

REPORT OF ACTIVITIES SUMMARY

FY2022

(October 1, 2021 – September 30, 2022)



Patrick Leahy
Lake Champlain
Basin Program



Photo: Tim Peters

Fiscal year 2022 provided the LCBP—and much of our community of partners—an opportunity to reflect on how far we’ve come. The year ushered in tremendous change, setting us up for exciting growth and new opportunities in the next five years. The end of 2022 also brought a new name for us—the Patrick Leahy Lake Champlain Basin Program—as part of re-authorizing legislation that will allow the LCBP to continue to work with Federal support for another five years.

Throughout 2022, the LCBP and the Champlain Valley National Heritage Partnership (CVNHP) commemorated the 50th anniversary of the passage of the Clean Water Act. Like many organizations, we reflected on the progress made and the work still to be done. The LCBP owes our existence to this landmark legislation. Amendments to the Act in 1990 established the Program and called for coordinated and comprehensive management of the basin’s resources. It also called for a plan to lay out a strategy for protecting and restoring Lake Champlain. This plan would be entitled *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*.

In June 2022, the governors of Vermont and New York and the Administrators of Regions 1 and 2 of the U.S. Environmental Protection Agency approved an update to that plan. The Premier of Québec also endorsed the plan, which remains structured around four goals that serve as the foundation for the Program’s work. *Opportunities for Action 2022* includes for the first time performance metrics to track progress more closely. All four goals support a renewed focus on climate change and programs targeted to underserved communities. This plan will guide the work and activities of the LCBP for the next five years.

The LCBP will accomplish a great deal of work over the next five years. As noted in last year’s LCBP annual report, a tremendous level of financial support hit the ground in new projects in 2022. These federal appropriations were carried forward at a similar level for FY2023. In addition,

the Bipartisan Infrastructure Law of 2022 provided \$40 million in funding for the LCBP over the next five years. These funds will increase our capacity to protect and restore aquatic habitat and water quality in many areas.

Perhaps the most significant change in the last year, facilitated in part by this funding, is a transition in staff and key supporting partners. In the fall 2022 LCBP *Casin’ the Basin* e-news, we likened this transition to the Lake’s fall turnover. An infusion of fresh ideas, approaches, and energy brought by new staff is mixing with a deep store of rich knowledge and institutional memory held by seasoned staff and committee members.

LCBP Office Manager Kathy Jarvis retired after more than 30 years. Kathy was here at the very beginning of the LCBP and is already sorely missed. Pete Stangel, at the helm of the Vermont-based crew for the Lake’s Long Term Water Quality Monitoring Program, retired after more than 25 years of collecting critical data to inform management decisions for the Lake. Also departing the LCBP community were two long-serving committee members: Dr. Breck Bowden and Vic Putman. These two ardent supporters of the Lake and the LCBP served in a number of capacities over the years, including as chairpersons of our Technical Committee and the New York Citizen Advisory Committee and as members of the Lake Champlain Steering Committee. We are fortunate and thrilled to welcome new staff and committee members who come to us equipped with knowledge and skill sets to move us forward in a new era.

Of course, the greatest transition for us and so many people across the region is the retirement of Senator Patrick Leahy. Senator Leahy has been a stalwart defender of Lake Champlain and supporter of the LCBP for the entirety of its existence. It is fair to say that most of the change noted here and the progress represented by that change would not be possible without Senator Leahy. The LCBP will be forever indebted—and appreciative—of this steadfast support.



FUNDING AND INVESTMENTS

FY2022 Federal Appropriations

EPA Base Section 120	\$11,996,000
EPA-2016 TMDL	\$8,000,000
EPA Infrastructure	\$7,649,000
NOAA Leahy CDS	\$750,000
NPS (CVNHP)	\$500,000
GLFC	\$690,000
Total:	\$29,585,000

FY2022 Budget Allocations

LCBP Key Functions	\$2,634,854
Clean Water	\$12,964,115
Healthy Ecosystems	\$10,348,377
Thriving Communities	\$2,225,560
Informed and Involved Public	\$1,412,094
Total:	\$29,585,000

FY2022 Funds Distribution

	LCBP	Vermont*	New York
Directed to States:		\$9,623,106	\$1,712,210
Competitive Grant Programs	\$13,210,648		
LCBP Priority Programs (Line Items)	\$995,000		
Core Projects (excluding competitive grants)	\$1,409,182		
LCBP Key Functions (staffing, administrative)	\$2,634,854		
Total:	\$29,585,000		

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

Implementation Grants

LCBP's Implementation Grant Programs provide vital support for the goals of the Lake Champlain Management Plan [Opportunities for Action](#). The LCBP has awarded more than 1,600 grants totalling more than \$19,275,000 to 350 organizations since 1992.

In 2022, the LCBP administered **\$5,231,701** for **232** implementation grants funded under budgets from multiple years. Some of these grants are described in the following pages. Learn more about other grants at lcbp.org/grants.



Technical Projects

Each year, the LCBP supports a number of larger research and implementation projects that help achieve the goals of the Program and its management partners. These projects are solicited through a competitive request for proposal process and are included as discrete line items in the LCBP's annual budget.

These larger program projects provide the foundation for informing critical decisions for limited resources. They provide data that inform and guide policy, management decisions, implementation practices, educational programming, and training opportunities. In FY2022, the LCBP administered more than **\$6.7 million** in Technical Projects, primarily across the Clean Water and Healthy Ecosystems goals of *Opportunities for Action*.



Upgrades to the Lake Champlain Long-Term Monitoring Program (LTMP) were a key focus for LCBP and partners in 2022. The LTMP has provided critical data for lake management and research for more than 30 years; two new monitoring buoys deployed in Lake Champlain supplement this rich dataset by measuring key water quality parameters 24 hours a day, seven days a week.

Working with SUNY Plattsburgh and the Vermont Department of Environmental Conservation, the LCBP launched the buoys to collect weather and water quality data in Malletts Bay and the Lamoille River. Sophisticated instruments measure an array of parameters—some not previously recorded—and automatically upload the data in real-time to the LCBP web site where watershed managers, scientists, and lake users can interactively explore the data.

The project will expand in 2023 with three new buoys in Missisquoi and St. Albans Bays, and the Northeast Arm of Lake Champlain.

Program Project Highlights

In FY2022, LCBP staff:

- Coordinated the Lake Champlain Research Conference to bring together researchers, watershed managers, and the public to learn about the state of research on Lake Champlain.
- Coordinated the work of the LCBP Technical Advisory Committee, which provides guidance on research and funding priorities.
- Provided support and coordination of technical workshops, data acquisition, and public outreach for the International Joint Commission's flood study of reducing water levels and flood vulnerability.
- Published a science blog to communicate project results to partners and the research community.
- Coordinated review and approval of more than 20 new quality assurance project plans (QAPPs) to ensure consistent, high-quality environmental data.

Implementation Grant Highlights

- Floodplain restoration design:** A consultant for Vermont Land Trust measured sediment and phosphorus coming from erosion on Mill Brook and developed a plan to stabilize and restore the floodplain.
- Phosphorus control planning:** Consultants for the Rutland Natural Resources Conservation District prepared a Phosphorus Control Plan for the City of Rutland to meet requirements of its stormwater permit.
- Interseeded cover crops:** The Clinton County SWCD purchased a shared 6-row cover crop interseeder to help corn growers plant multi-species cover crops.

Technical Project Highlights

- Floodplain sediment and nutrient capture:** UVM scientists studied sediment and phosphorus deposition and the potential role of floodplain restoration in nutrient load reductions.
- Rock River assessment:** Fitzgerald Environmental Associates is conducting geomorphic assessments of the Rock River in VT and QC to identify channel instability and restoration projects to improve water quality.
- Road salt:** The Ausable River Association is measuring the amount of salt that goes into Mirror Lake and testing the effectiveness of management practices to reduce salt.



Scott George, USGS



The LCBP invested considerable effort in 2022 to address the threat posed by round goby, an invasive fish that would devastate the Lake Champlain fishery if it were to become established.

Monitoring in 2022 determined that round goby was not likely present in Lake Champlain, Lake George, or the upper reaches of the Richelieu River. But its presence in the Hudson River and the Champlain Canal up to the C1 lock and lower reaches of the Richelieu has raised alarms as an imminent threat to the health of the Lake Champlain ecosystem.

The LCBP participated in a project advisory committee that worked with U.S. Army Corps of Engineers to develop alternatives as part of an AIS barrier study for the Champlain Canal.

As the coordinating member of the Lake Champlain AIS Rapid Response Task Force, the LCBP assisted the NYS Power Authority/Canal Corporation and New York State DEC in drafting a Round Goby Rapid Response plan for the Champlain Canal.

Implementation Grant Highlights

- 🐟 **Biodiversity assessment:** Organisme de bassin versant de la baie Missisquoi conducted five wetland and riparian ecological inventories to support conservation planning in the Pike River watershed in Québec.
- 🐟 **Boat decontamination:** The town of Dunham, QC purchased a mobile boat decontamination station for use at Lake Selby to prevent the spread of AIS.
- 🐟 **River steward:** The Ausable River Association hired a river steward to monitor for aquatic invasive species, educate the public about the threat they pose, and conduct a survey about river users' practices.

Program Project Highlights

In FY2022, LCBP staff:

- 🐟 Coordinated and participated in Vermont and New York dam task forces in efforts to increase river habitat connectivity.
- 🐟 Surveyed 13,629 boaters and intercepted invasive species 409 times in summer 2021, and decontaminated 251 watercraft.
- 🐟 Served in leadership positions with professional organizations and committees, including North American Lake Management Society, National Aquatic Nuisance Species Task Force, and regional Northeast Aquatic Nuisance Species Panel.
- 🐟 Hosted U.S. Army Corps of Engineers staff to tour the Champlain Canal AIS barrier and waterchestnut harvesting, watercraft decontamination, and Section 542-supported stormwater projects.
- 🐟 Updated the aquatic Invasive species identification guide.

Technical Project Highlights

- 🐟 **Boquet River protection:** The Nature Conservancy is conserving lands and identifying culverts for replacement to restore riparian and stream habitat.
- 🐟 **Dam removal:** The Vermont Natural Resources Council coordinated the feasibility study, design and permitting, and removal of the Pelletier Dam to improve aquatic organism passage on Breton Brook in Castleton.
- 🐟 **Fish community monitoring:** UVM scientists are surveying prey fish in Lake Champlain in order to establish a long-term survey program and fish community monitoring plan.



Community Sailing Center

The LCBP and the Champlain Valley National Heritage Partnership (CVNHP) commemorated the 50th anniversary of the Clean Water Act throughout 2022 with a full slate of events, activities, and publications.

A set of six exhibits traveled the region interpreting the history and impacts of the Act. CVNHP grants supported numerous partner interpretive projects, including exhibits at the Lake George Historical Association Museum and the Lake Champlain Maritime Museum. An LCBP naturalist led two excursions to learn about important wetlands and shoreline environments.

The culmination of the commemoration was an event at ECHO to mark the anniversary and honor the work of Senator Patrick Leahy in protecting Lake Champlain. Senator Leahy announced the winners of the Patrick Leahy Lake Champlain Basin Photography contest, held to celebrate the landmark legislation and shared passion for the lake.

Program Project Highlights

In FY2022, LCBP/CVNHP staff:

- ✂ Worked with VTFWD and Lake Champlain Sea Grant to deliver Learn to Fish workshops for disadvantaged communities, providing licenses and equipment to more than 80 participants.
- ✂ Convened the 13th Annual CVNHP International Summit in Saranac Lake, NY, where participants collaborated on interpretive themes and project ideas.
- ✂ Coordinated and advanced the efforts of the Champlain-Adirondack Biosphere Network to connect people and organizations working to build harmonious relationships between people and the environment.
- ✂ Established and published eight entries in the Champlain Valley Threads of History blog.
- ✂ Produced and updated more than 30 wayside exhibits that interpret natural and cultural heritage.

Implementation Grant Highlights

- ✂ **Gunboat Spitfire:** Lake Champlain Maritime Museum advanced the multi-year project to document, preserve, and share the shipwreck of the Revolutionary War gunboat in Lake Champlain.
- ✂ **Prohibition Trail:** The Centre Local de Développement de Brome-Missisquoi developed ten interpretive panels and a newspaper-style guidebook on the Temperance and Prohibition eras.
- ✂ **Clean Water, Safe Roads:** AdkAction trained highway departments to reduce the use of road salt and implement winter road maintenance best practices.
- ✂ **Multi-Cultural interpretations:** BluSeed Studio hosted a program with the participation of the North Country's Indigenous community that drew on the communicative powers of art to interpret water quality issues.
- ✂ **Pandemic Past and Present:** Historic Saranac Lake hosted programs on the Cure Porch on Wheels to explore the history of public health with new audiences.
- ✂ **Paddlers Trail Stewardship:** Vermont River Conservancy worked with community members on stewardship projects and ecological assessments on the Lamoille River.









The LCBP and several partners launched Stream Wise in spring 2022. The initiative helps increase flood resilience and protect and restore water quality and habitat by encouraging private property owners to adopt and promote stream buffering protection and restoration practices. Watershed organizations work directly with local stream communities to implement the program.

The LCBP coordinated the development of messaging, compilation of resources, and creation of an assessment protocol. Working with consultants, the partnership developed a brand kit, website, outreach materials, assessment tools, and training materials.








A pilot of the program started in summer 2022. Partners conducted outreach about best practices for stream health and resiliency, performed assessments of stream buffers, and recognized streamside landowners who maintained wide buffers of native plants along their section of river or stream.

Program Project Highlights

In FY2022, LCBP staff:

-  Greeted more than 28,000 visitors and hosted ten UVM classes at the LCBP Resource Room at ECHO, Leahy Center for Lake Champlain.
-  Presented exhibits and programs to more than 5,000 individuals and 50 school programs.
-  Hosted a virtual World Water Day celebration to showcase student learning and an aquaculture workshop for teachers.
-  Introduced students who are first in their families to attend college to environmental experiences and careers in partnership with Upward Bound programs at SUNY Plattsburgh and the UVM.
-  Partnered with the St. Albans Historical Museum to share watershed and stewardship lessons with over 300 students from schools in Franklin County, VT.
-  Launched the Clean Water Commitment website to interpret the Lake Champlain phosphorus TMDLs.

Implementation Grant Highlights

-  **Restoration Roundup:** UVM Extension produced a podcast exploring research and developments in best practices for riparian buffer restoration.
-  **Guided Watershed Tours:** The Ausable River Association led 15 tours where the public learned natural history, water sampling, and invasive species.
-  **Shoreline Socials:** Friends of Northern Lake Champlain hosted four events to teach residents about practices to reduce stormwater runoff and erosion.
-  **Nanaw8badam1:** Missisquoi Basin River Association worked with Missisquoi Valley Union H.S. students to restore riparian buffers and improve stream access.
-  **Libraries Love Lakes:** The Lake St. Catherine Association and the Wells Village Library promoted awareness of lake issues with exhibits and demonstrations in a dedicated area of the library.
-  **Public Awareness Survey:** Lake Champlain Sea Grant, UVM Extension, and Lake Champlain Committee conducted a survey of the public's knowledge, attitudes, and behaviors related to watershed issues.
-  **Diversity Access Initiative:** Created a program for BIPOC children to attend youth camps, learn to love and care for the lake, and explore educational and career opportunities.

ABOUT THE LCBP

The Patrick Leahy Lake Champlain Basin Program (LCBP) coordinates and funds efforts that benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources, in partnership with government agencies from New York, Vermont, and Québec, private organizations, local communities, and individuals.

The LCBP was created in 1992 at the recommendation of the Lake Champlain Management Conference. The Management Conference was a multi-jurisdictional effort led by the U.S. Environmental Protection Agency (US EPA) upon the signing of the Lake Champlain Special Designation Act, under Section 120 of the U.S. Clean Water Act on November 5, 1990. Sponsored by Senators Leahy and Jeffords from Vermont and Senators Moynihan and D'Amato from New York, this legislation designated Lake Champlain as a resource of national significance and required examina-

tion of water quality, fisheries, wildlife, recreational, and economic issues.

Before passage of the Act, natural resource managers faced the challenge of addressing specific problems requiring immediate action while also charting a comprehensive, integrated plan for the future of the Lake Champlain Basin. To address this challenge, the Lake Champlain Special Designation Act authorized funding through the US EPA to the States of Vermont and New York, and to NEIWPCC in support of the LCBP to work collaboratively to implement a management plan for the lake. *Opportunities for Action* has since been the plan that guides the LCBP's work.

NEIWPCC—a regional commission that helps the states of the Northeast preserve and advance water quality—serves as the primary program administrator of LCBP at the request of the Lake Champlain Steering Committee, and administers the program's personnel and finances. LCBP is a program partner of NEIWPCC.

LCBP GOALS

Opportunities for Action identifies four goals that address the key resource issues facing Lake Champlain and its watershed. These four goals serve as the framework for much of the LCBP's work. This summary of our work in FY2022 includes highlights of program

staff work, implementation grants, and technical projects across these four goals. For a comprehensive listing of the LCBP's work and a full listing of grants administered in 2022, please visit:

lcbp.org/annual-report.



CLEAN WATER

Water in the Lake Champlain Basin's lakes, ponds, rivers, and streams that sustains diverse ecosystems, supports vibrant communities and working landscapes, and provides safe recreation opportunities.



INFORMED & INVOLVED PUBLIC

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



HEALTHY ECOSYSTEMS

Ecosystems that provide clean water for drinking and recreating, and intact habitat that is resilient to extreme events and free of aquatic invasive species where diverse fish and wildlife populations will flourish.



THRIVING COMMUNITIES

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

