

COMPREHENSIVE UPDATE OF THE
CANANDAIGUA LAKE
WATERSHED MANAGEMENT PLAN
2014

THE CANANDAIGUA LAKE WATERSHED COUNCIL

PROTECTING THE LIFEBLOOD OF OUR REGION

Acknowledgments

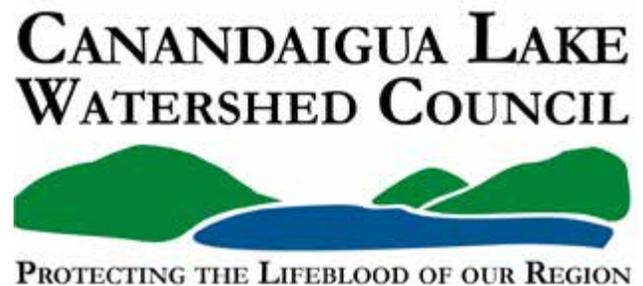
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Canandaigua Yacht Club at sunrise

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1. INTRODUCTION



This most recent update of the Canandaigua Lake Watershed Management Plan builds on the knowledge gained and projects completed over the last fourteen years to develop a more comprehensive strategy to protect Canandaigua Lake and its surrounding watershed from existing and emerging threats. National, State and local research have all documented that the watershed area surrounding the lake plays a critical role in the overall water quality of the lake. Therefore, protection at the watershed level is vital in protecting all that a healthy Canandaigua Lake ecosystem provides the region.

Canandaigua Lake is one of New York’s eleven renowned Finger Lakes, which are nestled between the glacially-carved rolling hills that are iconic to this part of New York State. State and local research have documented that Canandaigua Lake continues to be a high quality water resource (See Water Quality section). Municipal surveys have documented time and again that the beauty and quality of Canandaigua Lake is, without question, one of the main reasons most people live in or visit the region.



Map of the Finger Lakes Region in Central New York.

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This most recent update of the Watershed Plan makes the protection and restoration of critical areas a major area of focus, utilizing a wide array of strategies. Some examples of these critical areas include: wetlands, shorelines, streamside/roadbank buffer areas, floodplains, forested areas and other areas that filter and reduce stormwater runoff. Protecting and restoring these critical areas provides substantial beneficial services to individuals and the overall community within and beyond the watershed boundaries.

These critical land areas are our natural assets and therefore are considered our Natural Capital due to the stream of economic and quality of life benefits these areas provide to the greater public. Natural Capital is defined as “consisting of those components of the natural environment that provide a long-term stream of benefits and services to individual people and to society as a whole” (Costanza et. al, 2010). Natural Capital areas can range in size from an individual one-thousand square foot rain garden/stream buffer to the landscape scale one-hundred plus acre forests. Protecting, restoring and enhancing the functional value of these Natural Capital areas utilizing the five main management approaches of research, education, open space protection, restoration and regulation are identified throughout the implementation section.

Canandaigua Lake is considered a major economic engine to the region based on the ecosystem services that a healthy lake and watershed provides the region. The Natural Capital of the watershed provides the following ecosystem services to the region:

- High quality drinking water supply for approximately 70,000 people that has low water filtration costs and ultimately low water supply rates. Higher quality raw water reduces the potential for contaminants/pathogens to get through the filtration process.
- Major recreation and tourism destination that includes boating, sailing, kayaking, canoeing, sightseeing, fishing and swimming; generating millions for the region each year. The latest estimates from DEC show that the lake is the 23rd most fished waterbody in New York State with an estimated \$2.3 million dollar boost to the local economy from fishing in the lake.



- The value of the lake-influenced tax base is over \$1 billion, helping to reduce the overall local/school and county tax rate. The market based assessed value for shoreline property is over \$11,000 per foot of shoreline in some areas. Numerous studies have linked the market value of shoreline properties to the quality of the lake that those properties adjoin.
- Numerous municipal surveys have documented that the beauty and quality of Canandaigua Lake is, without question, one of the main reasons most people live in or visit the region. In addition, these surveys also document that residents place a great value on protecting the water quality of Canandaigua Lake. These surveys are buttressed by the actual population increases that are occurring around Canandaigua Lake, which is counter to the overall population trend in the Genesee Finger Lakes region.

NATURAL CAPITAL:
consisting of those components of the natural environment that provide a long-term stream of benefits and services to individual people and to society as a whole

Costanza et. al, 2010

Based on this list, it is obvious that the natural capital of the watershed contributes greatly to the economy and overall quality of life. If the watershed ecosystem remains in good health, then the region can expect a high rate of return from the Natural Capital that is provided. People truly do come here for our unique area and there will be a high demand for these services as long as the natural capital is protected and enhanced. Canandaigua Lake is not only a financial driver for communities within the watershed, but also improves the quality of life for local residents through its beauty and intrinsic value. For these reasons, Canandaigua Lake is considered the lifeblood of this region.



WATERSHED PLANNING OVER TIME

Watershed protection has been a community focus since the late 1980s, when community leaders and county agencies formed the Canandaigua Lake Watershed Task Force with the goal of raising awareness about the issues facing Canandaigua Lake. In 1994, the Task Force developed the State of the Canandaigua Lake Watershed, a comprehensive inventory of the watershed that identified potential pollution sources and provided recommendations to improve and protect the Canandaigua Lake ecosystem. From this report, the Task Force asked the fourteen municipalities that are within the watershed or that draw water from the lake, to come together to review the recommendations and to ultimately take the lead on implementing these strategies.

The Task Force was successful in this Call to Action by gaining municipal involvement and leadership in the planning process. In 1998, the municipalities received a grant from the New York State Department of State to hire a consultant to work with the municipalities and other interest groups to develop these recommendations into a formal Watershed Management Plan. In 1999, the Watershed Plan was finalized and the fourteen municipalities adopted the Plan. The municipalities also agreed to a funding formula to distribute the costs of Watershed Program and formed the Canandaigua Lake Watershed Council through Intermunicipal Agreement to lead the partnership effort in implementing this comprehensive watershed strategy.

The Canandaigua Lake Watershed Council is now in its 15th year of existence in implementing the comprehensive watershed protection program. The Watershed Council consists of the fourteen watershed and water purveying municipalities (Towns of Canandaigua, Bristol, South

Bristol, Potter, Naples, Gorham, Italy, Middlesex and Hopewell, Villages of Newark, Palmyra, Naples and Rushville and the City of Canandaigua), with each municipality sending their chief elected official or other elected municipal board member to Watershed Council meetings. The Watershed Manager, who is overseen by the Council, is responsible for recommending and implementing management decisions approved by the Watershed Council, along with coordinating with all the various partners.



The Canandaigua Lake Watershed Council in 2005

The Watershed Council provides a base level of funding to support the watershed program through a fair share formula that equitably divides the costs of the program among the fourteen municipalities. The Watershed Council and its member municipalities have been successful in obtaining over \$1 million in grant funding through various agencies, including NYS Dept. of State and NYS Dept. of Environmental Conservation, to help implement many priority actions that will be highlighted

throughout this Plan update. Through successful grants and wise spending, the total municipal contributions to the Watershed Council has only increased by 4% in fourteen years. The intermunicipal agreement that brings the municipalities together has been reaffirmed every five years since 2000, most recently in 2014.

Based on the intermunicipal leadership of the program, the Watershed Council has also received the prestigious NYS-DEC Environmental Excellence Award and the EPA Clean Water Partner for the 21st Century Award based on the intermunicipal success of the program.

The Canandaigua Lake Watershed Management Plan



*A Strategic Tool to Protect the Lifelihood of Our Region
January, 2001*



The Council received the first annual Environmental Excellence Award in 2004 from DEC Commissioner Erin Crotty.

PARTNERSHIP APPROACH

Although the Watershed Council was established to lead the watershed protection effort, no single entity can provide comprehensive protection of the lake. Continuing and enhancing the partnerships with a wide range of organizations will be what ultimately make this effort successful.

In addition to the Watershed Council, there are two other entities that share the first three words (Canandaigua Lake Watershed) in their names and play an instrumental role in the watershed program's success: The Canandaigua Lake Watershed Commission and the Canandaigua Lake Watershed Association.

The **Watershed Commission** consists of the five municipal water purveyors (City of Canandaigua, Villages of Newark, Palmyra and Rushville and Town of Gorham) that are required to implement the State Health Law derived Watershed Rules and Regulation to protect the water supply. These regulations focus mainly on Onsite Wastewater Treatment Systems, but also have a general pollution clause. They employ a full time Watershed Inspector to make sure the rules and regulation are implemented. The Watershed Inspector and Watershed Program Manager partner on many activities and investigations to make sure pollution sources are eliminated.

The **Watershed Association** is a citizen advocacy organization that provides the non-governmental voice in Watershed Management. They have over 800 members and have passionate volunteers along with part-time paid staff. They help to fund specific components of the protection effort, with an emphasis on education. The Association also helps to co-fund implementation projects. In addition, they play an important role in lobbying for specific legislation to be approved by local municipalities.

A wide spectrum of additional organizations at the local, regional and state/federal levels are integral to the comprehensive watershed effort.



Marcus Whitman Eco-school Program participating in the Naples Creek willow planting program.

PARTNERS

LOCAL LEVEL:

- Finger Lakes Community College
- Ontario and Yates County Soil and Water Conservation Districts
- Ontario and Yates County Cornell Cooperative Extension
- Ontario and Yates County Planning
- Ontario and Yates County Information Services
- Ontario and Yates County Public Works/Highway Departments
- Ontario County Water Resources Council

REGIONAL LEVEL:

- Finger Lakes Land Trust
- Finger Lakes Institute
- Genesee Finger Lakes Regional Planning Council

STATE/FEDERAL LEVEL:

- Dept. of Environmental Conservation (DEC)
- Dept. of Health (DOH)
- Dept. of Transportation (DOT)
- Natural Resource Conservation Service/ Farm Service Agency
- The Nature Conservancy
- U.S. Fish and Wildlife Service

The projects completed either by or in partnership with these entities over the last decade will be highlighted throughout the Plan, along with the future potential partnerships to complete the strategies identified in this comprehensive update of the Watershed Plan.

WATERSHED EDUCATION

Fostering a community focused on watershed stewardship requires strong partnerships and effective collaboration between all stakeholder groups, ranging from individual citizens to municipalities to community organizations to regional/state entities. Watershed education is a key component to generating support for the strategies that need to be implemented by these stakeholder groups. Here in the Canandaigua Lake watershed, we are fortunate to have those strong community relationships and many successful stewardship initiatives are centered on education, outreach and service activities.

Getting information out to the general public and raising awareness about water quality issues and solutions is vital to protecting the Canandaigua Lake watershed. Through these stewardship activities, we are creating a community of individuals who are informed about water quality threats and care about protecting the Canandaigua Lake watershed. Described next are two specific projects that highlight the type of partnerships and collaborations that are working towards creating a community dedicated to watershed stewardship:



Sharon Radak of the Canandaigua Lake Education Program discussing watersheds with kids using the Enviroscape.

THE WATERSHED EDUCATION PROGRAM

The Canandaigua Lake Watershed Association and Watershed Council have worked together since 2006 to co-sponsor the Watershed Education Program, which provides watershed-focused curricular enrichment activities and workshops to the three school districts within the watershed: Naples, Marcus Whitman and Canandaigua. Combined, the program's environmental educators teach nearly 2,000 K-12 students each year about the Canandaigua Lake watershed, the relationship between land use/stormwater runoff and water quality, ways to prevent water pollution and the importance of a healthy aquatic ecosystem. Additionally, the program's Mini-Newsletter is published twice a year and is sent home to families with updates on lake issues, such as, stormwater management, aquatic invasives, and tips for preventing water pollution around landowner's homes, such as proper fertilizer use and application.

STORM DRAIN MARKING PROGRAM

CLWA and the Watershed Council also partner on the Storm Drain Marking Project, which works with local schools and youth service groups to place markers on storm drains within the Canandaigua Lake Watershed boundaries. This project is critical to educating the public on the direct connection between stormwater runoff and lake water quality.

These stewardship programs are just two of the many examples of the types of collaborations that exist within the Canandaigua Lake Watershed community and should serve as models for future stewardship initiatives.



Children installed the storm drain markers throughout the watershed.



INTEGRATED WATERSHED MANAGEMENT APPROACH

INTEGRATED WATER RESOURCES MANAGEMENT

Integrated water resources management (IWRM) is the coordinated planning, development, protection, and management of water, land, and related resources in a manner that fosters sustainable economic activity, improves or sustains environmental quality, ensures public health and safety, and provides for the sustainability of communities and ecosystems.

Operationally, IWRM approaches involve applying knowledge from various disciplines as well as the insights from diverse stakeholders to devise and implement efficient, equitable, and sustainable solutions to water and development problems.

-American Water Resources Association

The existing plan and this comprehensive update embody the principles of integrated watershed management and adaptive management, focusing on multiple aspects to protect not only the lake, but also all of the tributaries and lands within the watershed that contribute to the overall lake health. Key to implementing the plan is collaboration, partnership and stakeholder involvement from existing agencies, organizations and individuals. The plan seeks to protect, improve, and sustain the environmental resources and all of the important services these ecosystems provide, while continuing to provide high quality drinking water and recreation for the surrounding communities.

Water quality protection in the Canandaigua Lake Watershed is achieved by the following management approaches: Research, Education, Restoration/Remediation, Open Space Protection and Regulation.

RESEARCH

A comprehensive monitoring program documents the health of the lake and its tributaries and helps to identify sources of pollution. Computer modeling is also used and has the ability to estimate pollution sources and loads. Where possible, research also helps measure the success of management.

EDUCATION

Empowering citizens to be stewards of the watershed is essential, as approximately 90% of the watershed is

privately owned. Education prevents seemingly insignificant actions of an individual from accumulating across the watershed into a larger problem. Also, citizen involvement and investment in the watershed bolsters support for management activities.

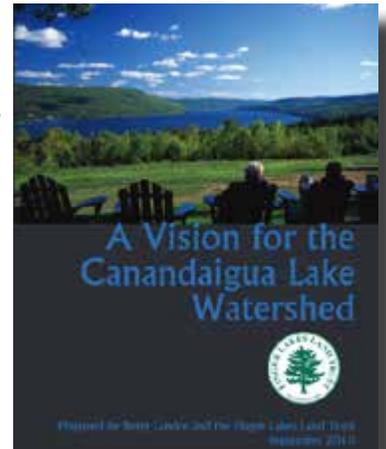
RESTORATION/REMEDICATION

The most efficient management is pollution-prevention of existing resources. However, restoration and remediation are essential tools to reverse past damage and to mitigate the effects from new impacts. This category includes stream stabilization projects, wetland creation projects, stormwater retrofits, and other approaches to provide tangible water quality improvements.

OPEN SPACE PROTECTION

Permanent protection of sensitive areas can provide critical water quality protection and can be achieved through partnerships with land owners, municipalities, land trusts and state agencies. In particular, the Finger Lakes Land Trust plays a critical role in protecting open space in the watershed. They have made numerous land acquisitions and easements throughout the watershed.

They have developed an open space strategy entitled: “A Vision for the Canandaigua Lake Watershed” to help guide and prioritize their land protection efforts.



REGULATION

Land use regulations such as zoning, subdivision, site plan review, building codes, stormwater and floodplain management, and onsite wastewater are just a few ways municipalities can ensure development and human activity minimally impact the lake. These regulations are particularly important for reducing non-point source pollution. The municipalities have primary land use control in New York State. The Watershed Council provides assistance to the municipalities in developing regulations and technical assistance in implementing regulations.