

Report of Activities Summary 2019



Lake Champlain
Basin Program

Fiscal Year 2019 was another productive year for the Lake Champlain Basin Program. With strong funding support secured by the Basin's Congressional delegation, staff managed more than 150 grants, ranging from \$2,500 capacity-building grants to larger research and implementation projects of \$250,000. In addition to grant management, staff worked on many other projects that advance the goals of the LCBP's management plan *Opportunities for Action*: clean water, healthy ecosystems, thriving communities, and an informed and involved public. The pages that follow contain highlights for the year in each of these areas.

The goals of *Opportunities for Action*, of course, are inextricably linked. Their interconnectedness was evident in 2019 in the Program's participation in the International Year of the Salmon (IYS) commemoration. The year-long celebration was an opportunity to advance efforts to restore the once-abundant species to the waters of the

Basin and recognize the fish's historical role in the region. It was a focus of much of the program's work over the course of the year and an opportunity to contribute the resources and expertise of all of its programs.

IYS also emphasized the benefits of the strong partnerships. The fortuitously timed discovery in summer 2019 of naturally reproduced salmon fry in the Boquet River in New York was symbolic of decades of collaboration by agencies, academic institutions, and other members of the Lake Champlain Fish and Wildlife Management Cooperative. In preparation for the IYS celebration itself, the LCBP worked closely with the U.S. Fish and Wildlife Service, the Lake Champlain Maritime Museum, and other partners on several initiatives to mark the occasion. These types of relationships bring a broad, multi-disciplinary approach that enhance our ability to tackle the challenges in managing the Lake Champlain Basin's resources. The LCBP is proud to be a part of these partnerships.



INTERNATIONAL YEAR OF THE SALMON



In consultation with the U.S. Fish and Wildlife Service, the LCBP developed a series of seven traveling interpretive exhibits focused on salmon restoration and history. The exhibits were on display at more than two dozen venues.



The Lake Champlain Salmon Festival in Richmond, VT included lectures, demonstrations, films, paddling, and fly casting. It culminated in a fall fingerling release into the Huntington River by a delighted group of children.



The three-part *Bringing Back Salmon* video series chronicles salmon restoration efforts in the Basin, including the community role in removing the Willsboro Dam on the Boquet River in New York.



The Lake Champlain Maritime Museum's replica canal schooner *Lois McClure* toured the Lake, sharing the history, ecology, and conservation story of salmon. A set of interpretive exhibits traveled with the *Lois* for the summer.

Photos: LCBP, LCBP, Peregrine Productions (clockwise from top left)



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.

Local Grant Highlights



Riparian Restoration Protocol:

The Ausable River Association surveyed vegetation, planted seedlings, and assessed effectiveness of maintenance approaches to develop a protocol for riparian planting in the Adirondacks.



VSECU Rain Garden:

The Montpelier Conservation Commission coordinated construction of a rain garden to infiltrate and slow stormwater runoff from the VT State Employees Credit Union parking lot.



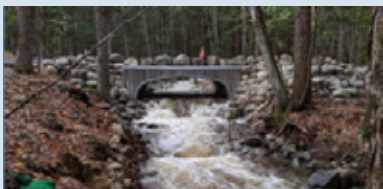
Gravel Wetland Retrofit:

The City of South Burlington, VT, converted a detention basin to a gravel wetland to reduce runoff from impervious surfaces by 75% in a suburban neighborhood with persistent stormwater problems.



Septic System Inventory:

The Assembly Point Water Quality Coalition documented underwater algae, inventoried septic systems in Queensbury, NY, and produced brochure to explain new septic rules.



Culvert Replacement:

The Lake George Association worked with the Town of Dresden to replace a culvert on Foster Brook. The wider structure helps reduce phosphorus entering Lake George and improves fish passage.

Additional Local Grants awarded in FY2019

Green Stormwater Infrastructure
Friends of Northern Lake Champlain

Road Salt Reduction
Town of Keene, NY

CSO Reduction
Greater Burlington YMCA

Stormwater & Habitat Improvement
Warren County SWCD

Program Highlights

In addition to managing grants, LCBP staff oversee numerous projects and provide expertise in collaborative efforts to improve water quality in the Lake Champlain Basin. In Fiscal Year 2019, LCBP staff:

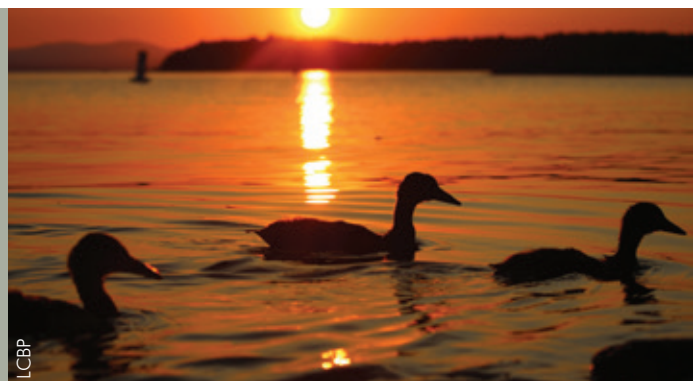
- Conducted analyses and produced a **Lake Champlain tributary loading report** which examines trends in pollutant delivery from the Lake's major tributaries since 1990.
- In cooperation with Organisme de bassin versant de la baie Missisquoi (OBVBM), completed a preliminary draft of the report **Nutrient Loading and Impacts in Lake Champlain, Missisquoi Bay, and the Richelieu River** as part of the International Joint Commission's Missisquoi Bay Water Quality project.
- Served in **leadership positions** with numerous professional organizations and committees, including North American Lake Management Society, agricultural tile drain advisory committee, and regional brownfields advisory committee.
- Coordinated the review and approval of more than 20 new **quality assurance project plans (QAPPs)** for projects requiring data collection or analysis to ensure consistent, high-quality environmental data.
- Collected critical data for scientific analyses and watershed management as part of the **Long-term Water Quality and Biological Monitoring Program**.
- Coordinated the work of the **LCBP Technical Advisory Committee**, which interprets scientific information and provides guidance on research and funding priorities for Lake Champlain management.
- Supported the International Joint Commission's **Lake Champlain-Richelieu River Study Board** analysis of flooding causes, impacts, risks, and solutions.



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.



LCBP

Program Highlights

In addition to managing dozens of grants, LCBP staff oversee numerous projects and provide expertise in collaborative efforts to improve ecosystems in the Lake Champlain Basin. In Fiscal Year 2019, LCBP staff:

-  Worked at eleven boat launches, **inspecting 11,116 vessels for aquatic invasive species** and surveying boaters about their activities and behavior. More than 8.5% of boats inspected carried invasive species.
-  Prevented the potential introduction of invasive *Hydrilla verticillata* by intercepting the plant on a boat being launched into the Lake in South Hero, VT.
-  Detected and reported large numbers of **invasive fishhook waterflea** in Shelburne Bay of Lake Champlain.
-  Served in **leadership positions** with numerous professional organizations and committees, including Northeast Aquatic Nuisance Species Panel, Northeast Plant Management Society, and the Lake Champlain AIS Rapid Response Task Force.
-  Assisted with analysis of fish tissue to understand **recent increases in mercury concentrations** in Lake Champlain fish.
-  Facilitated the solicitation and review of projects to improve water quality and ecosystem integrity under the U.S. Army Corps of Engineers **Section 542 Watershed Environmental Assistance Program**.
-  Established and coordinated the **New York-Lake Champlain Basin Dam Removal Task Force** to coordinate and focus efforts to increase river habitat connectivity.
-  Helped facilitate the renewal of funding agreements to support **water chestnut control work** in Lake Champlain for an additional five years.
-  Co-chaired host committee and helped plan and organize the 2019 annual meeting of the **North American Lake Management Society**.

Local Grant Highlights



Boat Launch Greeter Program:

The Lake Dunmore Fern Lake Assoc. operated a program that inspected 1,369 boats. The program intercepted 13 boats with Eurasian watermilfoil, a nuisance in the lake for decades.



Dam Removal:

The Vermont Natural Resources Council led the removal of the Mill Pond dam on Indian Brook in Colchester and restoration of the stream's floodplain, reconnecting 31 miles of aquatic passage.



River Steward:

The Ausable River Association's river steward provided information about aquatic invasive species prevention and surveyed river users about their activities, use, and gear to help refine outreach methods.



Invasive Plant Program:

The Warren County SWCD trained municipal staff and community members on invasive plant identification and management and provided toolkits to take home.



Riparian Buffers:

The Missisquoi River Basin Association worked with the Vermont Youth Conservation Corps to plant 600 trees in North Troy, VT and other locations along the northern reaches of the Missisquoi River.

Additional Local Grants awarded in FY2019

Riparian Restoration
Winooski Valley Park District
AIS River Steward
Ausable River Association

Watershed Steward Program
Upper Saranac Foundation

Backcountry Water Monitors
Adirondack Mountain Club

THRIVING COMMUNITIES



GOAL

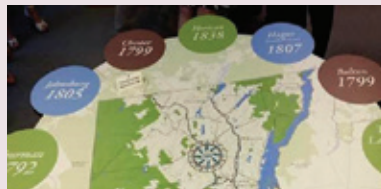
Communities have an appreciation and understanding of the Basin's natural and cultural resources, and the capacity to implement actions that will result in sound stewardship of resources while maintaining strong local economies.



Local Grant Highlights



Talks, Treks and Tasks: Friends of the Saranac River Trail hosted a series of walking tours in downtown Plattsburgh to encourage people to learn about their community and connect with their neighbors.



Celebrating People and Place: The Warren County Historical Society developed *Warren County 360*, an interpretive exhibit to educate citizens about their community's natural resources, history, and geography.



Paddlers Trail Map and Guide: The Vermont River Conservancy worked with university students to produce a waterproof map and interpretive content about the Lamoille River Paddlers Trail.



Lake George on the Water: The Folklife Center at Crandall Public Library in Glens Falls produced a series of 22 mini-documentaries to tell the stories of the people, places and traditions of the watershed.



Jahaziel Sherman's Steamboats: The Lake Champlain Maritime Museum inventoried and digitized historical resources and created two interpretive exhibits about the steamboat pioneer from Vergennes, VT.

Additional Local Grants awarded in FY2019

International Tasting Trail
Vermont Fresh Network

Missisquoi River Fishing Platform

Missisquoi River Basin Association

Historic Main Street Homes
Sheldon Historic Society

Adirondack Experience
Library Cataloging Internship

Program Highlights

In addition to managing grants, LCBP staff oversee numerous projects and provide expertise in collaborative efforts to foster thriving communities in the Lake Champlain Basin and the Champlain Valley National Heritage Partnership. In Fiscal Year 2019, LCBP staff:

- ✕ Helped plan and deliver programs in recognition of the **International Year of the Salmon**, including the Lake Champlain Salmon Festival, the *Bringing Back Salmon* video series, and a series of travelling interpretive exhibits.
- ✕ Hosted the 8th annual **CVNHP International Heritage Summit**, where more than 80 participants discussed budget priorities and partnership opportunities for the year. Presentations were given on the International Year of the Salmon and the centennial of the 19th Amendment and women's suffrage.
- ✕ Developed a **seven-panel interpretive trail** that explores the locations that inspired James Fennimore Cooper to write his 1826 novel *The Last of the Mohicans*.
- ✕ Provided **technical assistance** to communities in developing interpretation programs and products.
- ✕ Assisted with **facilitation of public meetings** to share progress and get feedback on the International Joint Commission Lake Champlain-Richelieu River Study Board flood study.
- ✕ Coordinated with the **Québec Regional Stakeholder Group** to share information and solicit input for priorities for cultural heritage initiatives.
- ✕ Managed **166 local implementation grants** that provided financial and technical assistance to watershed groups, municipalities, natural resource conservation districts, and other organizations.



INFORMED AND INVOLVED PUBLIC

GOAL

Basin residents and visitors understand and appreciate Lake Champlain Basin resources, and will possess a sense of personal responsibility that results in behavioral changes and actions to reduce pollution.



Program Highlights

In addition to managing dozens of grants, LCBP staff oversee numerous projects and provide expertise in collaborative efforts to improve public understanding of water quality and ecosystem issues in the Lake Champlain Basin. In Fiscal Year 2019, LCBP staff:

- Collaborated with partners to expand the **"Raise the Blade"** campaign to encourage people to mow their grass to no shorter than 3 inches to improve soil health and water infiltration.
- Updated the **Lawn to Lake website** to feature Raise the Blade information and refresh the **"Don't P" on Your Lawn** campaign.
- Trained camp counselors to deliver watershed education programs to campers at **YWCA Camp Hochelaga** and **YMCA Camp Abnaki** in the Champlain islands.
- Led field trips as part of a new **High School Lake Champlain Stewardship Program** with Plattsburgh and South Burlington High Schools.
- Expanded education efforts at camps, schools, public events, and meetings with the new **LCBP Outreach Steward** program.
- Helped provide teachers with inspiration, knowledge, and skills to teach watershed science through the CBEI **Watershed for Every Classroom** five-credit graduate course.
- Collaborated with Champlain Basin Education Initiative (CBEI) partners to host the **World Water Day** celebration, bringing together artwork, writing, photography, and videography from classrooms in New York and Vermont.
- Staff greeted 27,764 visitors and hosted many classes and organizations at the **LCBP Resource Room** at ECHO, Leahy Center for Lake Champlain.
- Produced four new videos in the **Diving In** series focused on opportunities for citizens to get involved in learning about and protecting the watershed.

Local Grant Highlights



New York Watershed Alliance: SUNY Plattsburgh developed new education programming to expand the Lake Champlain Sea Grant Watershed Alliance program to three New York K-12 schools.



Water Quality Connects Communities: Missisquoi River Basin Association demonstrated their rainfall simulators 14 times to show how plants with strong roots hold pollution in place much better than bare soils.



Precision Agriculture Videos: The Farmer's Watershed Alliance produced a video series to demonstrate how farmers are using digital technology to manage impact to natural resources and maximize return on investment.



River Stewardship for Students: The Northern Forest Canoe Trail engaged students in projects to improve recreation access to three rivers. Students constructed an access trail, ramp, and picnic area in Richford, VT.



River Tours: The Ausable River Association offered three interpretive paddling programs on the West Branch Ausable River at Lake Everest in Wilmington, NY. Participants learned about water quality and wildlife.

Additional Local Grants awarded in FY2019

First Peoples Lens on the Land and Lake

Shelburne Farms

Ahead of the Storm
Lewis Creek Association

Lake Headwaters Education
Paul Smith's College

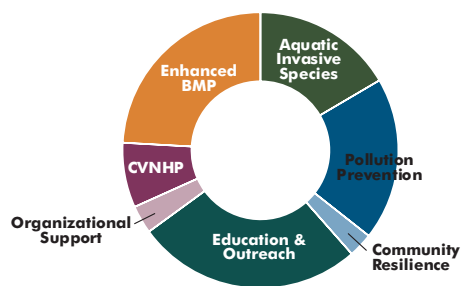
Community Engagement
Poultney-Mettowee NRCD

Local Implementation Grants

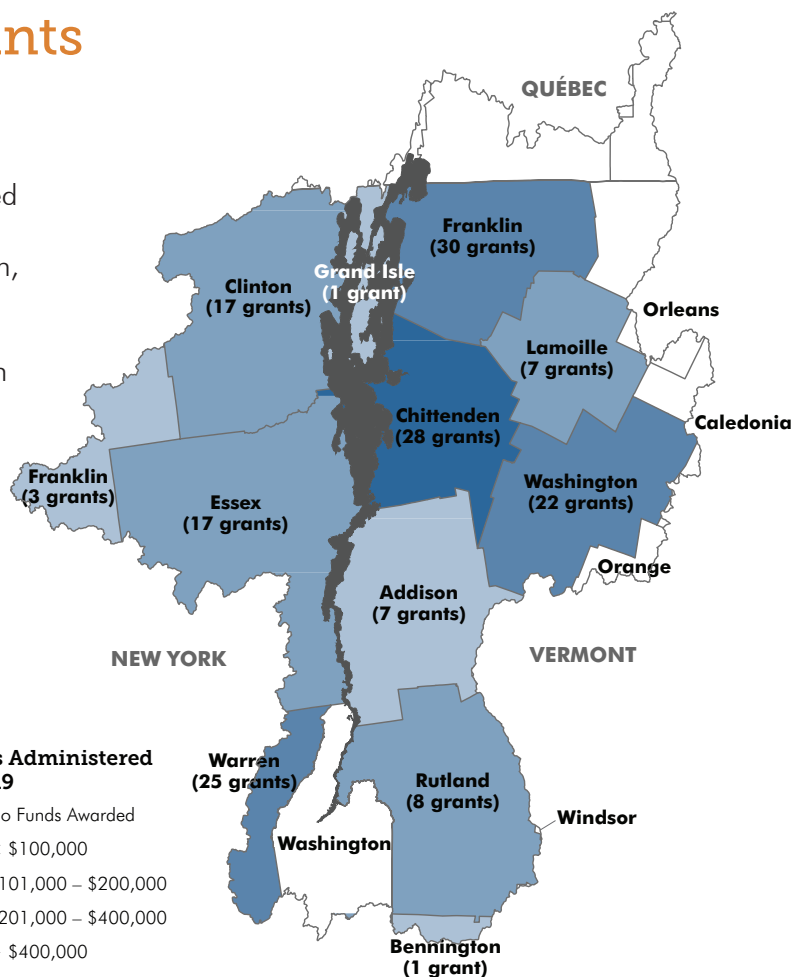
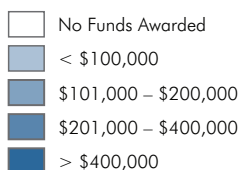
LCBP's Local Grant Programs provide vital support for many of the tasks included in the Lake Champlain Management Plan *Opportunities for Action*. The LCBP's core areas of work are addressed through grants awarded in several categories: Pollution Prevention and Habitat Conservation, Aquatic Invasive Species Spread Prevention, Education and Outreach, Organizational Support, and Cultural Heritage and Recreation. Since 1992, the LCBP has awarded more than 1,200 grants totalling more than \$9,000,000 to 350 organizations.

In 2019, the LCBP administered **\$2,042,000** for **166** local grants across **6** grant categories.

Funds Administered, by grant category



Funds Administered in 2019



Program Grants

Each year, the LCBP supports a number of research and implementation projects that help achieve the goals of the Program and its management partners. The awards for these projects are generally larger than local grants, and are solicited with Requests for Proposals from universities, consultants, re-search foundations, and other organizations.

These larger program projects provide the foundation for informing critical decisions for limited management resources. Results from these studies often inform policy, and are extended to educational programming and training opportunities by partners across the watershed.



Phosphorus Retention in Riparian Wetlands: Scientists at the University of Vermont are determining the capacity of restored riparian wetlands to hold phosphorus to help guide future wetland protection efforts.



State of the Lake Exhibits: ECHO developed interpretive exhibits to communicate the content of the LCBP's *State of the Lake* Report. Exhibits are located inside and in outside public space on the waterfront.



Volunteer Cyanobacteria Monitoring Program: The Lake Champlain Committee coordinates and trains volunteers to monitor and report cyanobacteria blooms each summer to help ensure public health.



Phosphorus from Tile Drainage: Newtrient, LLC is developing a model to estimate how much phosphorus comes from tile drains in agricultural fields and to evaluate the effectiveness of P reduction practices in tile drained fields.

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 2019, the LCBP received federal funding from the U.S. Environmental Protection Agency, the Great Lakes Fishery Commission, the National Park Service, and the International Joint Commission. 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.



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