

Lake Champlain Sea Grant-supported research informs land and water management and policy decisions to benefit ecosystems and sustainable economies in the Lake Champlain basin.

Researchers collaborate with a wide variety of partners in the basin and throughout the Great Lakes-St. Lawrence ecosystem. We welcome diverse research and stakeholder perspectives, and we share scientific results and management implications with business, state, and local leaders and the communities they serve.

[www.uvm.edu/seagrant](http://www.uvm.edu/seagrant)

## Featured Impacts



Meteorological data from research buoys in Lake Champlain inform local boaters, anglers, and the National Weather Service. Boaters and anglers reduce weather-related risks and save on fuel costs (and carbon dioxide emissions). The National Weather Service uses the data to improve forecasts.



Testing of nutrient bioretention in soil media resulted in more precise government-mandated specifications in the *Vermont Stormwater Management Manual*. Green Infrastructure, a stormwater management system, helps to reduce phosphorus runoff and protect water quality.



Research on how winter road maintenance practices affect water quality resulted in a northern New York State road salt reduction pilot program. Outreach to winter maintenance professionals around the basin is mitigating chloride pollution in roadside and other local water bodies.



Research in the Lake George region showed that a woodchip bioreactor can effectively remove 38% of nitrates from effluent wastewater compared to zero removal from the rest of the treatment plant's effluent stream. Due to this success, the Town of Bolton has received approval from the New York State DEC to install two additional bioreactors.

## 2022-2024 Research Projects

### [Assessing the Effectiveness of Lake Trout Stocking Strategies in Lake Champlain Using Next-Generation Genetic Tools](#)

Ellen Marsden and Benjamin Marcy-Quay  
University of Vermont

Researchers will evaluate the performance of two lake trout strains and alternative stocking strategies currently used by New York and Vermont to restore lake trout to Lake Champlain.

### [A Conservation Prioritization Framework for Protecting and Restoring Lake Champlain's Shoreline Turtle Community](#)

Brittany Mosher and James Murdoch  
University of Vermont

This research aims to stem the loss and degradation of the turtle community along the shorelines of Lake Champlain through development of tools to better manage species and inform conservation decisions by state, federal, and non-profit organizations.

### [Evaluating Drivers of Contaminant Exposure Risk Among Angling Groups in the Lake Champlain Basin](#)

Ariana Chiapella and Bindu Panikkar  
University of Vermont

Researchers will conduct community-based participatory research to determine how fish species preference, consumption behavior, angling locations, and advisory knowledge contribute to inequitable contaminant exposure risk among Indigenous, immigrant, and recreational anglers in the Lake Champlain basin.



### [Investigating Interventions to Increase Environmental Literacy Among K-12 Teacher and BIPOC Students](#)

Kimberly Coleman and Leon Walls  
SUNY Plattsburgh, University of Vermont

Researchers will examine factors that support environmental literacy among teachers and Black, Indigenous, and People of Color (BIPOC) students participating in Upward Bound summer courses at the University of Vermont and SUNY Plattsburgh.

### [Scientific and Procedural Development of Evidence-Based Floodplain Crediting Protocol to Meet Water Quality Goals on the Lake Champlain Basin](#)

Rebecca Diehl  
University of Vermont

Researchers will characterize floodplains based on their potential functioning to develop, with state and local partners, an evidence-based approach for phosphorus crediting of floodplain restoration and conservation, contributing to improving Lake Champlain water quality and promoting investment in green infrastructure.

