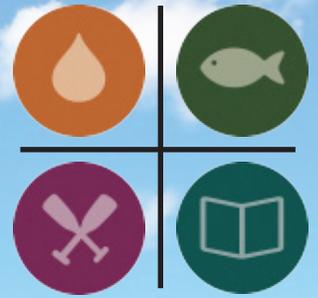


# Lake Champlain Basin Program



**2016 Summary Report of Activities**



## A Watershed Year

The year 2016 was a watershed year for the Lake Champlain Basin Program. During the fiscal year ending September 30, the LCBP embarked on its second quarter-century of coordinating work to improve the condition of the watershed. The federal legislation that established the Program was signed into law in 1990, and the LCBP office formally opened less than a year later. In the 25 intervening years, the many partners who comprise the LCBP have made great strides toward a healthy Lake and Basin. The past year has been no different. The accomplishments toward meeting our goals for water quality, aquatic invasive species, cultural heritage, and outreach are highlighted in the pages that follow.

In addition to LCBP's 25th anniversary, 2016 saw a transition in leadership of the program for the first time in more than 17 years. Dr. William Howland stepped down from the helm after a long run navigating the program through the sometimes roiling but always inspiring waters of Lake Champlain management. In this time, Dr. Howland was instrumental in building a program driven by sound science that brings together many diverse stakeholders. In July 2016, after seven years as the LCBP's Technical Coordinator, Dr. Eric Howe began his tenure as the Program Director. As the LCBP charts a course toward a half-century, we will build on our legacy of objective science and consensus building to move toward our common goals for Lake Champlain and its watershed.

It was appropriate—and at times, challenging—that during this time of transition the staff began working with the Steering Committee to update the Lake Cham-

plain management plan *Opportunities for Action*. The plan outlines the activities of the program for the next five years, laying out objectives and strategies to address four primary goals: Clean Water, Healthy Ecosystems, an Informed and Involved Public, and Thriving Communities. The plan will establish a framework for how the Program functions and reports out on progress. The plan is scheduled for release by summer 2017.

LCBP staff also have continued to work in fulfilling the key functions of the Program: identifying needs and priorities for research and implementation projects; ensuring efficient and coordinated actions among many partners; and providing financial and technical support for the watershed organizations, municipalities, and conservation districts that conduct important on-the-ground work at the local level. With the support of Senator Leahy and the rest of the Congressional delegation, the program was again well-positioned to support a large grant program. Staff coordinated the initiation of 106 new grants amounting to \$1.4 million dollars. In addition, several technical projects were initiated that will improve the understanding of the Lake and help guide its management.

This summary report includes select highlights from the past year. A comprehensive listing of all local grants, technical projects, and staff accomplishments in FY16 is available in the appendix to this publication. We encourage you to explore this work in more detail for a better sense of the many ongoing efforts to improve the watershed. You may find the inspiration for a project of your own to improve the future of Lake Champlain!





# 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.**

Improving water quality continues to be a major focus of the LCBP. The Long-Term Monitoring Program, operated in partnership with Vermont and New York, continued through its 26th year. Blue-green algae monitoring efforts continued as well, boosted by new state-run bloom alert websites. Staff coordinated monthly Technical Advisory Committee meetings, and represented the Program on numerous advisory boards

and partner committees. Water quality grants supported efforts ranging from expanding agricultural BMP implementation to green stormwater designs. New local implementation grant categories included a renewed focus on flood resilience and climate change, rural road maintenance, and impervious surface management in schools. In total, LCBP Technical staff managed 73 local grants.

## HIGHLIGHTS

- LCBP **Toxics Workgroup** formed to track potential impacts to human and ecosystem health.
- **East Creek Watershed Stormwater Reduction** green infrastructure demonstration project completed in Rutland, VT.
- **Edge of Field Agricultural Practice Evaluation** continued by USDA Natural Resource Conservation Service.
- **Lake Champlain Meteorological Stations** operated by the Vermont Monitoring Cooperative.

**15 & 22** ..... Lake stations and tributaries sampled as part of Long-Term Water Quality Monitoring Program.

**13** ..... Quality Assurance Project Plans prepared to ensure validity of data and research.

**20** ..... Training sessions for volunteer blue-green algae monitors held by Lake Champlain Committee.

**1,822** ..... Pounds of phosphorus reduced from farm fields with BMPs in Rock River watershed.

**240** ..... Acres planted with cover crops on nine farms in Essex and Clinton Counties, NY.





# 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.**

The protection and restoration of ecosystems in the Basin remains an ongoing priority for the LCBP. The Program supported the tenth year of the successful boat launch steward program, and helped to monitor the spread of spiny waterflea, the most recent invader detected in the Basin. LCBP staff continue to coordinate with regional and national partners on AIS spread prevention issues through its membership on the ANS Task Force and the NEANS Panel. The AIS Rapid Response Task Force responded to the

infestation of Asian clam in Lake Bomoseen—the first in the Vermont portion of the Basin.

LCBP’s AIS grants funded many other steward and greeter programs throughout the Basin, and supported harvesting of several species, including frog-bit, water chestnut, and Eurasian watermilfoil. Additional local implementation grants supported a wide variety of habitat improvement efforts, including aquatic organism passage and riparian restoration and stabilization projects.

## HIGHLIGHTS

- **Boat Launch Steward** program operated for tenth year.
- **Culvert replacement** restored aquatic organism passage on Crossett Brook and Mettawee River in Vermont.
- **Emerging Aquatic Invasive Species of Concern seminars** hosted in Vermont and New York.
- **Asian clam control** work continued in Lake George, New York.
- Two **boat wash and decontamination stations** established in Vermont.
- **Boquet River Restoration Project** improves bank stability and in-stream habitat.

- 25,697** .....Boaters surveyed by LCBP Boat Launch Stewards in summer 2016.
- 17** .....Years of LCBP-supported water chestnut harvesting in the South Lake completed.
- 281** .....Fish analyzed for mercury concentrations as part of human & ecosystem health risk assessment.
- 0** ..... Numer of new aquatic invasive species detected in Lake Champlain.
- 1,347** ..... Riparian trees and shrubs planted by Friends of the Winooski River.
- 57** .....Habitat improvement structures installed in streams and ponds by Warren County Soil & Water Conservation District.





# 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.**

The LCBP’s education and outreach efforts in 2016 focused on interpreting lake science and cultural heritage for citizens of all ages. The Program worked with partners to deliver formal programs for students and teachers, and informal interpretation at public events and in the LCBP Resource Room at the ECHO Leahy Center for Lake Champlain. Staff developed print and digital outreach pieces to address specific Lake issues and events, and to promote new CVNHP programs.

Local Implementation grants remain a key piece of education and outreach efforts, and are a priority in the budgeting process each year. Outreach staff coordinated 40 local grants in FY16. Projects supported by these grants were varied, including an initiative to train realtors on water quality issues to a program that brings elementary students into local rivers to identify macroinvertebrates to a televised public tour of a municipal wastewater treatment facility.

## HIGHLIGHTS

- **Watershed for Every Classroom**, a year-long professional development opportunity in watershed education for K-12 teachers.
- **Healthy Soils initiative** to encourage the public to adopt lake-friendly lawn-care practices began.
- **Diving In**, a new video series that highlights the ways that the public is learning about and helping to protect the Basin launched.
- **Love the Lake Speaker Series**, four winter evenings of lake-related presentations offered.
- **Vermont Clean Water Network**, launched by ECHO, Leahy Center for Lake Champlain and All Souls Interfaith Gathering.

- 28,969** .....Visitors welcomed to the LCBP Resource Room at ECHO.
- 930** .....Student participated in the Community Sailing Center’s Floating Classroom.
- 100+** .....Engineers, landscape architects, and municipal offices attended the North Country Stormwater Tradeshow.
- 76 & 57** .....School and community programs delivered by LCBP staff.
- 176,573** .....Page views on LCBP websites.





# 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 and the CVNHP continued a long-standing commitment to connecting residents and visitors to the resources that make the Champlain Valley an attractive place to live and visit, and to building the knowledge and capacity to realize the economic benefits these amenities provide.

By meeting with ten regional stakeholder groups throughout the heritage area, staff gathered input from hundreds of community members to develop the annual workplan and budget for heritage programs. The CVNHP’s

Local Heritage and Conservation and Community Grants empowered local residents to share the stories that make their communities unique.

Local grant programs supported the operational and programmatic needs of local groups, and encouraged dialogue and the exchange of information about resource stewardship among municipal staff and officials, farmers, and other community members. The LCBP furthered the understanding of resource protection programs by facilitating community meetings for the new Phosphorus TMDL in the State of Vermont.

## HIGHLIGHTS

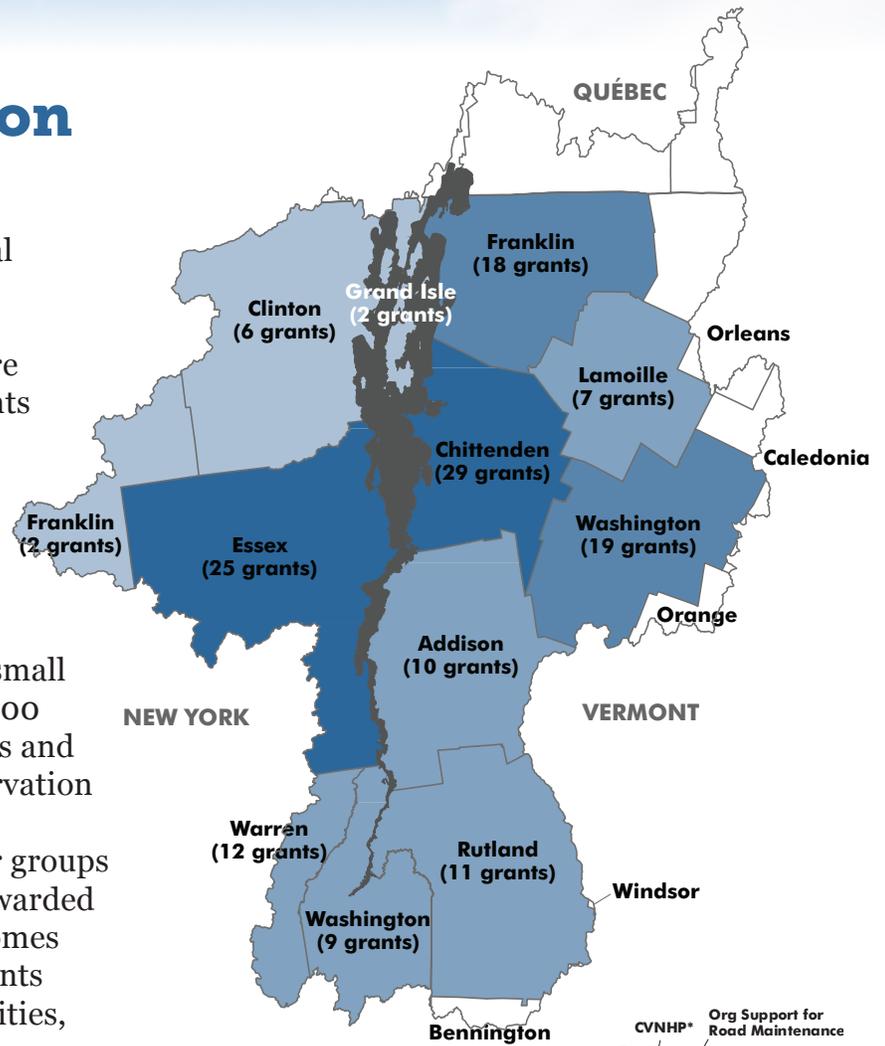
- **CVNHP Annual Summit**, where partners identified opportunities to share the common history and heritage of Québec, New York, and Vermont, hosted.
- **Lake Champlain Bridge Quest Map and Stamp Card, Valcour Island Interpretive Visitors Guide, and Champlain Valley Agricultural Guide Wheel** produced.
- **Technical Report #81, An Assessment of the Economic Value of Clean Water in Lake Champlain** published.

- 30** ..... Group leaders attended annual watershed organization meeting.
- 330** ..... Miles of river mapped as part of CVNHP Water Trail Grants Program.
- 11** ..... Locations participated in the CVNHP Passport Stamp Program.
- 63** ..... Map guides created for Vermont Bikeways routes.
- \$16.8M** ..... Potential loss in summer economic activity from a three-foot decrease in water clarity.
- 9,000** ..... Approximate area in square miles of the CVNHP.



# Local Implementation Grants

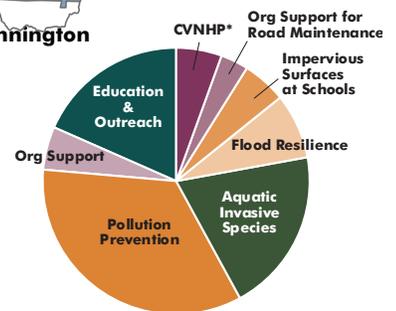
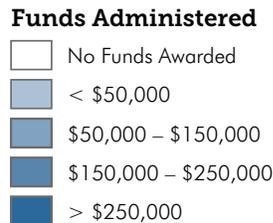
Local implementation grants provide vital support for many of the tasks included in the Lake Champlain Management Plan *Opportunities for Action*. The LCBP's core areas of work are addressed through grants awarded in several categories: Pollution Prevention and Habitat Conservation; Aquatic Invasive Species Spread Prevention; Education and Outreach; Organizational Support, and Cultural Heritage and Recreation. Since 1992, the LCBP has awarded more than 1,000 small grants amounting to more than \$7,000,000 to 350 organizations. Local municipalities and watershed groups, Soil and Water Conservation Districts, Natural Resource Conservation Districts, NGOs, schools, and many other groups have been funded for effective projects awarded through a competitive process. The outcomes of these grants feature the accomplishments of citizens working in their own communities, often with their own neighbors.



**\$1,596,057** Sum of grants administered by LCBP staff in FY 2016

**150** Local implementation grants administered by LCBP

**9** Categories of local implementation grants administered



Note: The grants administered in FY 2016 were funded with budgets from multiple years.

\* CVNHP includes Water Trail, Local Heritage, and Conservation and Community grants

## A Program of Partners

The LCBP continues to work with a diverse group of partners, including federal, state, and provincial agencies, heritage and recreation organizations, and local citizens. The Lake Champlain Steering Committee, which sets resource management policy and approves budget allocations for the LCBP, relies on the efforts of all partners. Representatives from many partner organizations bring expertise from a broad range of scientific disciplines to the LCBP's advisory committees.

More than 40 regional and local watershed organizations are active in the Lake Champlain Basin. These groups monitor water quality, assist with watershed planning, clean up rivers, streams, and lakes, restore fish habitat, and work with landowners to improve water quality. They are often the most familiar with conditions on the ground, and their continued communication with the LCBP about emerging issues and priorities is essential.

## ABOUT THE LCBP

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

The LCBP received federal funding in FY 2016 from the U.S. Environmental Protection Agency, the Great Lakes Fishery Commission, and the National Park Service. The New England Interstate Water Pollution Control Commission (NEIWPCC) manages the financial, contractual, and human resource business operations on behalf of the LCBP Steering Committee. LCBP Staff are employees of NEIWPCC operating from the LCBP office in Grand Isle, VT.

This summary annual report highlights LCBP projects that were in progress or concluded between October 1, 2015 and September 30, 2016. The appendix to this report includes a comprehensive listing of external contracts managed by LCBP, and key LCBP tasks implemented by staff during this time period. To view or request a copy of the appendix, please contact the LCBP.

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