners needing the bridges to access timber harvesting operations.

#### Outcomes:

- Protect water quality by reducing soil erosion,
- Reduce phosphorus inputs from soil erosion,
- Increase economic viability of forest management,
- Encourage the use of Best Management Practices in Forestry and improve soil health.

**Organization:** Greater Adirondack RC&D

**Contact Person:** Victor Putman

**Mailing Address:** 394 Schroon River Road  
Warrensburg, NY 02885

**Phone:** 518 963-8996

**E-mail:** vjp543@willex.com

**Website:** <http://www.greateradkrcd.org/>



**NEIWPCC Code:** L-2015-048

**EPA**

**Start Date:** 4/15/2015

**Grant Amount:** \$ 7,000.00

**Non-federal Match:** \$13,305.00

**Total Amount:** \$20,305.00



# Local Implementation Grant

# 2016

## South Champlain Historical Ecology Project (SCHEP)

### Project Summary

South Champlain Historical Ecology Project plans to amplify community engagement activities during the 2017 field season. SCHEP seeks funds to engage a part-time education and outreach coordinator and supporting students to plan and carry out SCHEP's 2017 education and outreach activities. SCHEP also plans to increase local volunteer participation through presentations at local community centers, advertising in local media, and hosting dedicated visitors days. Over the long-term, the proposed activities will be measured by the degree to which the knowledge and perception of local heritage resources is enhanced by our efforts. In the short-term, SCHEP will compile surveys, multimedia interviews, reaction pieces, and other data so that we can modify and enhance our efforts going forward.

#### Outputs:

- preparation of multimedia educational materials
- presentations to at least 15 schools
- hosting at least 10 school field trips to the research site.

#### Outcomes:

- enhance knowledge and perception of local heritage resources

**Organization:** South Champlain Historical Ecology Project

**Contact Person:** Matthew D. Moriarty

**Mailing Address:** Castleton University  
Leavenworth Hall Room 152  
Castleton, VT 05735

**Phone:** (802) 353-3465

**E-mail:** [schep.research@gmail.com](mailto:schep.research@gmail.com)

**Website:** [www.facebook.com/schep.research/](http://www.facebook.com/schep.research/)



**NEIWPCC Code:** L-2017-004

**GLFC**

**Start Date:** 2/24/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:**

**Total Amount:** \$10,000.00

2016

## Local Implementation Grant

*Stem to Stern* Education Program**Project Summary**

Through a new program called *Stem to Stern*, the Lake Champlain Maritime Museum (LCMM) is integrating the themes of forest stewardship, woodcraft and waterways into school programs. Working with various partners, LCMM is developing a “*Stem to Stern*” interactive and discovery-based curriculum that will enable the organization to distribute trees to each school, lead tree-plantings for participating classes, and weave together hands-on activities (seedling care, wood working) with conceptual exercises (researching how local waterways were used for timber transport or milling lumber).

**Outputs:**

- ten *Stem to Stern* classroom programs in the Champlain Basin, which includes at least ten trees planted at each school or its surrounding landscape by students.

**Outcomes:**

- increase student understanding of ecosystem relationships.
- enhance teacher familiarity with lesson plans and activities for teaching biology, forestry and history related to human impacts on the local environment.
- involve communities in reforestation and riparian protection projects.
- increase stewardship behavior among students

**Organization:** Lake Champlain Maritime Museum

**Contact Person:** Elizabeth Lee

**Mailing Address:** 4472 Basin Harbor Road  
Vergennes, VT 05491

**Phone:** (802) 475-2022

**E-mail:** Elizabethl@lcmm.org

**Website:** <https://www.lcmm.org/>



**NEIWPCC Code:** L-2017-003

**GLFC**

**Start Date:** 2/24/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$10,000.00

**Total Amount:** \$20,000.00

# Local Implementation Grant

2014

## Watershed Education for Backyard and Small Farmers

### Project Summary

Develop and implement a series of up to six local educational programs for small farms, homesteaders, and backyard farmers in our region. The programs will provide information to small farmers and homesteaders about the TMDL, living in a watershed, nutrient management, simple conservation practices and Best Management Practices, soil health, and understanding and using the Accepted Agricultural Practices.

#### Outputs:

- Development of a schedule, program components and co-presenters for the various topics. Production and development of educational materials and workshop content for presentations to participants.

#### Outcomes:

- Inform backyard farmers and small farmers in our region about the importance of the AAPs so that they may work to prevent nutrients from entering our waterways.
- Improve the understanding of individuals that have homesteads that would be considered small farms in Franklin County.
- Increase awareness of programs that can help with nutrients and best management practices.

**Organization:** Friends of Northern Lake Champlain

**Contact Person:** Kent Henderson

**Mailing Address:** PO Box 58  
Swanton, VT 05488

**Phone:** 802 355-0694

**E-mail:** hugamoo@comcast.com

**Website:** <http://www.northernlakechamplain.org/>



**NEIWPCC Code:** L-2015-037

**EPA**

**Start Date:** 4/15/2015

**Grant Amount:** \$ 7,500.00

**Non-federal Match:** \$ 4,000.00

**Total Amount:** \$11,500.00

2015

## Local Implementation Grant

## Wind, Waves and Variables – Gaining Awareness of the Lake Champlain Watershed Through Cross-Disciplinary Investigations

### Project Summary

This project will teach students of selected schools in the Vermont portion of the Lake Champlain watershed about pertinent social and physical science of the Basin. This will be accomplished through classroom work, data collection, interviews, observation, interpretation and field trips. The objective is to foster a life-long commitment in the students to educate themselves about, and make informed decisions regarding the watershed.

#### Outputs:

- Deliver multiple programs to four schools within the watershed

#### Outcomes:

- Produce coordinated education programs for students.
- Enhance learning opportunities at all educational levels to develop an understanding of and appreciation for Lake Champlain Basin resources, the related threats, and the priority actions needed to address them.

**Organization:** Isle LaMotte Preservation Trust

**Contact Person:** Anthony Fowler

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Isle La Motte, VT 05463

**Phone:** 802 928 3392

**E-mail:** [afowler@uottawa.ca](mailto:afowler@uottawa.ca)

**Website:** <http://ilmpt.org/wp/>



**NEIWPC Code:** PO 12259

**EPA**

**Start Date:** 5/1/2016

**Grant Amount:** \$10,000.00

**Non-federal Match:**

**Total Amount:** \$10,000.00

# E&O Project

2016

## Missisquoi Bay Riparian Buffer Education and Outreach Campaign

### Project Summary

Organisme de bassin versant de la baie Missisquoi (OBVBM) will support two seasonal interns to conduct outreach to residential and agricultural riparian land owners on degraded waters in the Missisquoi Bay watershed. Their goal will be to provide information about installing and maintaining riparian buffer strips and existing regulation. The interns will also identify priority sites for erosion control based on their work in the field.

#### Outputs:

- number of riparian land owners reached by the education campaign
- number of critical source areas identified on a waterway
- increase in percentage of conforming riparian buffer strips before and after the project and the number of town officials reached.

#### Outcomes:

- Build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution
- Provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution

**Organization:** OBVBM

**Contact Person:** Frédéric Chouinard

**Mailing Address:** 2 Adhemar-Cusson  
Bedford, Quebec, Canada, JOJ 1A0

**Phone:** 450-248-0100

**E-mail:** Frederic.chouinard@obvbm.org

**Website:** <http://www.obvbm.org/>



**NEIWPCC Code:** L-2017-037

**GLFC**

**Start Date:** 4/27/2017

**Grant Amount:** \$14,400.00

**Non-federal Match:** \$ 5,510.00

**Total Amount:** \$19,910.00

## State of the Lake Exhibit and Program

## Project Summary

This project will broaden the exposure of the *State of the Lake Report (SOL)* to 150,000 ECHO guests and 1 million Burlington Waterfront visitors. The goal is to engage the public in *SOL* through graphic displays, storytelling, and hands-on scientific inquiry. This project is a partnership effort in which LCBP provides *SOL* graphics and interpretation, the partners identify relevant *Opportunities for Action* priorities, and ECHO provides overall exhibit design, venue space, and dynamic interactive engagement with the visiting public.

## Outputs:

- new exhibit on the Center floor

## Outcomes:

- Enhance educator and student learning about watershed issues.
- Build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution
- Use education to empower the general public to reduce phosphorus contributions.

**Organization:** ECHO, Leahy Center for Lake Champlain

**Contact Person:** Nina Ridhibhinyo

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**NEIWPCC Code:** L-2017-011

**EPA**

**Start Date:** 3/15/2017

**Grant Amount:** \$28,793.00

**Non-federal Match:** \$ 3,390.00

**Total Amount:** \$32,183.00



# Local Implementation Grant

2014

## Aquatic Invasives Tank and Interpretation

### Project Summary

ECHO, Leahy Center for Lake Champlain retrofitted a 2,000 gallon tank to tell the story of invasive species in Lake Champlain, how to identify them, how they travel, and what personal actions the public can take to stop human transport. The tank presents live invasive fish species and reproductions of invasive aquatic plant species in a habitat. It also highlights human vectors by which invasive species travel. The tank experience is augmented by graphics, a tablet-based interactive game, and a live webcam. The exhibit is used for daily programs for ECHO on-site and online guests.

#### Outputs:

- informational exhibit which includes 3D models that compare ecologically similar native and invasive species pairs (yellow perch, white perch; northern clear-water crayfish, rusty crayfish; eastern lampmussels, and zebra mussels). The live animal tank also includes accompanying animal id labels for common carp, white perch, koi, tench, and rudd and physical examples of vectors (boat, motor, and bat bucket).
- webpage that displays live feed of the tank and text that supports id. A tablet-based game was relocated to support the exhibit.
- two interpretive panels: (1) describing the pathways and modes of invasive introductions; (2) describing how people can help prevent the spread of invasive species is also on the webpage.

#### Outcomes:

- access for up to 280,000 ECHO on-site and online guests to learn about invasive species identification, human vectors, and what individual actions they can take to stop invasive species spread
- reduce the spread of invasive species
- support education and outreach efforts related to aquatic invasive species

**Organization:** ECHO, Leahy Center for Lake Champlain

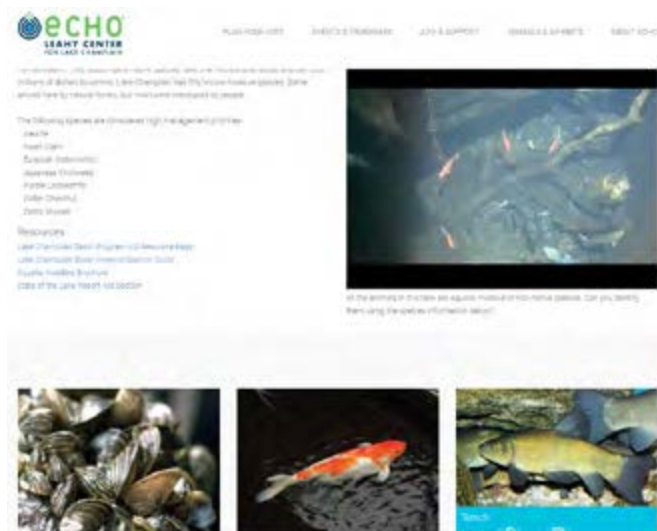
**Contact Person:** Phelan Fretz

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<b>NEIWPCC Code:</b>	L-2015-057
<b>GLFC</b>	
<b>Date Complete:</b>	11/15/2017
<b>Grant Amount:</b>	\$ 7,300.00
<b>Non-federal Match:</b>	\$12,576.00
<b>Total Amount:</b>	\$19,876.00

2014

## Local Implementation Grant

## Kitchen Table Talks: Bringing 'Ag' programs and alternatives home to farmers in Vermont

## Project Summary

Winooski NRCDC 'Kitchen Table Talks' reached small and nontraditional farms by developing materials that were not yet available and increased the District's visibility as the go-to resource to help farms manage AAPs and public expectations. Small and non-traditional farms are increasing in numbers throughout Vermont, including the Lake Champlain Basin. However, since they are not regulated in the same manner as large and medium farms, there is a misconception that Accepted Agricultural Practices (AAPs) and Best Management Practices (BMPs) that serve to protect land and water do not necessarily apply to them. With increasing attention on Lake Champlain and its Total Maximum Daily Load (TMDL) for phosphorus, it is essential for all farmers to know what regulations exist, what programs exist, and who to approach for either technical or financial resources to help them meet or exceed AAPs.

## Outputs:

- 18 small farm 'Kitchen Table Talks' visits
- One public service announcement was distributed to radio stations in the Lake Champlain Basin and several social media posts to share best practices clips and success stories about BMPs.
- fact sheet was developed and posted electronically for horse farmers on how to properly manage composted manure. <http://winooskinrcd.org/wp-content/uploads/Horse-Manure-Composting-factsheet.pdf>
- resource contacts matrix was developed for small farmers to answer questions about specific agricultural topics.
- more than 250 individuals reached at exhibits: Vermont Farm Show, Shelburne Harvest Festival, Annual Farm Tours, WNRCD annual meeting, UVM Grazing Conference.

## Outcomes:

- promote Best Management Practices awareness throughout the Winooski River Basin among small farms
- reduce phosphorus load

**Organization:** Winooski NRCDC

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**Mailing Address:** 617 Comstock Road  
Berlin, VT 05602

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**Website:** <http://winooskinrcd.org>



**NEIWPCC Code:** L-2015-041

**GLFC**

**Date Complete:** 12/7/2016

**Grant Amount:** \$ 7,500.00

**Non-federal Match:** \$ 6,400.00

**Total Amount:** \$13,900.00

# Local Implementation Grant

2015

## Lake George Floating Classroom 2016

### Project Summary

The Floating Classroom program offered two or four hour learning adventures aboard the *Rosalie Anna Ashby*, a 40' Corinthian Catamaran custom-built for the program, for students and adults to learn about the Lake George watershed and the quality of the Lake's water. It provided students with a real-world learning experience on environmental topics while meeting New York State core learning standards. More than 2,240 students investigated the Lake's ecosystem.

Program elements included history, water clarity and the trophic state of Lake George, food webs and plankton, water chemistry and overall water quality including the role of invasive species and how different land uses may impact the Lake. Participants sampled water quality parameters and used microscopes to search for benthic organisms as part of the series of activities conducted on the tour. Spring, summer and fall Floating Classroom field trips and presentations were conducted.

#### Outputs:

- 68 school programs were completed for 23 returning schools and 5 new schools during the academic year.
- 27 Summer Floating Classroom programs were completed, primarily for an adult audience

#### Outcomes:

- better understanding and appreciation of Basin resources and threats as well as personal responsibility that leads to behavioral changes and actions to reduce pollution.
- reduce the amount of phosphorus entering the lake by educating Basin residents about phosphorus.
- reduce spread of aquatic invasive species by educating Basin residents about invasive species and how they can help slow their spread by washing their boats
- educate area residents about septic systems, since failing systems not only pollute the lake with phosphorus, but can also put harmful bacteria into the water.

**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](mailto:kwilde@lakegeorgeassociation.org)

**Website:** <http://www.lakegeorgeassociation.org/>



**NEIWPCC Code:** L-2016-051  
**EPA**

**Date Complete:** 3/31/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$33,706.00

**Total Amount:** \$43,706.00



2015

## Local Implementation Grant

## LCC Microbead Education Campaign

## Project Summary

LCC developed an outreach campaign to educate consumers about the detrimental impacts of microbeads and guide them to more informed purchasing of personal care products (PCPs). Most people aren't aware that their PCPs might contain plastics but when provided with good information will choose not to purchase those products. LCC's program helped consumers make more informed choices that don't negatively affect water quality.

LCC partnered with the UVM Sustainability Entrepreneurship MBA program and student networks at the University of Vermont, Champlain College, St. Michael's College, Clinton Community College and SUNY Plattsburgh to coordinate educational tabling events.

LCC sought input and took guidance from other non-government organizations involved in or supporting microbead education campaigns such as Five Gyres Institute and the Surfrider Foundation. LCC also connected to SUNY Fredonia's research on microplastics that included a data gathering effort for Lake Champlain. The New York Attorney General's 2015 study on microbead discharges to New York waters provided helpful background information.

The Point radio station allowed LCC to table at their summer concert series and Aveda Institutes of Cosmetology and several Aveda salons throughout the region showcased microbead educational materials at their training institutes and salons during the grant period.

## Outputs:

- speaking presentations, event tabling, fact sheets, informational columns, a partnership with a local radio station, mailings, and social media.

## Outcomes:

- inform and involve the public and reduce toxic substances.
- enhance adult and student learning about watershed issues.
- build awareness and understanding among residents and visitors about behaviors that contribute to pollution.

**Organization:** Lake Champlain Committee

**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/>



- provide hands-on citizen action opportunities to change behaviors that contribute to pollution.



**NEIWPCC Code:** L-2016-041

**EPA**

**Date Complete:** 8/30/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 6,340.00

**Total Amount:** \$16,340.00

# Local Implementation Grant

2013

## *Let it Rain: Soak it for Schools!*

### Project Summary

The *Let it Rain* Program increased awareness about low impact development (LID) practices within the Lake Champlain Basin. WNRCD worked with partners to promote the adoption of LID practices through expanded education, increased communication, public demonstrations, and citizen participation.

The *Soak it for Schools* program created a toolbox of resources for schools and communities to address stormwater issues. The toolbox helps foster stormwater awareness in youth and increases the stormwater mitigation practices installed on school grounds. Six lessons provided basic information on the water cycle and how to mitigate stormwater on site. The WNRCD received additional funding through a state of Vermont grant to compliment the project allowing them to implement stormwater practices at the Rumney Memorial School in Middlesex. Using funds from the LCBP grant, youth were involved in all stakeholder meetings and planning, and received stormwater lessons to help them understand the impact of the practice that they were implementing.

#### Outputs:

- A toolbox of resources for both schools and communities including six lesson plans for classroom teachers
- Outreach information was distributed through 15 media outlets regarding Low Impact development practices
- Stormwater outreach programs were delivered to 23 school groups
- Stormwater outreach was conducted during the Vermont Flower Show and local Home and Garden Shows
- Students from Rumney School in Middlesex, VT participated in a stormwater demonstration project on public property

#### Outcomes:

- Built awareness and understanding among residents and visitors about behaviors that contribute to pollution
- Enhanced educator and student learning about watershed issues.

**Organization:** Winooski NRCD

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**Website:** <http://winooskinrcd.org/>



**NEIWPCC Code:** L-2014-036  
**GLFC**  
**Date Complete:** 12/23/2016  
**Grant Amount:** \$7,470.00  
**Non-federal Match:**  
**Total Amount:** \$7,470.00

2015

## Local Implementation Grant

## Maritime Educational Programming

## Project Summary

Fort Ticonderoga developed and implemented a maritime education program utilizing the recently acquired *Carillon* boat. Interpretive tours brought guests onto the waters of Lake Champlain to explore Fort Ticonderoga's epic story, to better understand the key strategic role Lake Champlain played in North America's history, and to realize how stewardship of the Lake is important today. Funds supported staff research, program development, and program implementation. Tours of the Ticonderoga peninsula allowed school and youth groups to align their visit to a variety of history, cultural and environmental related standards in the new C3 Framework of Social Studies which have been implemented by both Vermont and New York.

This project is the first phase in a long range plan, identified in Fort Ticonderoga's Destination Master Plan, to provide water transportation, public programming, and recreation along Lake Champlain. Participant feedback was sought in the first year of the program to strengthen future implementation.

## Outputs:

- Fort Ticonderoga developed and implemented a Maritime education program to more than 1,000 guests including students utilizing the recently acquired *M/V Carillon* boat.

## Outcomes:

- Expanded residents' and visitors' cultural heritage knowledge of the Champlain Valley and how it is linked to natural resources.
- Supported initiatives that promote sustainable recreational activities that feature the natural, cultural and historical resources in the CVNHP.
- Increased and improved public access opportunities to the interconnected waterways of the CVNHP for diverse recreational activities.

**Organization:** The Fort Ticonderoga Association

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**Website:** <https://www.fortticonderoga.org/>



**NEIWPCC Code:** L-2016-054  
**EPA**  
**Date Complete:** 5/18/2017  
**Grant Amount:** \$10,000.00  
**Non-federal Match:**  
**Total Amount:** \$10,000.00



# Local Implementation Grant

2015

## MRBA Bugworks

### Project Summary

Bugworks is a hands-on program for students in grades 5-6 to explore the aquatic ecosystems around them. The MRBA hired an educator, Kurt Valenta of Exordium, to teach students in the Missisquoi watershed about the natural, living world of the rivers, ponds, and streams within their community and within the broader Lake Champlain ecosystem. They also learned how to evaluate stream health. The program was tailored to the time and needs of participating teachers and typically involved both indoor and outdoor activities.

Programs were delivered to 451 students through 24 classroom and summer camp sessions, reaching participants in nine watershed communities. Bugworks activities, which are linked with the Vermont Teaching Standards, involved collecting and identifying bugs as stream indicators, learning about food chains, discussing water quality and what it means to be 'Stewards of the Land', and identifying elements involved in producing a scientific report.

#### Outputs:

- Water quality programs were delivered to about 500 participants in 13 communities.
- A cumulative evaluation from the last nine years of the Bugworks program identified any needed improvements, funding structure and long-term viability of the program.

#### Outcomes:

- Enhanced educator and student learning about watershed issues.
- Provided local groups, schools, and municipalities financial and technical resources to implement *Opportunities for Action* in Basin communities and watersheds.

**Organization:** Missisquoi River Basin Association

**Contact Person:** Cynthia Scott

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Saint Albans, VT 05478

**Phone:** 802-827-3360

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**Website:** <https://mrbavt.com/>



*Students from Alburgh Elementary examining specimens and creating scientific drawings*



*Students from Richford Elementary exploring what lives in their stream.*



**NEIWPCC Code:** L-2016-038

**EPA**

**Date Complete:** 12/8/2016

**Grant Amount:** \$7,705.00

**Non-federal Match:** \$ 952.00

**Total Amount:** \$8,657.00

2015

## Local Implementation Grant

## NY Realtor Educational Training Program

## Project Summary

Real estate agents are in a unique position to educate members of the public, many upon their first arrival to the Lake Champlain Basin and Adirondack Park. Through this program CWICNY trained realtors on the important interactions between the natural world and development, including septic system, wells, floodplains and wetlands. Realtors, in turn, then shared these resources with clientele to help them make informed decisions for land use planning purposes.

This was the crux of the creation of the Watershed Protection Course for Real Estate Agents that was provided by the Champlain Watershed Improvement Coalition of New York (CWICNY). A 3-hour class for realtors was created, accredited by the NYS Department of State, and held in Glens Falls, Warren County, Lake Placid, Essex County and Plattsburgh, Clinton County in March and April 2017. The courses provided realtors with information relating to wetlands, floodplains, wells, and septic systems, as well as land use regulations pertaining to those topics inside and outside of the Adirondack Park. Several presenters from the private sector, as well as the NYS Department of Health and Adirondack Park Agency, spoke at the classes. The courses were created with the assistance of the Chazen Companies from Queensbury, NY. CWICNY also partnered with the Southern Adirondack Realtors Association and the Northern Adirondack Board of Realtors to complete the project.

## Outputs:

- three natural resource/land use planning workshops for 145 realtors. Realtors shared land use planning and natural resource materials with their clients. Realtors received three continuing education credits for their successful completion of the workshop.

## Outcomes:

- develop an understanding and appreciation of the Basin's resource, threats and priority actions and promote awareness within the community
- increase awareness and understanding among residents about Basin resources as well as behaviors that contribute to pollution

**Organization:** CWICNY

**Contact Person:** Beth Gilles

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**E-mail:** bgilles\_rpb@verizon.net

**Website:** <https://cwicny.org/>



**NEIWPCC Code:** L-2016-044

**EPA**

**Date Complete:** 9/6/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 3,000.00

**Total Amount:** \$13,000.00

# Local Implementation Grant

2015

## PMNRCD Educational Objectives Support Grant

### Project Summary

Through this grant, PMNRCD strengthened the Southern Lake Champlain Education Center's ability to provide awareness of natural resources in the watershed, the challenges to these resources, and the viable solutions that are available by strengthening established area partnerships.

#### Outputs:

- Created a pilot five day place-based environmental science summer camp for youth ages 7-10 at the South Lake Education Center.
- Worked with CVNPRN to help residents in six towns learn about the benefits of planting native plant species and how to reduce the spread of non-native, invasive species; exhibited materials at eight events.
- Conducted an invasive species demonstration project in cooperation with a local business which now promotes information about invasive species.
- Held five meetings for farmers to discuss the Clean Water Act, Required Agricultural Practices, and water quality issues in the Poultney Mettowee.
- Offered students and the public volunteer opportunities for planting and outreach.

#### Outcomes:

- Enhanced educator and student learning about watershed issues in the South Lake watershed by offering hands-on, inquiry-based curriculum, technical expertise, and human resources.
- Built awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution by providing watershed and Lake Champlain educational materials and technical assistance.
- Provided local groups, schools, and municipalities financial and technical resources to implement *Opportunities for Action* in Basin communities and watersheds working

**Organization:** Poultney Mettowee NRC

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**Website:** <http://www.pmnrcd.org/>



to address priority issues and education and outreach.

- Promoted lake-friendly gardening techniques and provided interpretive outreach materials, exhibits, and displays in partnership with the local watershed groups that attract targeted public audiences.
- Restored communities of native plants and high-priority habitats to benefit riparian restoration in the Lake Champlain Basin by supporting native nurseries for restoration plantings.



**NEIWPCC Code:** L-2016-047

**EPA**

**Date Complete:** 8/30/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 8,818.00

**Total Amount:** \$18,818.00



2015

## Local Implementation Grant

Reprint and Distribute *Living in Harmony With Streams*

## Project Summary

Unstable streambanks have been identified as a major contributor to sediment and phosphorus reaching Lake Champlain through its many tributaries. The booklet *Living in Harmony with Streams* is a vital resource for educating key audiences about how to improve river management. Watersheds United Vermont (WUV) reprinted 4,000 copies, with minor updates to reflect recent policy changes. WUV then distributed those copies to watershed groups and educators, and continues to track how the booklets are used for educational and outreach programs.

## Outputs:

- Vermont watershed groups received 4,000 copies of *Living in Harmony with Streams* for use in their outreach and education programs, and will have access to information about how other groups are using the booklet and what educational approaches are most effective.

## Outcomes:

- Promoted a better understanding and appreciation of Lake Champlain Basin resources and threats as well as personal responsibility that leads to behavioral changes and actions to reduce pollution.
- Deepened the understanding of river dynamics to improve the design of roads, bridges, culverts, and bank stabilization efforts such as rip-rapping, which will ultimately reduce impacts to the Lake.

**Organization:** Watersheds United Vermont

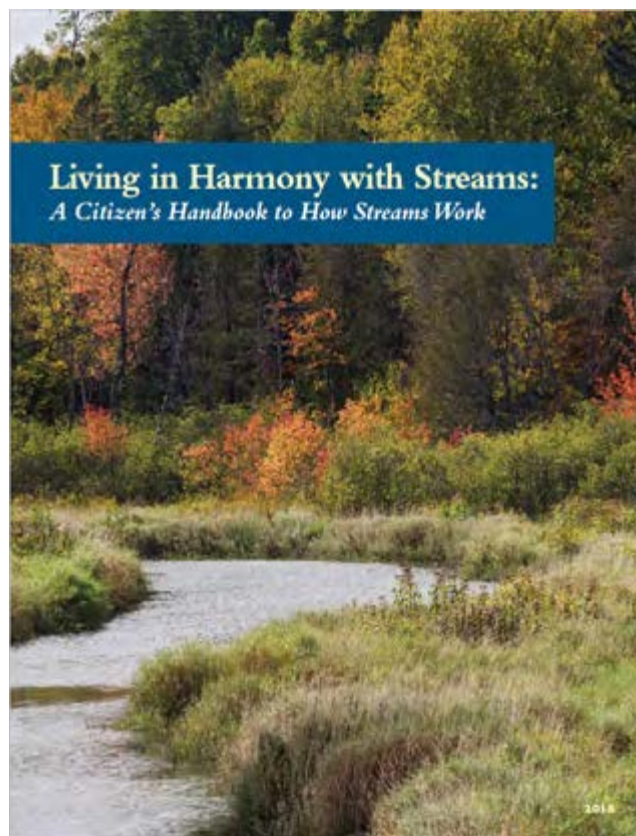
**Contact Person:** Lynn Munno

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**Phone:** 802-585-3569

**E-mail:** watershedsunited@gmail.com

**Website:** <http://www.watershedsunitedvt.org/>



**NEIWPCC Code:** L-2016-046

**EPA**

**Date Complete:** 3/30/2017

**Grant Amount:** \$ 9,888.00

**Non-federal Match:** \$ 2,940.00

**Total Amount:** \$12,828.00

# Local Implementation Grant

2015

## Restoration and Pollution Mitigation with Student-Grown Natives

### Project Summary

This project informed the general public about the benefits of plants and planting-related restoration projects designed to mitigate streamflow, nutrient, and sediment loading issues; provide habitat, food, and cool water; stabilize streambanks and side slopes; and reduce the effect of phosphorus sources. Multiple classes at Green Mountain College, Poultney High School, and local elementary schools participated in seed collection and seedling care, and implemented a variety of pollution-mitigating planting projects demonstrating the effectiveness of trees and shrubs in reducing pollution and supporting healthy ecosystems. The Poultney Mettowee Natural Resources Conservation District and the Nature Conservancy (TNC) also assisted on key aspects of this project.

#### Outputs:

- CVNPRN supported classes and held workshops including supporting public participation in TNC's American Elm project, grafting, soil conservation, seed collection and propagation, bare root bed construction, and hoop house construction.
- The nursery grew thousands of trees, helped plant over 10 acres for habitat restoration and water quality, and provided internships to four GMC students. Volunteer workshops, student labs to support classwork, and restoration planting workshops were completed. 39 college and community volunteers participated in the day to day activities at the nursery for a total of 1204 volunteer hours. 28 high school students participated in special workshops offered at the nursery together accumulating 78 additional volunteer hours.

#### Outcomes:

- Build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution by providing technical assistance and training for municipalities
- Reduce phosphorus pollution
- Restore communities of native plants and high-priority habitats to benefit riparian restoration

**Organization:** CV Native Plant Restoration Nursery

**Contact Person:** Natalie Coe

**Mailing Address:** One Brennan Circle  
Poultney, VT 05764

**Phone:** 802 287-xxxx

**E-mail:** coen@greenmtn.edu

**Website:** <http://www.pmnrcd.org/champlain-valley-native-plant-restoration-nursery/>



**NEIWPCC Code:** L-2016-040  
**EPA**

**Date Complete:** 3/31/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 4,062.00

**Total Amount:** \$14,062.00

2014

## Local Implementation Grant

## School Outreach Program and Plattsburgh's Military Heritage Publication

## Project Summary

The CCHA requested funds for a two-part education and outreach project. The first project was comprised of a four-part educational outreach program for elementary schools. The CCHA partnered with staff at the Saranac Elementary school to create a series of local history programs for 4th graders. Jan Couture, retired teacher and current Town of Saranac Historian worked with the CCHA Director to design an interactive program covering aspects of Clinton County's Settlement, Military Heritage, Industrial Development, and Attractions. For the second part of the project, CCHA worked with Dr. Richard Frost, author and local historian, to research and produce a book on the history of Clinton County's military reservation.

## Outputs:

- A four-part local history school outreach program was developed with Saranac Elementary School which included lessons on: 1) How Clinton County Came to Be; 2) Conflicts in Clinton County; 3) Immigration and Industry in Clinton County; and 4) Travel and Tourism in Clinton County. The historian visited three 4th grade classes at the school to present the lessons, then students took a field trip to the Museum.
- a county map floor puzzle and costumes for each series
- A military heritage publication was researched, written and published. The book, titled *Plattsburgh Military Reservation-A Pictorial History*, covered the reservation's inception in 1814 through present day. The book is 199 pages, with 6 chapters supported by up to 46 pictures per chapter.

## Outcomes:

- Enhanced educator and student learning about watershed and historical issues by offering hands-on opportunities for student learning
- Supported initiatives for cultural and historical resources in the CVNHP.

**Organization:** Clinton County Historical Association

**Contact Person:** Carlene Wood

**Mailing Address:** 98 Ohio Avenue  
Plattsburgh, NY 12903

**Phone:** 518 561-0340

**E-mail:** [director@clintoncountyhistorical.org](mailto:director@clintoncountyhistorical.org)

**Website:** <http://www.clintoncountyhistorical.org/>



**NEIWPCC Code:** L-2015-061

**GLFC**

**Date Complete:** 6/21/2017

**Grant Amount:** \$7,500.00

**Non-federal Match:**

**Total Amount:** \$7,500.00



# Local Implementation Grant

2014

## Sustainable Outdoor Leadership and Education (SOLE) Camp

### Project Summary

Established with the goal of educating youth to be naturalists and conservation stewards, the Sustainable Outdoor Leadership and Education (S.O.L.E.) Camp paired adventure with nature through exploration and games. Campers learned through hands-on activities about water quality testing, wildlife tracking, tree identification, outdoor skills, invasive species identification and removal, studies in ecosystem interdependence, energy flows, and food webs.

The need for youth outreach programs was especially high in the Old North End of Burlington and the City of Winooski. Through direct contact with schools, and by marketing through the Burlington Parks, Recreation and Waterfront, and through town recreation brochures, S.O.L.E. Camp reached out to young people across the economic and geographic spectrum so they could experience and learn about the natural environment.

#### Outputs:

- During the summer 2015, 57 youth participated over the four weeks of high-quality conservation day camp without any financial barriers to access
- During summer 2016, 94 youth participated throughout the eight weeks of conservation camp, without the financial burdens that might otherwise prohibit access.

#### Outcomes:

- Enhanced student learning about watershed issues along the Intervale - Winooski River region and Lake Champlain.
- Provided water-quality education programs including hands-on inquiry-based learning opportunities.
- Built awareness with students about behaviors that contribute pollution to Lake Champlain.
- Helped students explore, appreciate, and care for the fish and wildlife resources of the Winooski and Lake Champlain watersheds.

**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](mailto:info@wvdp.org)

**Website:** <http://www.wvdp.org/>



Lake Champlain  
Basin Program

**NEIWPC Code:** L-2015-036  
**GLFC**

**Date Complete:** 11/15/2016

**Grant Amount:** \$ 7,300.00

**Non-federal Match:** \$12,705.00

**Total Amount:** \$20,005.00

2015

## Local Implementation Grant

## The STEAMSHIP Program

## Project Summary

In 2016 the Lake Champlain Maritime Museum provided programming in partnership with the Vergennes Union Elementary and Middle Schools. Programs included on-water expeditions and recreation as well as watershed science, history, and boat-building skills. Students had the opportunity to work beside professional ecologists, archaeologists, historians, videographers and boat-builders. Students explored sites in their own schoolyards, as well as in nearby wetlands and streams, Otter Creek and Lake Champlain. They measured environmental conditions, solved problems related to outdoor weather conditions, and discovered artifacts from a previously unstudied Vergennes historic site. The students worked together in outdoor settings, sometimes enduring tough weather conditions that built self-confidence and fitness. Merging content enrichment and outdoor experiences proved to be both popular and successful.

LCMM's educators continue to align the program's enrichment activities with state standards and the LCMM relationship with school administrators strengthened during this project.

## Outputs:

- Lesson plans were developed by LCMM professional staff and five AmeriCorps members.
- LCMM educators were trained in Vermont Act 77 and in strategies that school districts, administrators and individual teachers are using to respond to the concepts of flexible pathways to graduation, proficiency-based graduation requirements, and personalized learning plans.
- Twenty-three weeks of programs for elementary school students and 28 weeks of programs for middle school students reaching 223 student participants.
- Assessments were completed by school administrators
- Developed curriculum for the LCMM Steamship Program

**Organization:** Lake Champlain Maritime Museum

**Contact Person:** Erick Tichonuk

**Mailing Address:** 4472 Basin Harbor Rd.  
Vergennes, VT 05491

**Phone:** 802-475-2022

**E-mail:** [erickt@lcmm.org](mailto:erickt@lcmm.org)

**Website:** <http://www.lcmm.org/>



## Outcomes:

- Encouraged students to thoughtfully engage in the world around them to promote better understanding, appreciation, and stewardship of our natural resources. Increased student engagement in school
- Improved student perceptions of learning
- Increased student ownership of Personalized Learning Plans
- Encouraged a higher number of academically relevant 8th Grade Capstone Projects.



Lake Champlain  
Basin Program

**NEIWPCC Code:** L-2016-050

**EPA**

**Date Complete:** 6/8/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$33,706.00

**Total Amount:** \$43,706.00

# Local Implementation Grant

2015

## This Plan is Our Plan: Bottom-Up, Stakeholder Engagement to Complete the Boquet River Watershed Management Plan

### Project Summary

BRASS engaged watershed stakeholders, particularly town officials, in a direct, participatory process to finalize the Boquet River Watershed Management Plan. Prior to this stakeholder engagement process, BRASS completed the inventory and analysis phase of the Boquet River Watershed Management plan. Working with community members from Westport, Willsboro, Essex, Elizabethtown, and Lewis, BRASS generated 45 very specific, water quality improvement findings and recommendations for local governments and property owners. Their results included measurable targets for action over the next 3-5 years. Stakeholder involvement and ownership were essential to build a strong commitment to implement the recommendations.

Five town supervisors from communities within the Boquet Watershed actively participated and attended at least one or more meetings. They all read the materials provided, completed a needs assessment of town interests in the proposed recommendations, and provided specific comments regarding the recommendations. In addition to the active participation of the supervisors, BRASS had excellent involvement of many additional town officials.

#### Outputs:

- The Boquet River Watershed Management Plan was completed through a series of municipal meetings and five workshops which included 44 stakeholders from five communities. Town supervisors, planning departments, highway planners and zoning and other officials participated throughout the process. BRASS developed 45 strategic findings, recommendations, and targets, and set up a perpetual BMP monitoring framework for action over the next 3-5 years.

#### Outcomes:

- Provide local groups, schools, and municipalities financial and technical resources to implement *Opportunities for Action* in Basin communities and watersheds
- build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution.

**Organization:** Boquet River Association

**Contact Person:** Anita Deming

**Mailing Address:** PO Box 374  
Elizabethtown, NY 12932

**Phone:** 518 963-7096

**E-mail:** [aholland@grantplanact.com](mailto:aholland@grantplanact.com)

**Website:** <http://boquetriver.org/>



- Provided hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.



**NEIWPCC Code:** L-2016-045

**EPA**

**Date Complete:** 11/30/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$33,706.00

**Total Amount:** \$43,706.00

2015

## Local Implementation Grant

## Trout in the Classroom

## Project Summary

The project established Trout in the Classroom programs (<http://www.troutintheclassroom.org/>) at 9 schools in the Lake Champlain Basin. This involved setting up 55-gallon tanks (including chillers, filters, and aerators) which allowed students to raise brook trout from eggs received in early January to fingerlings released in a local stream in May or June. Students learned about water chemistry, the characteristics of healthy watersheds, ecosystems, as well as trout anatomy, life cycle, habitat, and benthic macroinvertebrates.

## Outputs:

- nine schools participated in the Trout in the Classroom program and received 55-gallon tanks, chillers, filters, and aerators. The equipment has a life expectancy of five to twenty years, thus permitting many hundreds of students to benefit from this exciting hands-on curriculum for the next decade or more.
- The schools included: Bellows Free Academy, Camels Hump Middle School, Charlotte Central School, Crossett Brook Middle School, Milton Middle School, Moretown Elementary School, Proctor Elementary School, Vergennes Union High School, and West Rutland School

## Outcomes:

- enhance educator and student learning about watershed issues
- build awareness and understanding among residents and visitors about Lake Champlain Basin resources and behaviors that contribute to pollution
- provide hands-on citizen action opportunities to improve the watershed and change behaviors that contribute to pollution.

**Organization:** Vermont Trout Unlimited

**Contact Person:** Joseph Mark

**Mailing Address:** PO Box 387, Castleton, VT 05735

**Phone:** 802 468-5479

**E-mail:** [joe.mark@castleton.edu](mailto:joe.mark@castleton.edu)

**Website:** <http://www.vttu.org/>



**NEIWPCC Code:** L-2016-039

**EPA**

**Date Complete:** 3/31/2017

**Grant Amount:** \$10,000.00

**Non-federal Match:** \$ 1,440.00

**Total Amount:** \$11,440.00



# Local Implementation Grant

# 2015

## Upper Otter Creek Watershed Education and Outreach

### Project Summary

The Rutland Natural Resources Conservation District (RNRCD) hired a graphics company to design stream crossing/watershed identification signs. The signs were installed throughout the Upper Otter Creek watershed by town road crews. Otter Creek is a major tributary to Lake Champlain with Upper Otter Creek draining 16 communities. RNRCD also met with town road crews to explain local community options for Better Back Road funding and to discuss roles that towns can play in the VT Clean Water Initiative on stormwater from developed lands.

#### Outputs:

- stream crossing/watershed signs
- meetings with town road commissioners and staff

#### Outcomes:

- Installed 40 watershed identification signs in the Upper Otter Creek watershed to inform the public about what watershed they live in, while encouraging them to get involved in protecting and appreciating resources. A public that understands their watershed's water quality and resource management problems can make informed choices about protection and restoration
- Decreased phosphorus runoff from developed land, including urban and suburban land and roads, by encouraging town road commissioners and staff to write for Better Backroads funding.

**Organization:** Rutland NRC

**Contact Person:** Nanci McGuire

**Mailing Address:** 170 South Main Street, Ste. 4  
Rutland, VT 05701

**Phone:** 802-775-8034 x 117

**E-mail:** nanci.mcguire@vt.nacdnet.net

**Website:** <http://www.vacd.org/rcd/>



**NEIWPCC Code:** L-2016-042  
**EPA**

**Date Complete:** 12/23/2016  
**Grant Amount:** \$6,600.00  
**Non-federal Match:**  
**Total Amount:** \$6,600.00

2015

## Local Implementation Grant

## Wacky Water Round 2

## Project Summary

The Essex Co. SWCD hired an intern to provide watershed education to multiple summer youth programs and campgrounds throughout Essex County. The Wacky Water Grant provided hands on environmental education demonstrations and activities for several youth commission programs in Essex County. Four schools participated including Westport, Moriah, Elizabethtown and Willsboro. Each of the activities used were prepped in advance so that they were easily accessible and ready to be used when on site. This allowed for the lessons to run without being deterred. Participants aged four to twelve participated in camper groups ranging from five to twenty participants. Up to 320 students were reached in each of the five program weeks. The activities pertained to local environmental issues and preventative measures that can be taken to help keep our local waters clean.

## Outputs:

- Expanded watershed activities curriculum, completed weekly visits to schools and campgrounds, conducted field trips, and completed a summary presentation to the Youth Bureau

## Outcomes:

- Provide watershed and Lake Champlain educational materials and displays that attract targeted audiences annually.
- Enhance student learning about watershed issues.

**Organization:** Essex County SWCD

**Contact Person:** Tiffany Pinheiro

**Mailing Address:** P.O. Box 407 Westport NY 12993

**Phone:** 518-962-8225

**E-mail:** [tpinheiro@westelcom.com](mailto:tpinheiro@westelcom.com)

**Website:** <http://www.essexcountyswcd.org/>



**NEIWPCC Code:** L-2016-043

**EPA**

**Date Complete:** 1/25/2017

**Grant Amount:** \$5,500.00

**Non-federal Match:** \$1,200.00

**Total Amount:** \$6,700.00



# Local Implementation Grant

2015

## Winooski River Watershed Flume

### Project Summary

Friends of the Winooski developed and implemented program components to maximize the use and impact of the Emriver flume, including a lending program for organizations, schools, and individuals. The Friends group adapted existing lesson plans for adults and schools so that they were more directly applicable to the Winooski river watershed. They hosted a workshop to train flume users, developed school curriculum, and conducted flume demonstrations in both school and public settings.

#### Outputs:

- developed a stream table lending program
- created a 30 minute stream table lesson/demonstration for the adult and municipal audiences
- created a 45 minute school lesson plan (aligned with NGSS standards) including materials needed, learning outcomes, student activity sheets and instruction
- completed the design of a 5-day stream table curriculum (aligned with NGSS) applicable for students in grades 4-12
- hosted a 6-hour teacher training workshop that covered stream table management, curriculum, users plan and teaching plan
- completed two public flume demonstrations
- designed a successful, sustainable flume education program to help people in the Winooski River watershed understand river processes and the ways that humans can change their activities to minimize flood damage and negative impacts on river health.

#### Outcomes:

- enhance educator and student learning about watershed issues
- empower the general public to reduce phosphorus contributions

**Organization:** Friends of the Winooski River

**Contact Person:** Ann Smith

**Mailing Address:** PO Box 777  
Montpelier, VT 05601

**Phone:** 802-882-8276

**E-mail:** [info@winooskiriver.org](mailto:info@winooskiriver.org)

**Website:** <http://www.winooskiriver.org/>



**NEIWPCC Code:** L-2016-037

**EPA**

**Date Complete:** 4/24/2017

**Grant Amount:** \$6,000.00

**Non-federal Match:** \$1,200.00

**Total Amount:** \$7,200.00

SECTION FIVE:

# EXTERNALLY MANAGED CONTRACTS





# Externally Managed Contract

## Floodplain and River Corridor Outreach Modules

### Project Summary

This project will create high quality online resources to support municipal officials and communities in their work on floodplain and river corridor protection. These products may include informational topical pages, short on-demand topical webinar trainings for new municipal officials, and other tools to help communities and multiple agencies establish effective municipal floodplain and river corridor protections. The finished resources will be available to regional planning commissions, non-governmental organizations, and other networks supporting municipalities.

#### Outputs:

- Draft products and formative assessment by program stakeholders
- Finished modifiable products available for partners, and public products posted on VT DEC website

#### Outcomes:

- Accessible and effective information for municipal officials will increase their knowledge of floodplain and river corridor functions, and their ability to protect and administer municipal hazard area regulations.

**Organization:** VT DEC

**Contact Person:** Bethany Sargent

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** dec.vermont.gov/watershed



**EPA**

**Start Date:** 7/1/2016

**Grant Amount:** \$40,000.00

# Externally Managed Contract

## Hosting, Maintenance, and Support for Multi-Partner Agricultural Conservation Practice Tracking and Planning Geospatial Database

### Project Summary

The Multi-Partner, Agricultural Conservation Practice Tracking and Planning Geospatial Database allows for the planning, tracking, and reporting of agricultural best management practice implementation by field staff of a multi-organizational partnership. This project funds one year of hosting, application maintenance, user support, and minor upgrades.

#### Outputs:

- One year of application hosting;
- Application maintenance as needed for 12 months;
- User support as needed for 12 months;
- Application upgrades, including:
  1. Increased security and visibility filters to allow more users to access the database;
  2. Increased flexibility in uploading shapefiles and feature classes;
  3. Improvements to reporting function to increase flexibility and usefulness.

#### Outcomes:

- The continued hosting, maintenance, and support of this database will allow the measurement of nutrient and sediment reduction associated with implementation activity across a robust partnership of agricultural technical service providers. This database also improves coordination and efficiency in service delivery among partner field staff, increasing the amount of work the partnership is able to achieve, and ultimately improving the quality and quantity of projects being implemented. The long-term outcome of the database is intended to be the reduction of nutrients entering Lake Champlain.

**Organization:** VT DEC to Vermont Agency of Agriculture, Food and Markets

**Contact Person:** Bethany Sargent

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** dec.vermont.gov/watershed



**EPA**

**Start Date:**

11/1/2016

**Grant Amount:**

\$40,000.00

# Externally Managed Contract

## Lake Champlain Basin Agronomy Conservation Assistance Program (ACAP) – Phases 4 and 5

### Project Summary

Runoff from agricultural lands in Vermont is a major source of excess phosphorus and sediment, which have degraded water quality in Lake Champlain. The Agronomy and Conservation Assistance Program (ACAP), initiated in 2011, provides outreach and technical assistance to farmers in the Lake Champlain watershed to increase implementation of farm practices that reduce soil and nutrient losses to surface waters. A sub-award with UVM Extension and Poultney-Mettawee Natural Resources Conservation District supports agronomists that collaborate with farmers to identify high priority conservation projects for their farms, guide them to secure additional technical and financial resources, and provide on-site technical assistance for development and installation of conservation practices to meet water and soil quality objectives.

#### Outputs:

- UVM and Poultney-Mettawee Natural Resources Conservation District agronomists provide direct outreach and technical assistance to 184 individual farmers in the Lake Champlain watershed for planning and installation of 188 new field conservation practices to reduce soil and nutrient runoff from more than 24,695 acres of cropland.

#### Outcomes:

- The anticipated outcome is a reduction in phosphorus loading from agricultural lands, including farmsteads, cropland, and pasture lands in the Basin.

**Organization:** VT ANR

**Contact Person:** Bethany Sargent

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** dec.vermont.gov/watershed



*Before and after livestock exclusion fencing was installed near the Black Brook in the Missisquoi Basin.*



**EPA (FFY15)**

**Start Date:**

7/1/2016

**Grant Amount:**

\$280,000.00



# Externally Managed Contract

## 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 will maintain a database and serve 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.

**Organization:** VT DEC

**Contact Person:** Bethany Sargent

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** [dec.vermont.gov/watershed](http://dec.vermont.gov/watershed)

**Organization:** NYSDEC

**Contact Person:** Fred Dunlap

**Mailing Address:** PO Box 296  
Ray Brook, NY 12977

**Phone:** (518) 897-1262

**E-mail:** [fred.dunlap@dec.ny.gov](mailto:fred.dunlap@dec.ny.gov)

**Website:** <http://www.dec.ny.gov/>



**EPA**

**Start Date:** 7/1/2017

**Grant Amount:** \$558,978.00

# Externally Managed Contract

## Monitoring for Cyanotoxins in Public Drinking Water from Lake Champlain

### Project Summary

This project continues drinking water analyses for the presence of cyanotoxins for Vermont-based public drinking water suppliers on Lake Champlain that began in 2015. Vermont Department of Health (VOH) staff collected and transported weekly raw and finished water samples to the Vermont Department of Health, Public Health Laboratory for analyses of Microcystin and Cylindrospermopsin. The results of the analyses were provided to the Vermont Department of Environmental Conservation (DEC) and the public drinking water utilities. This data supports public health decisions intended to protect more than 150,000 people who have access to this drinking water source in Vermont.

#### Outputs:

- Cyanotoxin concentration results in weekly raw and finished drinking water samples, posted on the Drinking Water and Groundwater Protection Division (DW-GWPD) website during the monitoring season.
- Final report of findings and analysis, along with presentations at state and regional professional meetings.

#### Outcomes:

- Use of this data by DEC, DOH, and public drinking water suppliers will inform public health decisions and improve understanding of the effectiveness of current treatment technologies.

**Organization:** VT DEC to Vermont Department of Health

**Contact Person:** Bethany Sargent

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** dec.vermont.gov/watershed



**EPA**

**Start Date:** 7/1/2017

**Grant Amount:** \$30,000.00

# Externally Managed Contract

## Subwatershed Monitoring in the McKenzie Brook Watershed in Vermont

### Project Summary

The McKenzie Brook watershed in Vermont in western Addison County drains into the South Lake and is one of the most intensive agricultural areas in the state. Recently, the McKenzie Brook watershed has been targeted for accelerated implementation of agricultural conservation practices. This project will expand upon existing monitoring efforts by collecting streamflow data and enhancing water quality sampling through flow-dependent sampling. Streamflow data, along with precipitation data, will increase our understanding of baseline water quality conditions, allow us to estimate nutrient loads at the subwatershed scale, and document potential improvements in water quality as a result of agricultural best management practice (BMPs) implementation.

#### Outputs:

- Stream flow stations installed and operated for two years during non-frozen conditions (approximately April 2017 – November 2018)
- Continuous stream flow dataset and initial nutrient load estimates for gauged subwatersheds for two years
- Precipitation dataset for subwatersheds for two years
- Flow and initial nutrient load estimates for ungauged subwatersheds (as feasible)
- Water quality dataset available online through the Department of Environmental Conservation's Watershed Data Portal at <https://anrweb.vt.gov/DEC/IWIS/>.

#### Outcomes:

- Streamflow stations, along with the enhanced sampling effort, will allow initial nutrient loading estimates and the establishment of baseline water quality conditions in subwatersheds in the McKenzie Brook watershed in Vermont. With a better understanding of current water quality conditions and continued monitoring, we can better identify critical source areas for best management practice implementation and document any potential resulting water quality improvements, including a reduction in phosphorus and total suspended solid concentrations or loadings, that could occur as BMPs are implemented.

**Organization:** VT DEC

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**Phone:** 802-490-6131

**E-mail:** bethany.sargent@vermont.gov

**Website:** dec.vermont.gov/watershed



**EPA**

**Start Date:**

7/1/2017

**Grant Amount:**

\$50,000.00

# Externally Managed Contract

## Vermont Rural Road Pollution Prevention

### Project Summary

Implementing road best management practices (BMPs) on hydrologically-connected Class 4 municipal road segments will reduce road erosion and the resulting sediment and phosphorus pollution within the Lake Champlain watershed. Hydrologically-connected road segments are those sections of road at high risk to impact adjacent surface waters, including lakes, ponds, perennial and intermittent streams, and wetlands.

Class 4 roads represent approximately 13% of all municipal road miles. Class 4 town roads are typically located in the higher elevations within a watershed. Valleys in these locations are narrow and in many instances the roadway itself acts as a floodplain encroachment resulting in numerous road-river conflicts that can result in streambank erosion, debris jams, bank mass failures, and slides. Stream crossings are typically culverts and many located on Class 4 roads are significantly undersized, in poor structural condition, and/or are installed incorrectly.

This project will result in the implementation of road BMPs such as grass and stone-lined drainage ditches, road crowning, and drainage culvert upgrades and replacements, that will improve water quality and flood resilience.

#### Outputs:

- At least 4 high priority municipal road best management implementation projects completed
- Outreach workshop to demonstrate best management practices

#### Outcomes:

- Anticipated outcomes include improving water quality by reducing levels of sediment, phosphorus, and toxic substances from eroding into streams, and improving recreational use and safety of these waters by people. Additionally, transportation infrastructure flood resilience will be improved using the same suite of BMPs.



**Organization:** VT DEC

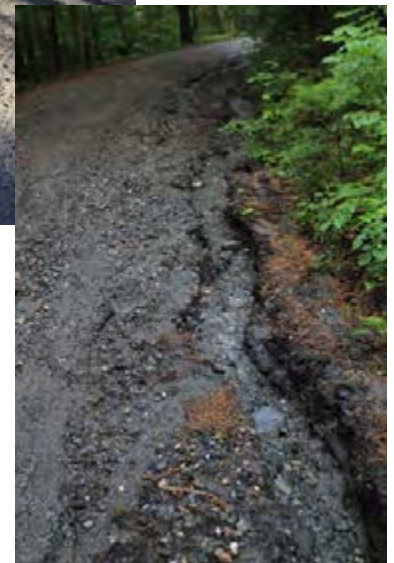
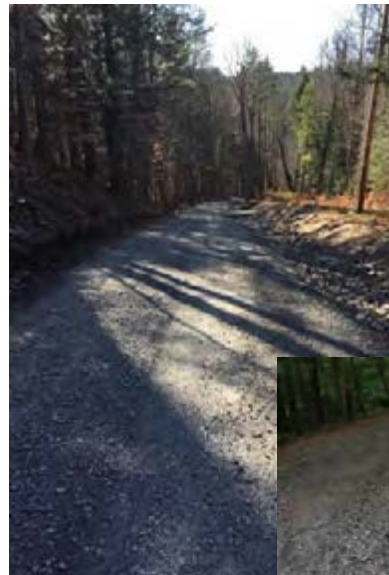
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Montpelier, VT 05620

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**EPA** (FFY14/15, \$50,000 each)  
**Start Date:** 7/1/2016  
**Grant Amount:** \$100,000.00

# Externally Managed Contract

## Water Chestnut 2017 Management Partnership - Lake Champlain Basin

### Project Summary

The Vermont Department of Environmental Conservation (VTDEC) continued water chestnut management north-to-south in Lake Champlain and adjoining tributaries, as well as other waterbodies in Vermont. The effort included both mechanical and hand removal of water chestnut to prevent the plant's northward expansion in Lake Champlain and further spread in the Basin, and to reduce water chestnut in other waterbodies. Funding from LCBP supported contracted hand-pulling only.

#### Outputs:

- Water chestnut management was conducted at 62 Lake Champlain sites between Charlotte, Vermont and Dresden, New York on both the Vermont and New York sides of the lake. In partnership with the Missisquoi National Wildlife Refuge, hand-pulling occurred at several sites in the refuge and water chestnut surveys occurred throughout.
- A final report will be prepared and submitted to the LCBP and available for public distribution. Through the LCBP Water Chestnut Workgroup, VTDEC will work with partners to provide 2017 water chestnut indicators for all water chestnut management efforts in the Lake Champlain Basin: area infested with water chestnut, management resources, and mechanical and hand harvesting management specifics.

#### Outcomes:

- Harvesting efforts will continue to reduce densities, prevent further spread, and shift Lake Champlain populations from dense mats in need of mechanical harvesting to populations that can be managed by hand-pulling.

**Organization:** VT DEC, MNWR

**Contact Person:** Josh Mulhollem (VT ANR)

**Mailing Address:** 1 National Life Drive, Main 2  
Montpelier, VT 05620

**Phone:** 802-490-6121

**E-mail:** josh.mulhollem@vermont.gov

**Website:** [dec.vermont.gov/watershed/lakes-ponds](http://dec.vermont.gov/watershed/lakes-ponds)



**EPA**

**Start Date:**

7/1/2017

**Grant Amount:**

\$75,000.00

# ABOUT THE LCBP

The 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 Lake Champlain Basin Program 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 examination 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 the New England Interstate Water Pollution Control Commission (NEIWPCC) in support of the Lake Champlain Basin Program to work collaboratively toward achieving management goals outlined in *Opportunities for Action*, the management plan for Lake Champlain.

In FY 2017, the LCBP received federal funding from the U.S. Environmental Protection Agency, the Great Lakes Fishery Commission, and the National Park Service. NEIWPCC manages the financial, contractual, and human resource business operations for the LCBP on behalf of the Lake Champlain Steering Committee. LCBP staff are employees of NEIWPCC operating from the LCBP office in Grand Isle, VT.

This report includes a comprehensive listing of LCBP projects, external contracts managed by LCBP, and LCBP tasks implemented by staff that were in progress or concluded between October 1, 2016 and September 30, 2017. The *2017 Report of Activities Summary* highlights key activities during this time period. To request a copy of the summary, please contact the LCBP.



Lake Champlain Basin Program  
54 West Shore Road  
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(802) 372-3213  
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