

Executive Summary

The Conesus Lake watershed encompasses 70 square miles and includes all or part of seven municipalities within Livingston County. The Towns of Conesus, Geneseo, Groveland, Livonia, Springwater, and Sparta and the Village of Livonia are all or partially located within the watershed. The watershed is home to approximately 10,000 people, and the Conesus Lake (Lake) supplies water for 20,000+ Livingston County residents. More than 18 streams flow through the Conesus Lake watershed, although three of them—North and South McMillan Creeks and Conesus Inlet—contribute up to 70% of the flow into the Lake. The watershed is part of the 2,500-square-mile Genesee River Basin that flows into Lake Ontario.

This update to the initial *Conesus Lake Watershed Management Plan* (CLWMP) examines current conditions of the Lake and watershed, tracks changes in water quality and habitat conditions, and highlights challenges and opportunities associated with meeting community goals for the future of the resource. Watershed management has been a focus of the Livingston County Planning Department (LCPD) for decades; the initial CLWMP was adopted in 2003. Funding and technical support for the Conesus Lake watershed planning initiatives has been provided by the New York State (NYS) Department of State, Division of Coastal Resources.

While much has changed over the past two decades, the community's commitment to Lake and watershed management has not. The Conesus Lake Watershed Council (CLWC) was formed in 2003 and continues to serve as an effective hub for stakeholder communication and coordination. The LCPD staffs the CLWC and oversees preparation of an annual report card to track Lake water quality and habitat conditions, partnerships, and implementation status of recommendations of the 2003 CLWMP. Annual CLWC work plans embrace an adaptive management approach; priority actions reflect new data and information, opportunities for funding and partnerships, and emerging issues such as invasive species and cyanobacterial blooms. The Conesus Lake Association (CLA) continues to be an effective partner in both monitoring and community engagement. The CLA participates in the Citizen Statewide Lake Assessment Program (CSLAP), runs a harmful algal blooms (HABs) monitoring program, and supports the Watercraft Steward Program, among many other efforts to protect the Lake.

In addition to the robust annual monitoring programs of the Lake and its tributary streams, many significant analyses have been completed since 2003. With U.S. Department of Agriculture (USDA) funding, partners at State University of New York (SUNY) at Brockport undertook a multi-year analysis of the effectiveness of agricultural best management practices (BMPs) within the Conesus Lake watershed. A 10-year update of the *Watershed Characterization* was completed in 2013. In 2018, the New York State Department of Environmental Conservation (NYSDEC) included the Lake among the group of 12 NYS lakes for which HAB action plans were prepared. The U.S. Environmental

Protection Agency (USEPA) approved the Lake's phosphorus Total Maximum Daily Load (TMDL) allocation in 2019. In 2021, Livingston County completed an updated Safe Yield Assessment to examine water level management and water supply under a range of meteorological conditions.

The past decades have also seen an increased understanding of the major impact of changing climate conditions on land and water resources and a strong commitment to investing in tools to help communities prepare for change. Warmer air temperatures, notably in spring and fall, and shifting precipitation patterns affect the Lake and watershed in ways that can degrade water quality and habitat. This updated CLWMP highlights opportunities for communities to increase hydrologic resilience of both the built environment and the working landscape. Hydrologic resilience results in slowing runoff and enhancing infiltration, thus reducing the risk of flooding and soil erosion. The project team has reviewed local laws of watershed municipalities to analyze vulnerabilities and gaps and identify opportunities for improvement such as green infrastructural measures. Expanded support to the agricultural community is recommended to enable increased adoption of BMPs such as winter cover crops. These recommendations are timely, as New York State is investing in programs to incentivize and support communities with preparing for a changing climate.

The project team applied the watershed planning approach jointly developed by the New York State Department of State (NYS DOS) and NYS DEC described in the 2009 guidebook *Watershed Plans: Protecting and Restoring Water Quality*. The approach takes the watershed stakeholder community through a four-step inquiry process to address these questions:

1. **Where are we now?** What is the current environmental, social, and political environment within the watershed? What are the assets and challenges within the watershed?
2. **Where are we going?** What are the current trends and emerging issues, including climate, water quality, population, land cover, BMPs, and invasive species? How are these things predicted to impact the watershed?
3. **Where do we want to be?** What is the community's vision for the future of the watershed? What are the goals that will help the community achieve the vision?
4. **How do we get there?** What are specific actions, programs, projects, partnerships, and practices that will enable the community to achieve the vision and goals? What resources are needed, and how can those resources be acquired?

As a "home-rule" state, New York delegates most land use decisions to local government. The Conesus Lake watershed encompasses multiple municipalities; consequently, there is a patchwork of local laws related to standards, such as impervious cover, riparian setbacks, wastewater inspections within the non-sewered areas, etc. This fact illustrates the importance of the CLWC and the productive intermunicipal collaborations that have developed over the years.

Public education and outreach are essential for a watershed management plan to succeed. The project team employed a range of techniques to engage the watershed community during the update process. Input on watershed vision and goals was gathered using a “postcards from the future” approach; people were asked to imagine that the updated CLWMP is successful and describe the Lake and watershed years from now. Community surveys were also conducted. A public information session/open house was held on September 30, 2024, to answer questions and gather additional input. Based on a review of community comments, the project team adopted updated statements of the vision and goals for the watershed.

Vision

Our vision is to advocate for and achieve a resilient Conesus Lake watershed able to withstand current and future challenges to the health and integrity of the natural ecosystem from a changing climate as well as challenges to the continued provision of services that support human well-being. Ecosystem services provided by Conesus Lake and its watershed include clean water, agricultural and forest products, flood protection, recreational opportunities, climate moderation, habitat for a diverse assemblage of native species, and the unique sense of place embedded in the watershed’s rural history and natural landscape.

Goals

- **Goal 1.** Manage the Conesus Lake watershed in ways that control inputs of sediment and minimize entry of phosphorus, sodium and chloride, and other potential pollutants into the Lake.
- **Goal 2.** Maintain Conesus Lake as a dependable source of high-quality water that meets water supply needs and meets or exceeds public health standards for potable water and recreational uses.
- **Goal 3.** Continue efforts to detect, prevent, and mitigate cyanobacterial blooms (harmful algal blooms or HABs) and their associated beneficial use impairments (e.g., beach closures, restrictions on drinking water).
- **Goal 4.** Improve and enhance recreational access to and use of Conesus Lake while managing for and maintaining a balance between multiple uses, without overcrowding the Lake.
- **Goal 5.** Continue and expand efforts focused on prevention, early detection, and rapid response to terrestrial and aquatic invasive species to protect the health of the Lake. Support management efforts to conserve and/or restore habitats for a diverse and resilient assemblage of native species.
- **Goal 6.** Maintain and strengthen the effective intermunicipal partnerships fostered through the Conesus Lake Watershed Council and continue to take actions that will increase resilience to changes in climate, population, and land use.

- **Goal 7.** Continue to work with the federal, state, regional, county, and local resources to make management decisions that reflect the best available information regarding Conesus Lake and watershed.
- **Goal 8.** Employ multiple approaches to outreach and education that enhance community awareness of how human activities affect water resources, opportunities for nature-based solutions, and the effectiveness of local actions.

The project team worked with watershed stakeholders to identify a series of recommendations to continue to advance toward realization of the community’s vision for the future of the Lake and watershed. The recommendations update and expand the recommendations of the 2003 CLWMP based on new information, new partnerships, and effectiveness of accomplishments over the past decades. Overall, actions may be categorized as follows:

- Maintain and enhance institutional partnerships and collaborations
 - LCPD, CLWC, Watershed Inspector and Watershed Manager
 - Watershed Towns and Village
 - Research and educational community, such as SUNY Geneseo and SUNY Brockport
 - NYSDEC
 - State and county agricultural management, public health, and planning agencies
 - State and regional alliances for invasive species management
 - Local organizations, such as the CLA
- Improve hydrologic resilience
 - Promote adoption of green infrastructure measures for the built environment
 - Develop tools for municipal planning boards
 - Identify/protect/restore key areas to promote infiltration and enhance habitat
- Support measures to minimize sediment, nutrient, and other pollutant loss from the landscape
 - Expand agricultural BMPs, including funding support
 - Support agricultural producers as they adapt to changing climate
 - Support efforts to increase efficiency of winter road salt use
 - Increase education and outreach to the community on actions they can take to reduce their impact on water quality
 - Implement septic system inspection process
- Adaptive management
 - Continue monitoring and surveillance of the Lake and watershed
 - Continue programs of early detection and rapid response to invasive species
 - Evaluate potential effectiveness of alternatives to manage legacy phosphorus
 - Evaluate measures to reduce frequency, intensity, and duration of harmful cyanobacterial blooms

- Public outreach
 - Continue engagement with the public using multiple techniques and venues, including the Watershed Education Center
 - Communicate risk related to cyanobacterial blooms and how to live safely with HABs
- Water supply
 - Implement recommendations of the 2021 Safe Yield Assessment
 - Prepare for future demands on water supply
 - Continue to monitor drinking water quality
- Recreational access and use
 - Encourage boating etiquette and educate on the importance of “no wake” zones and speed limits
 - Evaluate the need for boating management
 - Investigate potential public swimming areas

It is important to note that these recommendations reflect priorities in 2025. They will continue to evolve as additional data and information become available, funding sources change, or as a result of regulatory changes. Not all recommendations can be implemented at once; while some could be addressed in the short term, others will need to be developed over the course of years.

Implementation strategies were then identified to create a roadmap for making progress toward achieving the vision for the watershed.

Successful implementation of this CLWMP Update will require collaboration among a diverse range of agencies, institutions, and stakeholders working together as partners, pursuing funding, and contributing resources to support initiatives that will protect and restore the quality of the watershed. The implementation section of the document assesses each watershed recommendation, providing critical information, including task leaders and partners, potential funding sources, approximate cost, and proposed timeframe.

The 2025 update to the CLWMP reflects data and information collected over decades of Lake and watershed monitoring by many organizations and individuals. Continued monitoring and assessment will enable community stakeholders to fully implement the principles of adaptive management. The Annual Report Card has been extremely effective in tracking and reporting progress toward meeting the goals of CLWMP; continued preparation of an annual report to the Watershed Council is a key recommendation.