Vermont Clean Water Initiative 2023 Performance Report Executive Summary

Vermont's waterways are important environmental and economic resources for residents and visitors. The State of Vermont funds clean water projects to protect, enhance, and restore water quality across the state. Clean water projects are regulatory or non-regulatory practices or protections that address water pollution, including excess nutrients and sediment. The Vermont Clean Water Initiative 2023 Performance Report, referred to hereafter as Report, summarizes efforts of state government, along with federal and local partners, to improve water quality across Vermont from state fiscal year (SFY) 2016 to 2023 (July 1, 2015–June 30, 2023).

Clean Water Investments

Vermont's clean water funding helps municipalities, farmers, landowners, and nonprofit organizations implement clean water projects statewide. Collectively, state and federal funding programs, as well as regulatory requirements, drive clean water implementation efforts in Vermont.

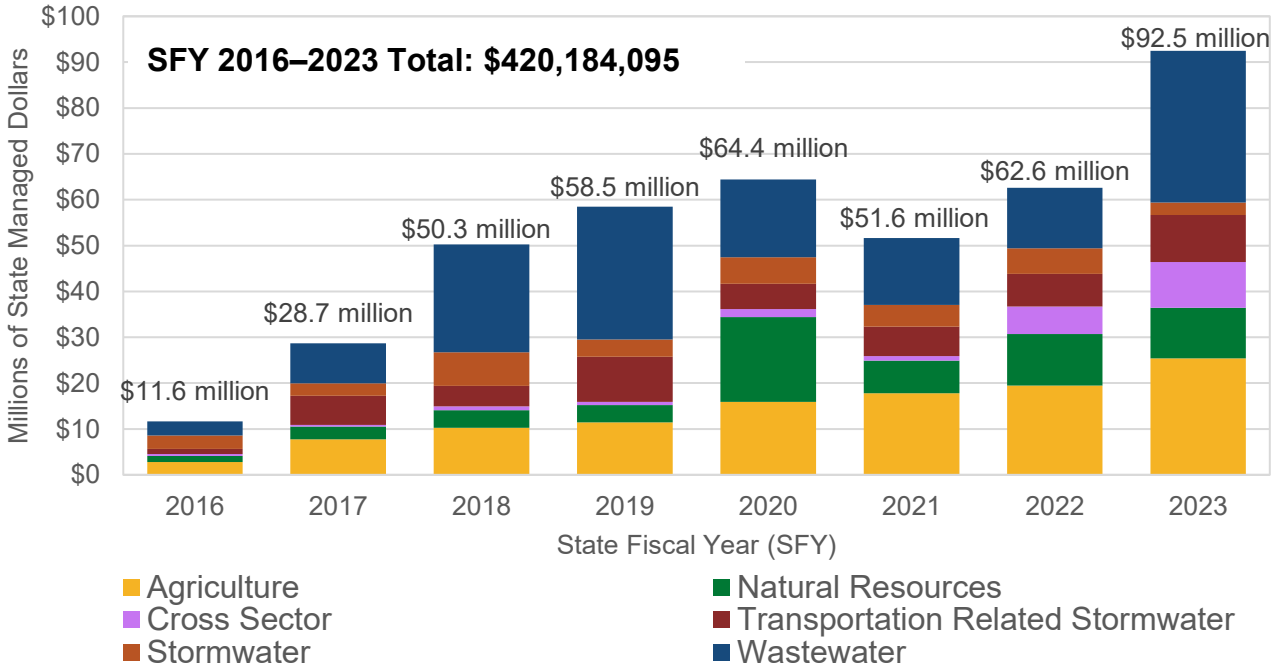

Figure ES-1: Dollars awarded by State of Vermont agencies to clean water projects statewide by land use sector, SFY 2016–2023.

The State of Vermont invested over $420 million in clean water projects through grants, contracts, and loans from SFY 2016 to SFY 2023. The amount of funding awarded to clean water projects rose significantly between 2016 and 2023. Project funding varies annually based on project readiness, award timing, and economic factors. *See Report Chapter 2 to learn more about clean water funding and investments.*

Clean Water Project Outputs

Clean water projects work to improve water quality, and also provide co-benefits for the environment and local communities, such as increasing flood resilience, improving habitat function and biodiversity, supporting carbon sequestration, improving soil health, supporting workforce development, and providing local economic stimulus. The following table highlights some of the results of state and federally funded and regulatory projects completed from SFY 2016 to 2023. *See Report Chapter 2 to learn more about clean water project outputs.*

LAND USE SECTOR	PROJECT OBJECTIVES	EXAMPLE PROJECTS	PROJECT BENEFITS	CUMULATIVE PROJECT OUTPUTS (SFY 2016–2023)
AGRICULTURE	Reduces pollution by slowing/controlling rain/snowmelt runoff and soil erosion from farm production areas and farm fields	 	• Cost-effective • Supports agricultural economy • Improves soil health	• Over **380,000** acres of agricultural conservation practices implemented • Over **5,000** structural agricultural practices implemented
STORMWATER	Reduces pollution by slowing/controlling rain/snowmelt runoff from developed lands, such as parking lots, sidewalks, and rooftops	 	• Publicly visible educational opportunity • Adds green space in residential and commercial areas	• Over **1,400** acres of existing impervious/hard surfaces treated by stormwater practices
NATURAL RESOURCES	Reduces pollution by restoring functions of "natural infrastructure" — river channels, floodplains, lakeshores, wetlands, and forests	 	• Cost-effective • Improves habitat • Enhances recreation • May improve public access	• Over **500** riparian acres (adjacent to rivers, lakes, and wetlands) actively restored through buffer plantings and lakeshore restorations • Over **2,600** riparian acres passively restored through river corridor and wetland easements
TRANSPORTATION RELATED STORMWATER	Reduces pollution by slowing/controlling rain/snowmelt runoff and erosion from roads	 	• Reduces future road maintenance costs • Improves public safety	• Over **360** municipal road miles improved through drainage and erosion control best practices
WASTEWATER	Reduces pollution by improving wastewater treatment infrastructure	 	• Protects public health and safety	• **22** wastewater treatment facility upgrades and refurbishes • **7** combined overflow abatements completed

Total Maximum Daily Load (TMDL) Progress

The 2023 Performance Report summarizes the state's progress in implementing the Lake Champlain and Lake Memphremagog phosphorus Total Maximum Daily Loads (TMDLs). TMDLs identify water pollution (e.g., phosphorus) reductions required to restore water quality. The figures below show the estimated total phosphorus load reduction (metric tons per year) achieved by clean water project implementation thus far in the Lake Champlain (left) and Lake Memphremagog (right) basins. Estimates include the results of projects implemented through state and federal funding programs and in response to regulatory requirements. *See Report Chapters 3 and 4 for more information.*

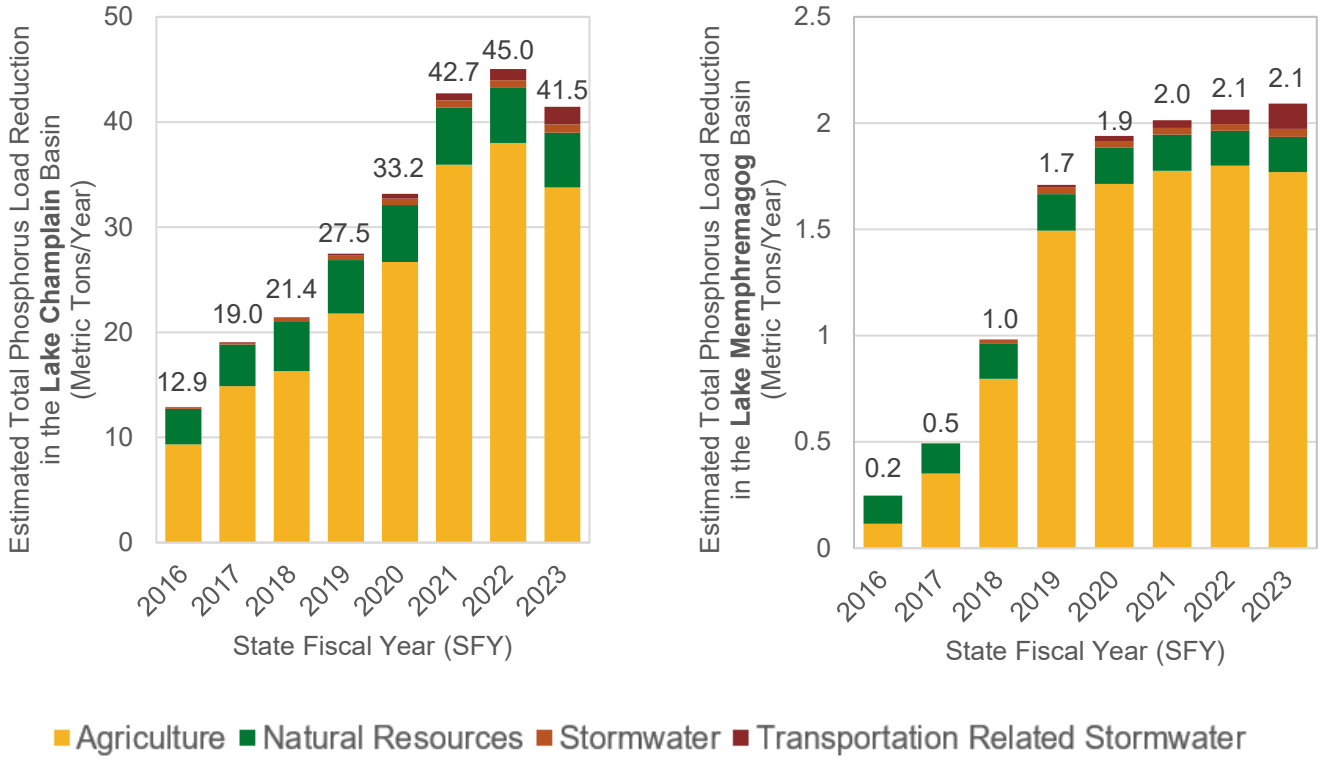

Figure ES-2: Annual estimated total phosphorus load reductions (metric tons per year) associated with reported clean water projects in the Lake Champlain (left) and Lake Memphremagog (right) basins during SFY 2016–2023 by land use sector.

Over the past eight state fiscal years, the state has made substantial progress towards reaching the water quality targets outlined in the state's large-scale phosphorus TMDLs, with 20% of the required reduction achieved to date in the Lake Champlain basin and 14% of the required reduction achieved to date in the Lake Memphremagog basin. Achieving the water quality goals outlined in the state's large-scale TMDLs is not a linear path — variance in the rate of progress is to be expected over the 20-year implementation period. The rate of progress in estimated phosphorus reductions in both the Lake Champlain and Lake Memphremagog basins has slowed in SFY 2023, however several ongoing factors are expected to accelerate the rate of progress in future years, including:

- State funding programs at the Vermont Department of Environmental Conservation have shifted to block grant structures that rely on regional partners to manage and

administer funding of individual projects. The transition to regional administration of clean water funding is anticipated to empower community partners, reduce bottlenecks, and increase the impact of clean water investments.

- Vermont has received an influx in federal funding under the American Rescue Plan Act, the Bipartisan Infrastructure Law, and the Inflation Reduction Act, as well as increased Clean Water Fund revenue enacted under Act 76 of 2019. Program expansion supported by this funding will drive clean water project implementation across sectors.
- The State of Vermont has been expanding clean water regulatory, financial, and technical assistance programs since SFY 2016. Many regulatory programs are now in place that will drive meaningful progress in the agriculture and developed lands sectors.
- The State is investing to expand the capacity of the clean water workforce. Investments in our partner network to support capacity expansion are expected to increase clean water progress and reduce reporting lags.
- The State is expanding its ability to fully capture results in its tracking and reporting, such as estimating phosphorus reductions for additional project types in the natural resources sector. Enhanced tracking and reporting will provide a more complete picture of progress on the ground.

Continued effort, investment, and coordination are critical in the state's ability to reach its water quality goals. The Vermont Clean Water Initiative 2023 Performance Report serves as a useful tool to provide accountability on the state's clean water progress and to inform adaptive management. By taking an adaptive management approach, the state will continue to identify and prioritize its resources to break down barriers to project implementation and clean water progress. Clean water project implementation is an important piece of climate resilience work and clean water projects have co-benefits like increased flood resilience, improved carbon sequestration, better soil health, and improved habitat function and biodiversity. In addition to achieving water quality goals, Vermont's work to improve water quality directly supports climate adaptation and flood mitigation, which will increase the state's resilience to future climate related stressors.

Learn More and Explore the Data

Explore the data behind the Vermont Clean Water Initiative 2023 Performance Report, including investments, outputs, estimated phosphorus reductions, and much more in the online Clean Water Interactive Dashboard via the Clean Water Portal.

https://anrweb.vt.gov/DEC/cleanWaterDashboard/