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# CHAPTER 1: INTRODUCTION

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*(Photo: Saltman)*

## Overview

Many people throughout the Oneida Lake watershed community have been working hard over the past several years to improve and protect Oneida Lake and its tributaries. This has involved extensive planning, creative program implementation, comprehensive data collection and analysis, and the development of professional partnerships leading to improved cost effectiveness and program efficiency.

The Central New York Regional Planning and Development Board (CNY RPDB) was responsible for coordinating the Oneida Lake Watershed Management Plan and worked with many watershed stakeholders to reach a diverse set of program goals. This has been an action-oriented, local level initiative involving extensive data collection and analysis, identification of priority issues, and the selection of opportunities for effective solutions.



*Oneida Lake (Photo: Saltman)*

This report, *A Management Strategy for Oneida Lake and Its Watershed* (Strategy), contains a description of the environmental setting and cultural influences, background information on the priority water resource issues of concern, and recommendations to

address these problems. The Strategy also presents a summary of the additional work (such as monitoring and education projects) that was accomplished as part of the watershed management plan over the past 3½ years.

Eight priority lake and watershed problem areas were initially identified through municipal surveys, stakeholder discussion groups, public comment meetings, and input from county Water Quality Coordinating Committees. Community leaders and agency representatives then met on a regular basis as “Working Groups” during 2003 and 2004 to compile background information and identify short and long-term goals for each of these issues. Recommendations were also developed for the long-term protection and enhancement of Oneida Lake and its tributaries. The findings were reviewed and endorsed by the Watershed Advisory Council and were then presented at six public meetings throughout the watershed. The findings from this effort are presented in this report.

*A Management Strategy for Oneida Lake and Its Watershed* also provides information about the environmental and economic setting throughout the watershed. This information was taken from *The Oneida Lake State of the Lake and Watershed Report* (SOLWR) that was published in 2003. The SOLWR serves as a reference for local decision-makers. It is used in the identification and prioritization of goals and in the development of action plans for the protection of surface water and groundwater resources. Many watershed partners contributed to the collection of information for the SOLWR, which is now available at municipal offices, public libraries, and agencies throughout the watershed. It can also be found on the Internet at [www.cnyrpd.org/oneidalake](http://www.cnyrpd.org/oneidalake).

## ***Project Purpose and Benefits***

Ground and surface water, Central New York's most precious natural resource, fuels the region's economic development. The Oneida Lake watershed management planning initiative was launched in order to address water resource issues as a regional partnership, to improve opportunities for state and federal funds for restoration projects, and to establish goals and priorities as a grassroots effort. It has required community-based partners to look beyond county and agency boundaries as they work together to monitor, conserve, and restore Oneida Lake and its watershed.

From the early stages of the project, the management plan has been promoted as an opportunity to protect water resources while strengthening the region's economic viability. We learned from other lake groups that comprehensive, long-term planning would maintain a healthy lake environment while attracting business, tourism, and recreation dollars to strengthen the local economy. Maintaining regional partnerships and moving ahead with natural resource protection is a step in the right direction. The Oneida Lake Watershed Management Plan is providing the following benefits:

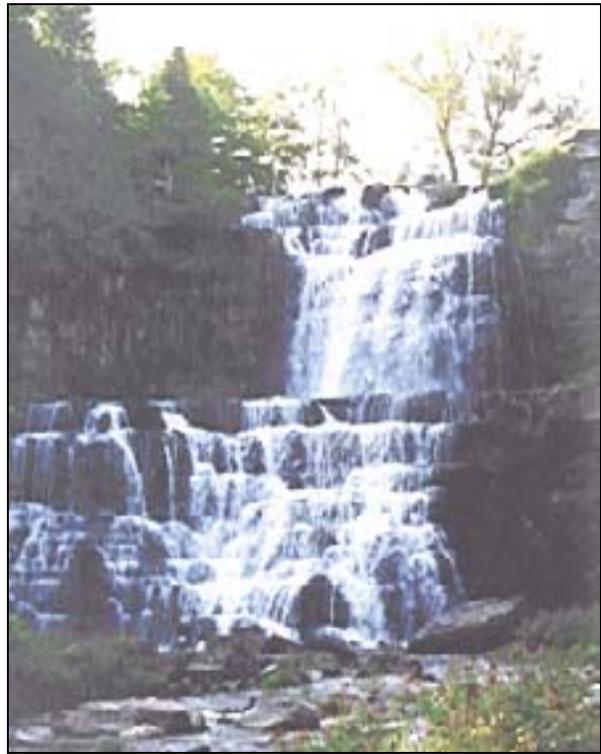
- Cooperation among organizations, pooled services and financial resources, and enhanced communication across municipal borders – all leading to improved regional efficiency;
- Ability to prioritize projects and to develop ecologically based, cost effective solutions within the watershed as a regional effort;
- Improved recreational opportunities and biological diversity in the lake and streams;
- Uniformity, consistency and fairness in program implementation;
- Expanded economic potential and improved quality of life for all watershed residents;
- Improved opportunities to receive state and federal grant funding;
- Reduction of nonpoint source pollution and protection of fisheries, wildlife habitats, and other critical areas;
- Water resource goals are established as a grassroots, locally based effort;
- Involved and informed homeowners and lake users.

## ***Project History***

The CNY RPDB initiated the Oneida Lake and Watershed Protection Program during the summer of 1997 with a \$200,000 federal Clean Water Act 604(b) grant through the NYS Department of Environmental Conservation. This watershed initiative, also referred to as *The Southern Region Strategy*, involved working with local organizations to collect, summarize, and map environmental and cultural influences. Due to the large size and diversity of the watershed, the focus of this project was a thorough review of environ-

mental, regulatory, and land use issues in the southern region, including portions of Onondaga, Madison and Oneida counties. The southern region extended from the southern lake border down to Route 5 in the vicinity of Chittenango, Canastota, and Wampsville. This area was selected as a priority due to population growth rates, development pressures, tributary water quality problems, and concerns for water quality impacts.

The grant provided the resources to strengthen watershed partnerships through the development of the Oneida Lake and Watershed Task Force. Educational workshops and conferences were held and brochures and project newsletters were distributed to keep watershed partners well informed. Water quality monitoring programs were also initiated during this time in order to collect information about the streams flowing into Oneida Lake. Survey information was collected to document lake and watershed user perceptions, computer resources, and long-term water quality monitoring goals. "The Oneida Lake Book," a publication containing information about the lake and its watershed, was written as a homeowners guide to lake protection and free copies were distributed throughout the region. *The Southern Region Strategy* continued to the end of 2000, laying the foundation for a comprehensive, six-county watershed planning project that was launched in 2001.



*Chittenango Falls (Photo: Saltman)*

## ***The Oneida Lake Watershed Management Plan***

The Oneida Lake and Watershed Management Plan is a process whereby municipalities, homeowners, citizen groups, and county, state and federal agencies are working together to develop and implement plans for the long-term protection and improvement of our surface and groundwater resources. This project involves data collection and analysis,

identification of high priority lake and watershed issues, pooled funding and staff resources, and the selection of plans for improved water quality. By pooling our resources, we boost our efficiency, reduce our project costs, and enhance our chances for success.

### ***Regional Partnerships***

From 2001 to 2004, the CNY RPDB contracted with the following organizations to accomplish the watershed management planning goals and objectives: Cornell Biological Field Station, Madison County Planning Department, Cornell Cooperative Extension of Onondaga County, Herkimer-Oneida Counties Comprehensive Planning Program,

SUNY Research Foundation, Dr. Joseph Makarewicz (SUNY Brockport), Oneida County Soil and Water Conservation District, Hamilton College, the City of Oneida, Project Watershed, and Life Science Laboratories. Many other people have contributed in-kind support and resources to the success of this project.

## *Committee Structure*

Water resource management frequently extends beyond county and agency boundaries, making regional collaborations an absolute necessity. These partnerships serve as a fundamental building block for successful environmental strategies. Oneida Lake Watershed Task Force Committees and the Watershed Advisory Council were developed to encourage working partnerships between state and federal agencies, research institutions, non-governmental organizations, county and municipal representatives, and other primary decision-makers.

The **Oneida Lake Watershed Task Force Committees** have been an influential component in building and maintaining momentum with watershed projects. The Technical Task Force Committee and the Education Task Force Committee represent a partnership of agencies, organizations, and non-profit groups throughout the watershed. These groups have provided advice for projects such as the tributary monitoring program and education initiatives.

The **Oneida Lake Watershed Advisory Council**, formed in the spring of 2002, is responsible for overseeing and guiding the development and implementation of the

Oneida Lake and Watershed Management Plan. For the purpose of conducting official business, the decision-making body includes a Board of Directors with members comprised of county level, local government, and stakeholder representatives. Refer to the section below for additional information.

Several **Working Groups**, consisting of agency representatives, key decision-makers, and interested citizens, played a critical role during 2003 and 2004. These groups researched the priority issues of concern and then compiled recommendations to address them. Their draft recommendations were sent to the Watershed Advisory Council for endorsement and were then presented to the public during the spring of 2004 (refer to Appendix D for public comments). The product of their work is presented in this Strategy.

An **Oneida Lake Watershed Agricultural Advisory Committee** was established in the spring of 2002 to encourage participation from the agricultural community in the Watershed Management Plan and to shape regional activities for agricultural projects. Farmer representatives from Madison, Oneida, Onondaga and Oswego counties participated.

## *The Watershed Advisory Council*

The Oneida Lake Watershed Advisory Council Board of Directors is a group of county and municipal representatives and stakeholders that guide the development and implementation of the Oneida Lake and Watershed Management Plan. Council members have worked closely with the CNY RPDB and the Working Groups in the development of a plan that identifies the priority water resource

issues of concern, summarizes recommendations, and provides opportunities for program implementation. The Advisory Council is committed to the protection and restoration of a multiple-use lake and watershed that sustains healthy ground and surface water, fisheries, aesthetic values, cultural resources, economic vitality, wildlife habitat, and water-based recreation.

## *Additional Programs*

In addition to defining a set of priority issues and recommendations, the Oneida Lake Watershed Management Plan has involved water quality monitoring, GIS mapping, data collection, report preparation, assistance to municipalities, watershed websites, newsletters, conferences and workshops, brochures and fact sheets, innovative watershed improvement projects, and the development of a four-county agricultural program (Figure 2). These programs are summarized below.

### **Tributary Monitoring**

A comprehensive baseline and storm-event sampling program on Oneida Lake tributaries took place during 2002 and 2003. The program represented a successful partnership between CNY RPDB, NYS Department of Environmental Conservation (NYS DEC), Cornell Biological Field Station, SUNY Brockport, and agencies in four counties that border Oneida Lake (Onondaga County Health Department, Madison County Planning Department, Oneida County Soil and Water Conservation District (SWCD), and Oswego County SWCD). J. Makarewicz (SUNY Brockport) prepared a final report that was presented to the Task Force Technical Committee in June 2003.

The Technical Committee selected Oneida Creek for future sampling, based on high levels of sediment loading. The CNY RPDB worked with Technical Committee members to develop maps and compile recommendations for sampling locations. County Planning Departments and Soil and Water Conservation Districts were consulted and helped with homeowner notification and site access on private property. Segment Analysis, representing a year of storm and baseline sampling on Oneida Creek, was completed during the summer of 2004.

Limited grant funding also supported Project Watershed, a non-profit organization dedicated to water resource education in Central New York schools. Project Watershed has worked with high schools and homeowners to monitor Oneida Lake tributaries in Onondaga, Madison and Oneida Counties.



*Water Monitoring on Chittenango Creek  
(Photo: Saltman)*

### **Education and Outreach**

Education initiatives have contributed to the success of the Watershed Management Plan. Our goal was to provide opportunities for decision-makers to learn more about the environmental setting and the land use influences that impact water resources. Outreach and education programs also cultivated a sense of local ownership and responsibility for water resource issues. The CNY RPDB subcontracted with Cornell Cooperative Extension (CCE) of Onondaga County to achieve watershed-wide education objectives, and other groups have assisted through participation on the Task Force Education Committee.

# ONEIDA LAKE AND WATERSHED MANAGEMENT PLAN

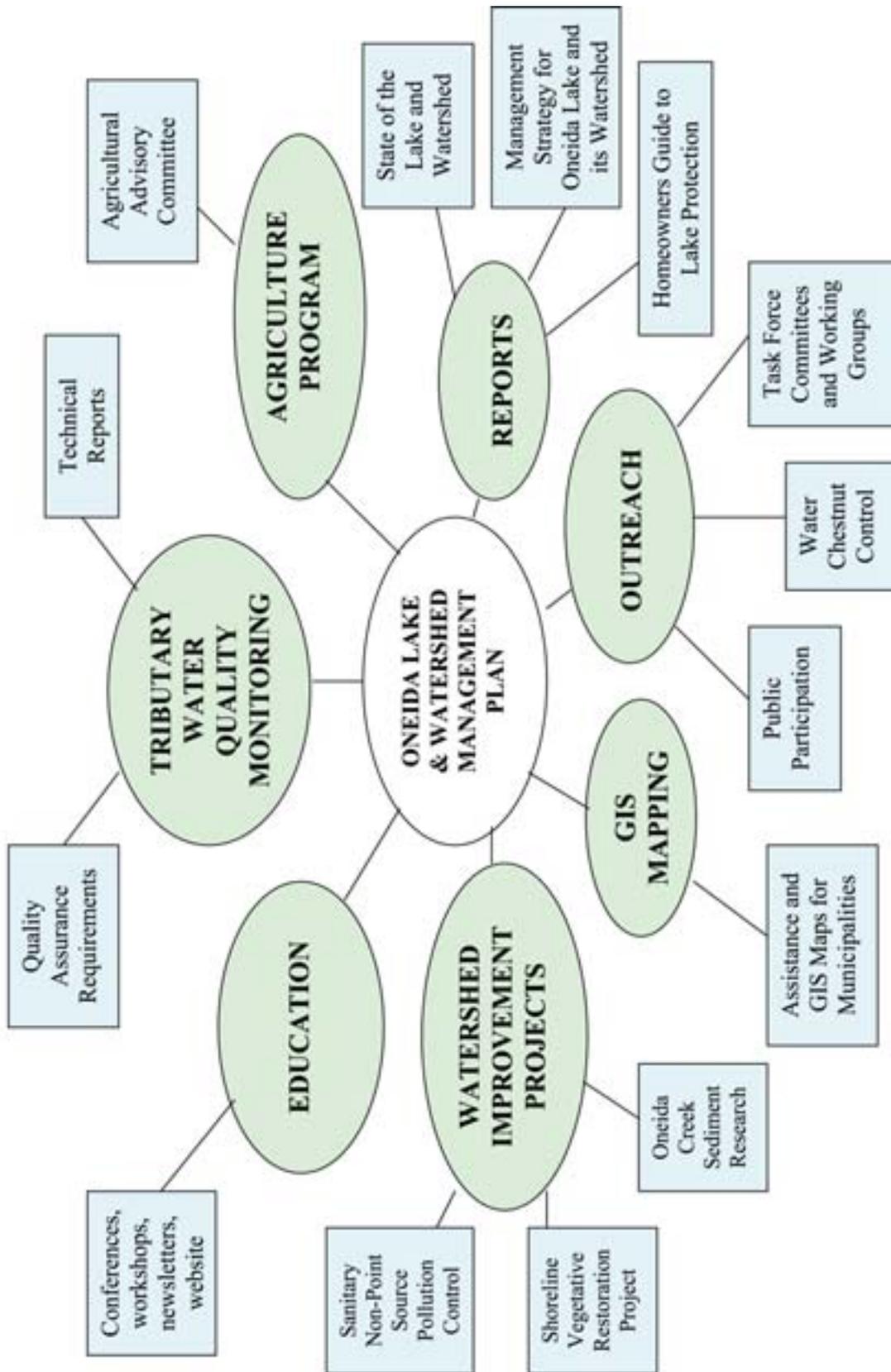


Figure 2: Oneida Lake and Watershed Management Plan

Throughout the past 3½ years, education and outreach initiatives have focused on websites, newsletters, annual conferences, workshops, public meetings, watershed bus tours, brochures, fact sheets, tabletop displays, calendars, and slide shows for municipalities, local groups, and statewide organizations. The CCE designed the “Know Your Lake” lecture series and a regional symposium to address pollution from onsite septic systems. The CNY RPDB worked with the Advisory Council to sponsor annual watershed conferences. Advisory Council members and other watershed stakeholders contributed to the success of all these events by providing slide presentations, resources, and staff time. Numerous articles about the management plan have appeared in regional and local newspapers and in statewide publications. Project updates are routinely sent to federal, state, and local elected officials. The CNY RPDB and Advisory Council Board members also participated in efforts to address regional issues (with impacts beyond the watershed) such as water chestnut and flooding.

## **Watershed Improvement Projects**

With funding from the NYS DEC (using dollars from the Environmental Protection Fund), the CNY RPDB and the Task Force Executive Committee distributed a “Request for Proposals” to solicit watershed improvement projects to restore and protect waterbodies in the Oneida Lake watershed. Several projects were selected as recipients of this grant funding in 2003-2004. The projects are summarized below.

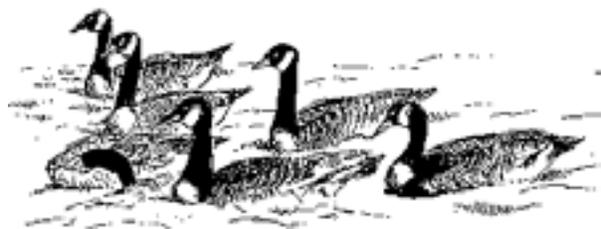
- Oneida Lake Shoreline Restoration Project (grant recipient: Madison County Planning Department).
- Oneida Creek Sanitary Non-Point Source Pollution Control Evaluation / Implementation Plan (grant recipient: the City of Oneida on

behalf of the Oneida Creek Water Quality Improvement Task Force).

- Analysis of the Oneida Creek Delta in South Bay, Oneida Lake (grant recipient: Hamilton College in cooperation with the Madison County Planning Department).
- The Oneida Lake Watershed Agricultural Program (grant recipient: Oneida County SWCD on behalf of the SWCD managers in four watershed counties).

## **Oneida Lake Watershed Agricultural Program**

The Oneida Lake Watershed Agricultural Program (OLWAP) was established to address water quality concerns originating from approximately 360 farms in the watershed and to ensure representation of the agriculture community in the Oneida Lake Watershed Management Plan. The OLWAP has involved an inventory and analysis of the impact of agriculture on water quality in the Oneida Lake watershed. Comprehensive nutrient management plans and agriculture improvement practices have been developed for farms where manure management is impacting water quality in the streams. An agricultural coordinator was hired to oversee agriculture activities throughout the watershed. Newsletters were distributed and meetings were held with representatives from the farming community in order to maintain communication and to improve the efficiency of watershed-wide agricultural programs.





*Agriculture represents 29% of the watershed*

## **Municipal Outreach**

The Oneida Lake watershed includes portions of six counties and 69 municipalities, many of which have signed formal resolutions supporting the watershed management planning process.

As a service to the watershed municipalities, the CNY RPDB provided “Sensitive Areas and Development Suitability” maps and other GIS mapping services to several Oneida Lake shoreline communities.

The completion of this report represents a significant milestone in the management planning process. The current priority for the Watershed Advisory Council and the CNY RPDB is to generate funding for the implementation phase of the management plan. Agencies, municipalities, colleges, businesses and other primary stakeholders will be asked to contribute. With sufficient funding, the following priorities (based on the recommendations found in the Strategy) will be the focus in 2005:

- Improve Oneida Lake recreation and fishing habitat by reducing soil erosion.

## **Website**

A website was developed in order to improve communication and to facilitate the exchange of information concerning the Oneida Lake watershed. Information about the Oneida Lake Watershed Management Plan is available at: [www.cnyrpdb.org/oneidalake/](http://www.cnyrpdb.org/oneidalake/).

## **Local Laws Project**

During 2003 and 2004, the CNY RPDB met with several municipalities in the Oneida Lake watershed to discuss the Management Plan recommendations that refer to improving, amending and enforcing local laws. Recommendations from the Flooding and Water Level Management, Septics, and Soil Erosion and Sedimentation Working Groups were the focus of this project. Recognizing that a law is only as good as its enforcement, the CNY RPDB met with municipal representatives, including the Mayor/Supervisor, Code Enforcement Officer and Highway Superintendent or Department of Public Works officials from the following communities: the Towns of Cicero, Constantia, Dewitt, Manlius, Sullivan, West Monroe and the Villages of East Syracuse, Fayetteville and Minoa.

## ***Goals for 2005***

- Reduce the current and potential impacts from exotic species, especially water chestnut.
- Minimize flood damage to shoreline homes while maintaining water levels for navigation, recreation, fish habitat, and lake ecology.
- Implement a comprehensive watershed education program for the benefit of shoreline homeowners, agencies and organizations, municipalities, and school students.
- Protect and maintain public health and property values and improve aquatic habitat through better installation, maintenance and regulation of on-site septic systems.

- Control cormorant populations to reduce their impacts on fish populations, island habitat, and colonial nesting birds.
- Provide safe storage and usage of road salt and explore economically viable alternatives.
- Fund scientific research to ensure the long-term stability of Oneida Lake fisheries.
- Encourage safe boating practices and the responsible use of boats and motorized watercraft.
- Maintain the agricultural program for the control of non-point source pollution and the continuation of the New York State Agricultural Environmental Management Program.
- Provide assistance to municipalities in the review of local laws as they pertain to erosion and sedimentation.
- Continue the CNY RPDB and the Watershed Advisory Council's leading role in watershed management, thereby ensuring that project priorities remain locally driven initiatives.
- Hire a Watershed Coordinator to maintain program direction and regional communications and for continued staff assistance to the Watershed Advisory Council.
- Review and evaluate implementation projects each year to ensure that the Strategy goals are met.



*Shoreline vegetation will minimize erosion  
(Photo: [www.tva.gov](http://www.tva.gov))*

## PUBLICATIONS

The following reports were written as part of the Oneida Lake and Watershed Management Plan. These reports, in addition to annual program summaries and newsletters, are available at the following location: [cnyrpdb.org/oneidalake/publications.asp](http://cnyrpdb.org/oneidalake/publications.asp).

**Sediment Analysis of Oneida Creek: The Location of Sources of Pollution**, by Joseph C. Makarewicz and Theodore W. Lewis, September 2004.

**Sediment Dynamics of the Oneida Creek Delta, Oneida Lake New York**  
By Eugene Domack (Hamilton College), Scott Ingmire (Madison County Planning Department), Katie Arnold (Hamilton College), anticipated September 2004.

**Oneida Lake Watershed Agriculture Program Final Report**, by Jo-Anne Faulkner (Oneida County Soil and Water Conservation District), anticipated September 2004.

**Oneida Creek Sub-Basin Sewer System Evaluations**, O'Brien and Gere Engineers, Inc., December 2003.

**Oneida Lake State of the Lake and Watershed Report**, Edited by the CNY RPDB, June 2003.

**Nutrients and Suspended Solid Losses from Oneida Lake Tributaries, 2002 – 2003**, by Joseph C. Makarewicz and Theodore W. Lewis, June 2003.

**Oneida Lake Native Shoreline Restoration Incentive Program**, by Scott Ingmire (Madison County Planning Department), October 2000.