



# Skaneateles Lake Watershed Program Annual Report 2023-2024

## City of Syracuse Department of Water

April 10, 2024

Prepared By:  
Richard Abbott  
Public Health Sanitarian  
Department of Water

Photo courtesy of William Hecht

Prepared by  
Rich Abbott  
Watershed Quality Coordinator

City of Syracuse Department of Water  
Division of Skaneateles Lake Watershed Programs

# Table of Contents

1.	AGRICULTURAL PROGRAM ANNUAL REPORT .....	1
1.1	Overview .....	1
1.2	Conservation Reserve Enhancement Program .....	2
2.	LAND PROTECTION PROGRAM FINAL DOCUMENTATION .....	3
3.	PUBLIC EDUCATION PROGRAM ANNUAL REPORT .....	3
3.1	Public Education .....	3
3.2	Water Department Staff Participation and Training .....	5
4.	OTHER MECHANISMS OF WATER QUALITY PROTECTION .....	6
4.1	Cooperative Agreements .....	6
4.2	Data Gathering and Management Program.....	6
4.3	Watershed Rules and Regulations .....	6
5.	COORDINATION WITH GOVERNMENT AGENCIES, NONPROFITS, AND MUNICIPALITIES.....	7
6.	STAFFING AND FUNDING .....	10
6.1	Current Staffing Levels .....	10
6.2	Watershed Program Funding.....	11
7.	LIST OF ACRONYMS.....	12

## Appendices

Appendix A – Maps

Appendix B - Skaneateles Lake Watershed Agricultural Program Progress Report

Appendix C - CCE Water Quality Education Program for the Skaneateles Lake Watershed





# 1. AGRICULTURAL PROGRAM ANNUAL REPORT

## 1.1 Overview

The City of Syracuse continued to contract with the Onondaga County Soil and Water Conservation District for the Skaneateles Lake Watershed Agricultural Program (SLWAP) in FY 2023-2024. This year forty-two (42) watershed farms meet the Agriculture and Markets' definition of a "farm." Thirty-seven (37) of these are enrolled in the program and five (5) farms do not wish to participate. Two (2) of the non-participating farms are self-implementing Best Management Practices from Whole Farm Plans developed by SLWAP. City watershed inspectors monitor one additional farm for compliance with Watershed Rules and Regulations and Environmental Conservation Law. The overall participation rate is eighty-eight (88%).

The figures in this report represent the current number of Whole Farm Plans applied to active agricultural land in the watershed. Twenty-three (23) farms are no longer in active production or do not meet the definition of a farm and have been eliminated from the status reports, resulting in an annual decline in the number of enrolled farms. For the most part, the farmland has been absorbed by other active farms. Progress has continued with Whole Farm Plans completed for thirty-five (35) farms, equaling 75.82 farm equivalents (one farm equivalent being 400 acres), and implementation is complete on twenty-nine (29) farms, equaling 66.38 farm equivalents. Approximately ninety-three percent (93%) of the farmland in the watershed is enrolled in the program.

Three barriers to pathogen movement, including exclusion from watercourses, are established on eighteen (18) of the twenty-one (21) active enrolled livestock farms in the watershed. Livestock farms in the 6-mile zone were planned and implemented by June 30, 2004, in accordance with the NYS DOH requirement. Soil erosion and nitrogen and phosphorous runoff have been reduced by considerable amounts watershed-wide, based on standard estimating techniques (See Appendix B).

SLWAP staff conducted comprehensive reviews of all implemented Whole Farm Plans from January to March 2024. Farm operators received a letter in advance detailing which data to have prepared for the review, streamlining the process. Farm survey data collected during each review is presented in the "Skaneateles Lake and Watershed 2023 Annual Report," City of Syracuse Department of Water – Water Quality Management, April 2024, submitted separately to the NYSDOH.

A rental program for soil conservation tools was instituted in 2009. The City provided SLWAP with funds to purchase a John Deere conservation planter, a Great Plains no-till drill, and an AerWay minimal tillage system. The first two of these tools can plant corn and beans and apply fertilizer, seed buffer strips and filtration areas, reseed pasture and improve wildlife habitat areas. The third, the AerWay, allows for injecting liquid manure directly into the soil up to eight inches deep, reducing volatilization and the likelihood of manure-laden storm runoff leaving a field after a manure treatment. The AerWay was sold in the fall of 2012 because of exceedingly limited rental. In the summer of 2017, SLWAP sold the 6-Row John Deere 1750 Conservation Planter and the 10' Great Plains 1006 No-Till Drill and purchased a new 12-foot Esch 5512 No-Till Drill. The drill can plant small grains, cover crops, small seeds, soybeans, and buffer strips. In 2022 the drill was utilized on a total of 383 acres of cropland between the watershed and Onondaga County. Since 2009, four (4) farms have purchased conservation implements. Two (2) farms have purchased the 30-foot AerWay manure incorporation tool, one (1) farm purchased a 30-foot Great Plains drill, and one (1) farm purchased a 12-row planter that utilizes some of the conservation technology.

SLWAP is implementing Phase II of its program as outlined in the “Task Force Recommendations for the Continuation of the Skaneateles Lake Watershed Agricultural Program,” which was accepted by Mayor Matthew J. Driscoll in January 2005. This document outlines Phase II of the Skaneateles Lake Watershed Agricultural Program and gives recommendations for procedures such as Whole Farm Plan revisions, BMP repairs, farm expansions, planning emphasis, and continuation of financial incentives.

As in other areas of New York State, every year a portion of watershed farmland is converted to residential lots to finance family needs or is sold outright for development. In 2023, of the thirteen (13) new housing starts in the watershed, none were on active farmland. Five (5) permits were issued for major additions and renovations on the lake and another ten (10) were issued for non-lake front properties. Demand for farmland continues to be high, as some farms expand to remain profitable or increase their land base to spread manure at state-approved rates. In this watershed, many smaller farms are purchased by larger and/or new operations at the retirement of lifelong farmers. To demonstrate this point, sixty-two (62) operations met the Agriculture & Markets definition of a farm in FY 1995-96. This year only forty-two (42) operations meet that definition. Consolidation or change of operations by new owners necessitates revisions to (or sometimes brand-new) Whole Farm Plans. SLWAP is addressing these changes as they arise. Priority is given to changes that have a high probability of impact to water quality near the City’s water intakes.

The Water Department’s Watershed Quality Coordinator is the current City representative on the Skaneateles Lake Watershed Agricultural Program Review Committee (WAPRC). The Watershed Quality Coordinator also coordinates efforts between SLWAP and the monitoring of conservation easements on SLWAP participating farms. SLWAP Policy #18 has allowed for permanent integration of easement restrictions on agricultural practices and buffers into the SLWAP Whole Farm Plans. The integration is complete.

## **1.2 Conservation Reserve Enhancement Program**

The USDA Syracuse, New York Conservation Reserve Enhancement Program (CREP, a joint City/SLWAP/USDA project) has resulted in a program total of 148.4 acres planned and 146.5 acres of sensitive areas implemented and protected around Skaneateles Lake. No additional acres were implemented in 2023. SLWAP coordinates the program in the Skaneateles Lake Watershed and the federal government makes short-term rental payments as an incentive to keep the sensitive lands out of production for ten to fifteen years. The City uses its contract with SLWAP to promote interest for CREP and provide technical services and the local cost share. In return, USDA provides additional funds to increase the standard per-acre rental rate for removing lands from agriculture. NRCS District Conservationists plan and implement projects, and USDA Farm Service Agency employees handle the paperwork and rental payments.

This program supplements the City’s permanent land conservation efforts in the watershed. The federal contract with the City calls for a combined federal and City obligation of approximately \$900,000 over 15 years, with \$650,000 coming from USDA and approximately \$250,000 from the City of Syracuse. With the reauthorization of the Farm Bill in 2008, the City contract was extended by Ordinance #146-2008 for an indefinite period. Future funding will be contained in the 5-year federal Farm Bills.

A proposed budget for SLWAP for FY 2024-25 has been received and contract renewal is expected on July 1, 2024. For additional program details, see the SLWAP Annual Progress Report—March 2023 - February 2024, in Appendix C. See progress maps for SLWAP and CREP at the end of this section.

## 2. LAND PROTECTION PROGRAM FINAL DOCUMENTATION

The Land Protection Program requirements that appear in Section 5-1.30(c)(7)(j) of the Filtration Avoidance Conditions expired on June 30, 2008. The final of nine easements closed on 4/27/2009, and the NYSDEC Water Supply Permit for the program (DEC ID# 7-9907-00037/00001) expired on July 8, 2009. The final data on acquisitions and other conditions of item (j), above, appear in the “Skaneateles Lake Watershed Land Protection Program and the Skaneateles Lake Watershed Agricultural Program Annual Report for Fiscal Year 2009-10, April 2010.” During 2012, a portion of the Withey conservation easement property was sold to another SLWAP program farmer, making eleven (11) owners of City of Syracuse conservation easement properties in the Skaneateles Lake Watershed.

## 3. PUBLIC EDUCATION PROGRAM ANNUAL REPORT

### 3.1 Public Education

The City continues to fund public education through contractual relationships with the Cornell Cooperative Extension of Onondaga County (CCE of Onondaga County) and the Onondaga County Soil and Water Conservation District, supplemented by the in-kind services of City staff to assist other agencies or groups in research or presentations. Below are activities or publications included in the contracts with CCE of Onondaga County and the OCSWCD for 2023 and 2024 that are within this report period. Previous years’ reports describe many other public education efforts. (See the SLWAP annual report, Appendix B and the CCE of Onondaga County annual report, Appendix C for details of those programs’ educational activities for FY 23-24).

The CCE of Onondaga County continued to promote water quality education in the Skaneateles Lake Watershed under contract to the City. The City has renewed its contract with the CCE of Onondaga County for the calendar year 2024.

In 2023, the CCE of Onondaga County concentrated its education efforts on the following activities:

- Skaneateles Lake Elevation
- Non-point source pollution
- Landscaping for water quality
- Invasive species management
- Riparian buffers
- Land stewardship
- Flood resiliency
- Rain gardens

Six hundred and thirty-three (633) people attended virtual workshops and speaking events sponsored or supported by CCE of Onondaga County over the year.

### **Press Articles**

Educators worked with various local media to promote the Skaneateles Lake Watershed Water Quality Education Program. CCE of Onondaga County contributed to four articles and videos that appeared in local publications in 2023.

### **Annual Watershed Resident Newsletter**

In 2023 CCE of Onondaga published Summer and Winter editions of the Skaneateles Wave Review. The newsletters included information about the programs sponsored by the City in the watershed. Featured articles included the *Skaneateles Lake Watershed Nine Element Plan Update*, *Shoreline Protection and Restoration*, *Steep Slope Erosion Mitigation efforts by Central New York Land Trust* and *Emergency Streambank Repair and Soil Stabilization Work Coordinated by the SLWAP in the Shotwell Brook Sub-Watershed*. (A copy is included at the end of the report before the Appendices.)

### **Electronic Communications**

An electronic listserv was set up for the program in 2011. The e-mail list was generated from prior participants in CCE of Onondaga County educational activities and from government agency and non-profit e-mail contacts provided by the City of Syracuse Water Department. The Skaneateles Lake e-mail list includes over 700 residents, municipal officials, partners, and businesses.

### **Miscellaneous Brochures**

The following brochures are still distributed at CCE of Onondaga County events: “How to Build a Rain Barrel: A step-by-step guide for building and installing a homemade rain barrel,” “Water Deflectors: Managing Surface Water and Reducing Erosion on Unpaved Roads,” “Catch the Rain—A Citizen’s Guide to Aquatic Plant Management,” “What Homeowners Need to Know About Emerald Ash Borer,” “Wasp Watcher: How to find the wasp that hunts Emerald Ash Borer.”

### **Skaneateles Lake Watershed Website**

Through a collaborative effort of CCE of Onondaga, local municipalities, SLWAP and the City, the Skaneateles Lake Watershed Website [www.skanelakeinfo.org](http://www.skanelakeinfo.org) was completed and launched on July 1, 2020. The website features water quality data, information on harmful algal blooms, and links to agencies involved in the watershed. The website was viewed by a total of 9,259 visitors in 2023.

### **SLWAP Newsletter**

The “Watershed Journal,” a publication of the Skaneateles Lake Watershed Agricultural Program, published approximately four times per year, is e-mailed and/or mailed to the agricultural community of the watershed, allied agencies, and farm businesses. A digital version is available to interested agencies and to those requesting it.

### **SLWAP Annual Meeting**

The December meeting featured guest speakers Zach Larson, Sustainable Systems Agronomist, Bayer Crop Science and Leah Hurtgen Ziemba – Partner at Michael Best & Friedrich Law Firm, Madison, WI. Mr. Larson’s presentation focused on Bayer’s research in soil health, cover crops and other regenerative farming practices. He also covered the current structure of carbon markets, from the grower’s practices to an issued credit. Ms. Ziemba discussed NYS regulations guiding the agribusiness industry and how a compliance mindset can help protect farm operators in the face of disputes within the community. Fourteen farms representing 50% of the agricultural land base in the watershed were in attendance.

## 3.2 Water Department Staff Participation and Training

Activities for the Water Quality Management Division staff are as follows:

### *Participation*

The Watershed Quality Coordinator is a member of the Watershed Agricultural Program Review Committee, representing the Syracuse Department of Water

### **3.2.1 Training & Conferences**

The following Environmental Construction Solutions on-demand and live webinars were attended by the Watershed Quality Coordinator in 2023: The webinars focused on innovative new technologies related to stormwater management.

- ***Repair Your Shoreline with SOX Erosion Solutions & native Plantings – January 31, 2023***
- ***Stormwater Ponds: Function and Management Best Practices Explained – August 2, 2023***
- ***Erosion Control Blankets: Updated Options and E&S Strategies – August 4, 2023***
- ***Trackout Control Mats for Construction Entrances – August 22, 2023***
- ***Tied Concrete Flight Block Mat: Flexamat Design and Install – October 10, 2023***
- ***Erosion Control BMP Products for Challenging Solar Sights – September 5, 2023***

The Watershed Quality Coordinator completed the following coursework (June 16 – June 26, 2023) through PESTED – an online pest control training and continuing education organization. The training was necessary to maintain a Commercial Pesticide Applicator certification.

- ***Aquatic Vegetation (Category 5a)***
- ***Aquatic Insect (Category 5b)***
- ***Aquatic Fish (Category 5c)***



## 4. OTHER MECHANISMS OF WATER QUALITY PROTECTION

### 4.1 Cooperative Agreements

The City entered into no new cooperative agreements for watershed protection in the past year.

### 4.2 Data Gathering and Management Program

The GIS position has been filled continuously since January 10, 2002. Creation and development of Geographic Information System (GIS) data sets continued to support watershed and Water Department programs and facilitated watershed program analysis.

Work Completed:

Coverages/Databases updated or expanded:

- Farms with Whole Farm Plans or BMP revisions implemented in FY 2023-24
- Monitoring reports created for the nine watershed conservation easements
- Water distribution features (fire hydrants, valves, etc.) within the City of Syracuse updated with GPS points
- Documented major water infrastructure improvements, including water main replacement projects on several major streets

Coordination/Cooperation with others:

- Provided digital data and/or maps to Water Department staff and contractors to support construction and maintenance of the water distribution system, the Skaneateles Lake Watershed Protection Program and SLWAP
- Provided maps and data packages of City water infrastructure to support the planned replacement of Interstate-81

In 2023, GIS was utilized as the foundation of Cityworks Asset Management, a work order system used to track assets and daily operations. Service connections and meters have been added to the database, which will be used to generate the public-accessible maps that are required for the EPA Service Line Inventory. For 2024, the City will be implementing an Enterprise GIS. This software will allow for more efficient sharing of maps, data, and analysis tools.

### 4.3 Watershed Rules and Regulations

The City conducts inspections to determine compliance with Watershed Rules and Regulations. Refer to the “Skaneateles Lake and Watershed 2023 Annual Report, Volume XLIX,” for detailed information on inspection and enforcement. The City of Syracuse met its filtration avoidance condition to revise its Watershed Rules and Regulations on the date of their promulgation by the State of New York, September 1, 2004. Subsequently, minor amendments were promulgated on July 6, 2005. The NY State Register Quarterly Index, January – December 2005 lists that this

Administrative Rule was finalized on July 6, 2005 (reference # HLT – 48 04-00012). The DEC SEQR project number was #P7002107-00012; NYS DEC Region 7.

To view a list of significant dates and requirements for the promulgation process, refer to the Skaneateles Lake Watershed Land Protection Program and the Skaneateles Lake Watershed Agricultural Program Annual Report for Fiscal Year 2006-07, or 2007-08. The Watershed Rules and Regulations (Title 10, Public Health, Chapter III, Subchapter A, Part 131.1, and City of Syracuse) are available on the online New York State Code of Rules and Regulations at <http://www.dos.state.ny.us/info/nycrr.html> and on the City of Syracuse web page under “Departments” and “Water Department,” at <http://www.syracuse.ny.us>.

## 5. COORDINATION WITH GOVERNMENT AGENCIES, NONPROFITS, AND MUNICIPALITIES

### *Multiple Agency Coordination*

A group that includes representatives from NYSDOH, OCHD, NYSDEC, the City of Syracuse Department of Water, the SLWAP and others continues to share information on pressing watershed events, complaints, and their resolutions through e-mail. The group uses this method to expedite reporting of spill incidents.

### *New York State Department of Environmental Conservation (NYSDEC)*

The NYSDEC General SPDES Permit for Confined Animal Feeding Operations (CAFOs) has enhanced the City’s voluntary agricultural program by adding an extra incentive for operations to follow their Whole Farm Plans. Eight (8) of the approximately forty-two (42) farms eligible for SLWAP are considered CAFOs under the current standards. Of those, only one (1) has its farm headquarters within the watershed. All operations that meet the definition already have Whole Farm Plans and meet the requirements of the “Agricultural Waste Management Plans” called for in the state permit. SLWAP employees are no longer the lead nutrient planners for any CAFOs in the watershed. They continue, however, to attend CAFO reviews of watershed farms to provide input and support to the CAFO review.

### *Town of Skaneateles Lake Monitoring Committee*

Based on the findings of the Town of Skaneateles Lake Monitoring Committee’s Lake Monitoring Plan, the Town approved funding for sampling, which was carried out by Upstate Freshwater Institute (UFI) from April through October 2007 and 2008. The two consecutive years of data established a baseline for the following parameters: phosphorous, water clarity, chlorophyll a, and dissolved oxygen profiles. UFI prepared a 2008 report on the results. Since the data from the first two years was very consistent, the committee proposed a 3-year cycle for repeat monitoring. Recent monitoring reports available at the Skaneateles Town Hall include *Water Quality and Limnological Monitoring of Skaneateles Lake-2019* and *Winter-Spring Monitoring of Skaneateles Lake Tributaries-2020*.

### *Land Trusts*

The Finger Lakes Land Trust (FLLT) and Central New York Land Trust (CNYLT) continue to emphasize the Skaneateles Lake Watershed as a priority focus area for land conservation and water quality protection.

In 2023 the FLLT completed conservation easement agreements on thirteen tax parcels from three property owners in the watershed totaling 799 acres.

A total of 690 acres in the town of Spafford were protected through three separate conservation easements. The easements were established with a farm operator to allow for continued agricultural use and conserve over 200 acres of woodlands. Conditions of the easement include required maintenance of vegetated stream buffers. The property features fields and forests including steep watercourses containing 8,500 feet of streambank. The property also includes nearly two miles of scenic frontage on State Route 41, in an area of potentially increasing development pressure. The October 11, 2023, FLLT press release noted; *'This is the largest conservation project ever completed in the Skaneateles Lake watershed'*.

A conservation easement agreement was also completed by the FLLT, permanently protecting 86 acres in the Shotwell Brook sub-watershed. The property includes 2,070 feet along Shotwell Brook, and 1,430 feet along an unnamed tributary. The easement specifies an 18-acre environmental protection zone that will buffer the two streams.

A 23-acre conservation easement in the town of Skaneateles was donated to the FLLT. The property which borders the NYSDEC Boat Launch, features meadows and young forest dominated by birch trees.

CNYLT acquired a 144-acre property in the town of Skaneateles in 2023. The parcel includes property boundaries that border the Village of Skaneateles. Previously in agriculture production, CNYLT plans to restore the land to a more natural state.

### ***Watershed Management Approach to Controlling Hemlock Woolly Adelgid (HWA)***

HWA was identified in the Skaneateles Lake Watershed in 2014. Once infested with HWA, mature hemlock trees die within four to 20 years. The hemlock loss and replacement with hardwood species has the potential to impact water quality by altering nutrient cycling in the watershed and changing water temperature and water quantity going into the lake over the course of the year. Hemlocks' deep shade and often streamside habitat helps keep streams cool, and their evergreen shade keeps snow on the ground into the spring, providing cold runoff into groundwater farther into the growing season. Because hemlocks draw the most water during spring and fall, and relatively little in the summer, they also help stabilize stream flows.

HWA has been found on both shores of Skaneateles Lake in the southern portion of the lake. As of February 2020, the northernmost points where HWA has been found are in the area of Fire Lane 22A on the western shore, and around Ten Mile Point on the eastern shore. (For the most up to date information, please visit the NY iMapInvasives map at [nyimainvasives.org/data-and-maps](http://nyimainvasives.org/data-and-maps)). To minimize the spread of HWA, the City of Syracuse Water Department has collaborated with the Onondaga County Soil and Water District, Cornell University, CCE of Onondaga County and several volunteers residing with the watershed. In May 2015, 100 Eastern Hemlock trees were planted within this region of the watershed to grow populations of biological controls to resist the spread of HWA.

Three insects that feed on HWA (biocontrols) have been released in the Skaneateles Watershed in 2015 and 2016. These are a beetle referred to as 'Little Larry', *Laricobius nigrinus*, and two species of silver fly, *Leucopis piniperda* and *L. argenticollis*. All three species are imported from their native range in the Northwestern US where they are natural predators of HWA. Establishment has not been verified in the Skaneateles watershed for any of the three species, but establishment can take many years to be detected.

To enhance and support this biocontrol management option, in November of 2017 a new, \$1.2 million biocontrol laboratory was established on the Cornell University campus, focused on researching and rearing biological controls to stop the spread of HWA. The lab is funded through NYSDEC's monies from the NYS Environmental Protection Fund and is headed by a Cornell entomologist.

Biological control is a long-term solution for HWA, but landowners with trees that are currently infested are strongly encouraged to consider treatment of their trees. Treatment is relatively inexpensive and lasts for three - seven years. More information on HWA management options can be found at the NYS Hemlock Initiative website, [nyshemlockinitiative.info](http://nyshemlockinitiative.info).

In 2018, the agencies included HWA-specific iMap-Invasives training in their HWA workshop. IMap-Invasives is an on-line, GIS-based data management system used to assist citizen scientists and natural resource professionals working to protect our natural resources from the threat of invasive species. Attendees learned how to identify and report HWA infestations and, of equal importance, the absence of infestations around the Skaneateles watershed. Since the training, workshop participants on their own have logged over three dozen entries in the database project shared between CCE of Onondaga and the NYSHI. Including first reports of known infestations in the watershed, this citizen science effort has largely contributed to the NYSHI research, is proving to be an efficient use of agency resources and aids our partners at the state PRISMs in following early detection, rapid response protocol.

## 6. STAFFING AND FUNDING

### 6.1 Current Staffing Levels

#### *City of Syracuse*

Geographic Information System Specialist	0.17
Watershed Quality Coordinator	1.00
Sanitarian	1.00
Assistant Corporation Counsel	0.02
Total FTE	2.19

#### *SLWAP Staff -- Liverpool, New York*

Program Leader	0.25
Resource Conservation Specialists	1.00
Conservation District Technician	1.00
Conservation District Technician	0.50
Total FTE	2.75

#### *Onondaga Soil and Water Conservation District – Liverpool, New York*

Executive Director	0.25
Accountant I	0.50
Secretary	0.50
Salary/Benefits Coordinator (Part-Time)	0.25
Watershed Inspector (6-Month Position)	0.50
Total FTE	2.00

#### *CCE of Onondaga Water Quality/Agriculture Education Program Staff*

Team Coordinator (Water Quality)	0.23
Resource Educator (Agriculture)	0.03
Subject Educator (Water Quality)	0.95
Subject Educator (Water Quality/Forestry)	0.00
Social Media Platform & IT	0.06
Administrative Assistant (Water Quality)	0.09
Total FTE	1.36



## 6.2 Watershed Program Funding

<b>Expenditures</b>	<b>Actual FY 22-23</b>	<b>Estimated 23-24</b>	<b>Proposed 24-25</b>
<u>Onondaga Co, SWCD Contract Services:</u>	\$622,000	\$635,000	\$740,000
<u>Watershed Education Program:</u>			
CCE of Onondaga Co, Contract Services	\$89,361	\$89,500	\$96,178
GIS Expenses	\$11,000	\$11,000	\$12,000
Miscellaneous Expenses	-----	-----	-----
Subtotal Contractual Expenses	\$722,361	\$735,500	\$848,178
<u>City of Syracuse Staff (Direct Salary Expenses):</u>			
Water Department Staff	\$114,352	\$135,992	\$139,255
Legal Staff	\$1,055	\$1,000	\$1,000
Surveying Staff	\$1,323	\$2,000	\$2,000
Subtotal City Staff Expenses	\$116,730	\$138,992	\$142,255
<u>Other Expenditures:</u>			
Onon. SWCD Grant Program Activities- Fund Secured	\$81,052	\$73,282	\$130,000
CCE of Onondaga County Grant Supported Activities	-----	-----	-----
Subtotal Other Expenditures	\$81,052	\$73,282	\$130,000
Total Program Expenditures	\$920,143	\$947,774	\$1,008,755
<u>Funding Sources:</u>			
City of Syracuse			
Operating Budget	\$920,143	\$947,774	\$1,008,755
Subtotal City Funding	\$920,143	\$947,774	\$1,008,755
Other Funding	-----	-----	-----
Total Funds Available	\$920,143	\$947,774	\$1,008,755

## 7. LIST OF ACRONYMS

BMP	Best Management Practice
CAFO	Confined Animal Feeding Operation
CCE	Cornell Cooperative Extension
CEH	Council on Environmental Health (Onondaga County)
CNY	Central New York
CNYLT	Central New York Land Trust
CNY RPDB	Central New York Regional Planning & Development Board
CREP	Conservation Reserve Enhancement Program
CSLAP	Citizens Statewide Lake Assessment Program
EQIP	Environmental Quality Incentives Program
FE	Farm Equivalent
FLI	Finger Lakes Institute
FLLT	Finger Lakes Land Trust
FLOWPA	Finger Lakes-Lake Ontario Watershed Protection Alliance
FPIG	Farmland Protection Implementation Grant
FTE	Full Time Equivalent
GIS	Geographic Information System
GPS	Global Positioning System
HABs	Harmful Algae Blooms
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OCHD	Onondaga County Health Department
OCSWCD	Onondaga County Soil and Water Conservation District
OEC	Onondaga Earth Corps
OEI	Onondaga Environmental Institute
PDH	Professional Development Hour
SGEIS	Supplemental Generic Environmental Impact Statement
SLA	Skaneateles Lake Association
SLWAP	Skaneateles Lake Watershed Agricultural Program
SPDES	State Pollution Discharge Elimination System
SWCS	Soil and Water Conservation Society
UFI	Upstate Freshwater Institute
USDA	United States Department of Agriculture
USDA NRCS	United States Department of Agriculture, Natural Resources Conservation Service
US EPA	United States Environmental Protection Agency
USTF	Upstate Safety Task Force
WAPRC	Watershed Agricultural Program Review Committee
WQIP	Water Quality Improvement Project





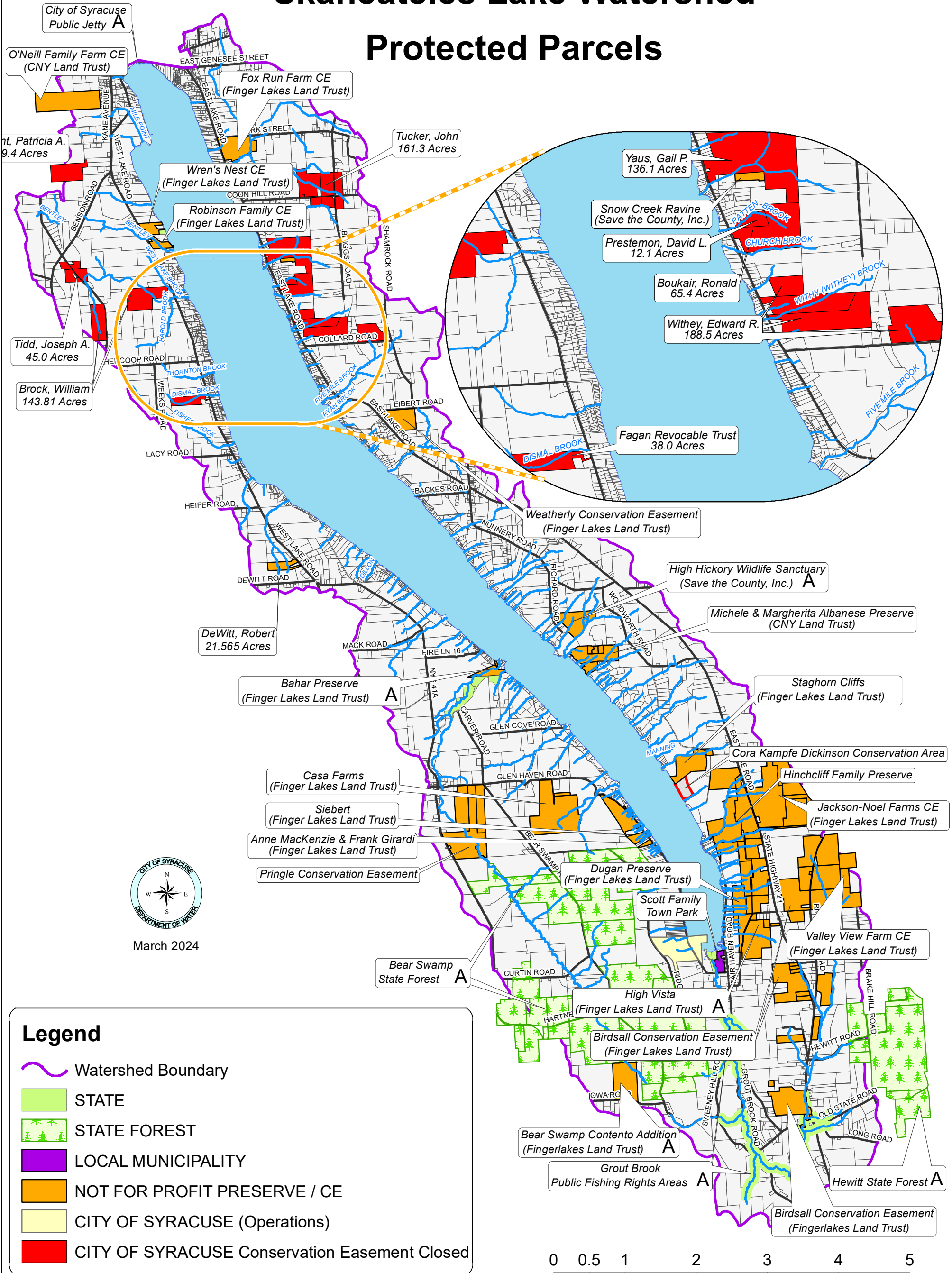
# Appendices



## **Appendix A – Maps**

# Skaneateles Lake Watershed

## Protected Parcels



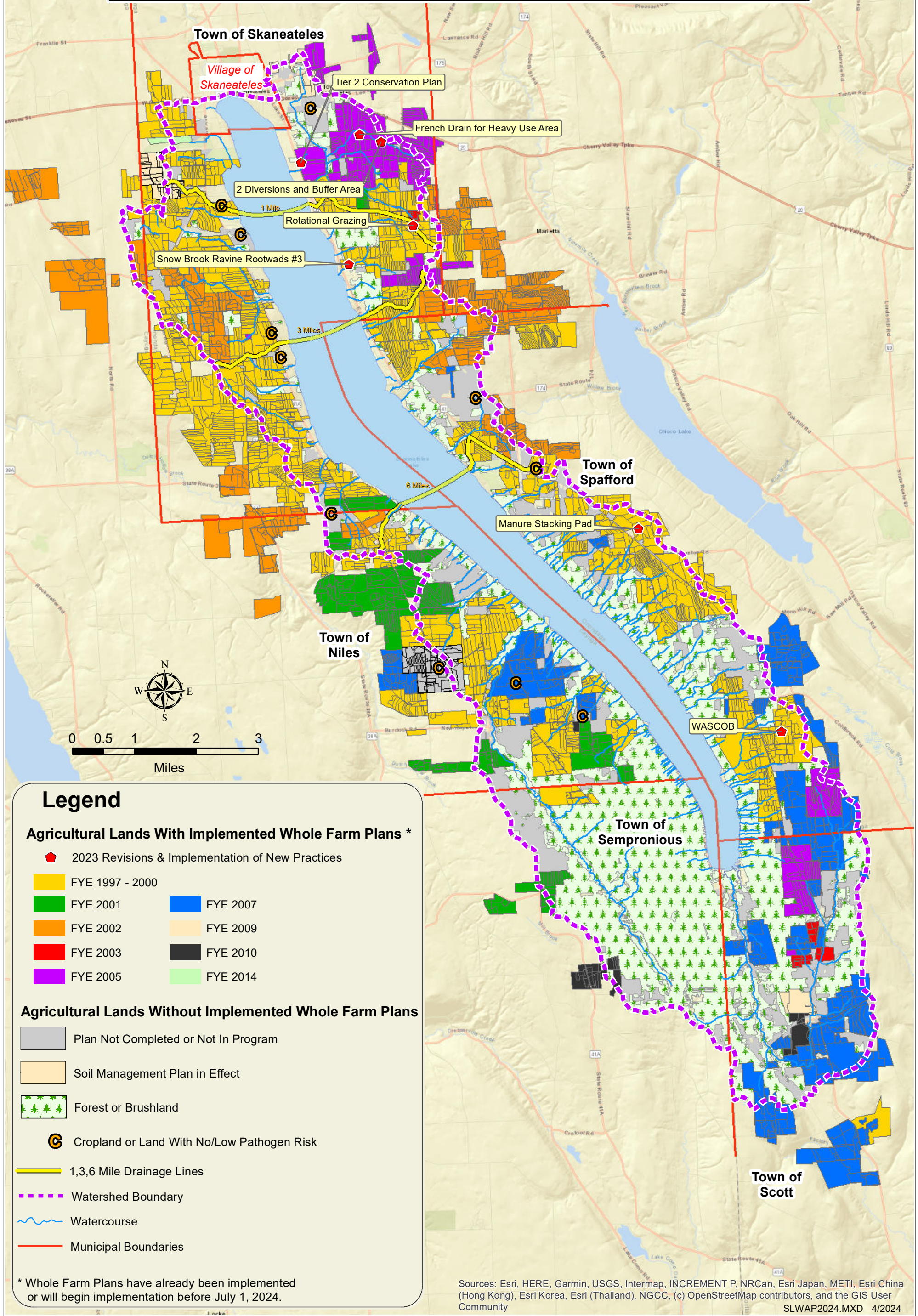
### Legend

- Watershed Boundary
- STATE
- STATE FOREST
- LOCAL MUNICIPALITY
- NOT FOR PROFIT PRESERVE / CE
- CITY OF SYRACUSE (Operations)
- CITY OF SYRACUSE Conservation Easement Closed

**A** Denotes Area Open For Public Access  
 No Public Access On Non-Profit Conservation Easements or  
 City Of Syracuse Conservation Easements



# Skaneateles Lake Watershed Agricultural Program Whole Farm Plan Implementation Progress





## **Appendix B** - Skaneateles Lake Watershed Agricultural Program Progress Report



## **Onondaga County Soil and Water Conservation District**

**6680 Onondaga Lake Parkway  
Liverpool, NY 13088**

Phone: (315)-457-0325

E-mail: [info@ocswcd.org](mailto:info@ocswcd.org)

Fax: (315)-457-0410

Web: [www.ocswcd.org](http://www.ocswcd.org)

---

### **Progress Report –**

## **Skaneateles Lake Watershed Agricultural Program**

**March 2023 – February 2024**

### **I. Introduction**

The Onondaga County Soil and Water Conservation District (OCSWCD) signed a contract with the City of Syracuse initiating the Skaneateles Lake Watershed Agricultural Program (SLWAP) in September of 1994. SLWAP was created as part of the filtration avoidance criteria established by the NYS Department of Health for the City of Syracuse in accordance with the 1986 Safe Drinking Water Act. On October 1, 1994, the OCSWCD entered into agreement with our conservation partners to implement the program. These partners included: the SWCD's of Cayuga and Cortland counties; the Cornell Cooperative Extension Associations of Onondaga, Cayuga and Cortland counties; and the USDA Natural Resources Conservation Service (NRCS).

In addition to the conservation partners, a Watershed Agricultural Program Review Committee (WAPRC) consisting of seven watershed farmers and one representative of the City of Syracuse was formed. The primary function of WAPRC is to give guidance, develop and recommend SLWAP policy for approval by SWCD district boards, and review and recommend approval of Whole Farm Plans to district boards that are developed by SLWAP.

The objective of SLWAP is to carry out a voluntary, cost-effective whole farm planning and implementation program for the watershed's agricultural community that will reduce the risk of contamination of the lake from agricultural nonpoint sources. Priority agricultural nonpoint sources of pollution include pathogens, nutrients and sediment. Whole farm plans must not only meet the water quality objectives of the program; they must also meet business objectives of the farming enterprise to be successful. Plans are developed by a multi-agency team, which includes the farm manager, and utilizes a tiered approach to whole farm planning. The whole farm plan recommends Best Management Practices (BMPs) to be implemented on the farm to address priority water quality concerns. According to NYS Soil and Water Conservation Districts Law, BMP "means a practice or combination of practices determined to be the most effective, economically feasible and practicable means of preventing or reducing pollution generated by nonpoint sources." BMP implementation is paid for through the SLWAP with principal funding provided by the City of Syracuse and other outside sources.



The program team began developing plans in March of 1995 by taking participants through Tiers I and II. The first whole farm plan was completed in February 1996. SLWAP now has participants at all five tiers of the whole farm planning process.

## **II. Participation**

There are currently 37 farms enrolled in the program that meet the definition of a “farm”. *For the purpose of the SLWAP, a farm is defined as “land used in a single farming operation for the production for sale of crops, livestock or livestock products of an average (over the past two years) gross sales of \$10,000 or more.”* This represents an 88% participation rate in the SLWAP. Five (5) farms that meet the definition of a “farm” do not want to participate in the program but are visited annually to discuss any issues/opportunities for SLWAP to provide technical assistance. Two of these non-participating farms have whole farm plans developed, and two farms have chosen to self-implement Best Management Practices identified in the plan. Twenty-three (23) of the original farms are either no longer in active production or no longer meet the definition of a farm; “land used in a single farming operation for the production for sale of crops, livestock, or livestock products of an average (over the past two years) gross sales value of \$10,000 or more.” Typically, a portion (or all) of the land base associated with these farms is being utilized by other agricultural operations in the watershed and the land is included in that farm’s whole farm plan.

Of the land in the watershed in agricultural production, approximately 93% has been enrolled in the program. It is important to note that some farmers have retired and have sold or leased their land to another watershed farm. This land has stayed in agricultural production within the watershed.

Efforts will continue to enroll those farms that have yet to sign up with the program. A continued goal of the program is to eventually involve 100% of the active farm operations in the watershed.

## **III. Planning Status (Tiers I, II, III & IV)**

Through February 2024:

- 36 farms have completed Tier I (farm inventory and identification of potential water quality concerns).
- 36 of these farms have completed Tier II (verification of water quality concerns).
- 35 farms have completed whole farm plans (Tier III) for their operations (75.82 Farm Equivalents). Note: One farm equivalent is equal to 400 acres of agricultural land, which includes forested land. (Some farms have been replanned to incorporate the management of the new owners: Allan and Ronk).

- 29 farms have completed Tier IV plan implementation (66.38 Farm Equivalents). Two (2) additional farms have self-implemented portions of whole farm plan prepared by SLWAP.

Planning Progress by Fiscal Year – Whole Farm Plans Completed\*

FY	Planning Time (months)	Plans	Updates to Plans	New Acres Planned	Updates to Previously Planned Acres	Farm Equivalents
95-96	6	5		1,200		5.56
96-97	12	11		3,747		13.87
97-98	12	7		4,618		13.79
98-99	12	4		5,580		19.81
99-00	12	5		2,866		8.76
00-01	12	4		1,735		7.92
01-02	9	5		2,628		8.43
02-03	11	2		1,470		4.08
03-04	11	4		257		4
04-05	7	1		188		1
** ,***						
05-06	12	2		489		2
06-07	12	3		1,367		5.25
07-08	12	2		466		2.14
08-09	12	2		286		2
09-10	12	4		1,016		4.65
10-11	12	3		520		3
11-12	12	0	3	-	137	3.39
12-13	12	0	1	37	0	1
13-14	12	1	0	89	0	1
14-15	12	1	1	60	1048	3.62
15-16	12	0	1	0	125	1
16-17	12	0	3	15	108	3
17-18	12	0	2	0	3032	8.22
18-19	12	0	2	0	279	9.25
19-20	12	2	0	217	0	2
20-21	12	0	1	0	24	1
21-22	12	1	0	210	0	1
22-23	12	1	1	81	0	1
23-24	12	0	2	0	55	3.62
TOTAL		69	17	29,142	4,808	145.36

\* Note: Data in this report has been updated to reflect the number of Whole Farm Plans that are currently being applied to agricultural land that is in active production, within the watershed. During the last 29 years, some farms have gone out of business and some of that land has been absorbed by other farmers (new or existing). Therefore, many of the values that are now being reported are lower than in previous reports. By way of our database, an historical record of all farms who have participated in the SLWAP has been maintained.

\*\* Note: Two farms already accounted for in previous fiscal years required additional planning to account for changes in the operation. This additional planning effort was equivalent to 2.65 Farm Equivalents and 642 acres of agricultural land. This data was not recorded for the 04-05 Fiscal Year.

\*\*\* Note: Planning team suspended Whole Farm Planning for four months to assist implementation team.

#### **IV. Implementation Status (Tier IV)**

Through February 2024, SLWAP has fully implemented whole farm plans for 29 farms (66.38 farm equivalents). During the past year revisions were planned and implemented to existing BMPs on four farms and three private landowner sites (15.14 farm equivalents). BMP implementation (survey/design/build) occurred on two new farms (2 farm equivalents). SLWAP is now primarily in a maintenance phase. Throughout the 2024 construction season, we anticipate BMP implementation to occur on at least one new farm and revisions to BMPs on four existing farms and one private landowner (stream project).

Best Management Practices (BMPs) that have been constructed on farms in the watershed include:

<b>BMP</b>	<b>Quantity Implemented</b>
Pathogen Management Systems	27
Barnyard Runoff Management Systems	30
Temporary Manure Nutrient Storage/Composting Systems	24
Nutrient Management Systems (~ AEM Tier 4)	31
Alternative Water Supply	44
Buffer Strips	39.69 acres
Access Road Improvement Sites	74
Diversions	29,273 feet
Fencing	140,449 feet
Milking Center Waste-Water Treatment & Disposal Systems	15
Short Duration Grazing Systems	13
Strip-cropping on Contour	1,375 acres
Water & Sediment Control Systems (WASCOBs)	70
Waterways – grass, stone lined	50,427 feet
Critical Area Protection – vegetation control	394 acres
Critical Area Protection – streambank stabilization	12,483 feet
Nutrient Management Reviews (annually)	26
Mortality Composting Systems	10
Cover Crops (cumulative acres - 2023)	2,405
Conservation Cover in Wheat, grass, hay (cumulative acres–‘23)	654

Roof Water Dripline (ft) -2019	23
Road Ditch Stabilization Projects w/ Heavy Armoring (#)	1
Tire Recycling (# tires since 2019)	63,729
Hydroseeded Road Ditch-Cleaned by Municipalities ('23 Miles)	3.3

Measurable results from the implementation of these BMPs include:

- Per the Chesapeake Bay model for NYS, a forest buffer applied along a pasture can provide up to a 57.57% reduction in sediment loading. The model also reports that a forest buffer applied along a pasture can provide up to a 39.43% reduction in Phosphorous loading (no value provided for Nitrogen from this model).
- The SLWAP and District have participated with Greenfield Farms for two years (2021 and 2022) to monitor tile outlet water and water coming from a wooded stream nearby the crop field. Overall, Total Dissolved Phosphorous (TDP) was higher coming out of the woods than out of the tile outlet. There were only three times that tile outlet water had higher concentrations of TDP than stream water sampled coming out of the woods. In all but three instances, Nitrogen Oxides (NOx) were higher in stream water sampled coming out of the woods as compared to tile outlet water.

In conclusion, water quality in agricultural tile lines can be of high quality if the farmer has a focus to build and maintain soil health, like Greenfield Farms has! This means establishing and maintaining vegetative buffers on the downslope side between your fields, streams and ditches. Planting cover crops annually also enhances soil health!

Hire a qualified agricultural nutrient management planner to develop a plan. Strictly adhere to the nutrient management plan (NMP)! A NMP will determine the nutrients your fields need for the intended crop growth. It is important to only apply the amount of nutrients needed. If you are an animal farmer, work with your NMP and/or your local Soil and Water Conservation District to sample your manure to determine the amount of nutrients in that manure. Then have a planner develop a NMP so that you can maximize the nutrient benefits of your manure. One local farmer in the Skaneateles Lake watershed “estimates \$180 per acre saved due to efficient manure management. “For my 1,400 acres that receive manure nutrient applications, that’s over \$250,000 in savings to my farm’s bottom line every year!”

Other BMPs in the agricultural tool box to help protect water quality and to build soil health include, but are not limited to:

- |                   |                              |
|-------------------|------------------------------|
| -Buffers          | -Protected/enhanced wetlands |
| -No-till planting | -Filter Strips               |
| -Terrace          | -Grassed Waterways           |

- Strip Cropping
- Bio Reactors
- Cover Crops
- Water & Sediment Control Basins (WASCOBs)
- Crop Rotation
- Residue & tillage management
- Diversions

Research has shown that better drained soils have better growing seasons. Tile drained soils provide the farmer greater flexibility when timing fertilizer and manure applications. This allows animal farmers to have more flexibility to stay off fields during higher risk times (rain and/or snow melt events). And, tile drained fields generally provide longer periods to harvest crops and spread manure. All of which means cover crops can be planted sooner in the fall!

- Cornell University in cooperation with Onondaga County Soil and Water Conservation District and funding from the USDA-Natural Resources Conservation Service (NRCS) Conservation Innovation Grants Program have been working with a watershed farm, since 2016, to reduce nitrate-rich farm runoff that could be discharged via tile (subsurface) drains to waterways.

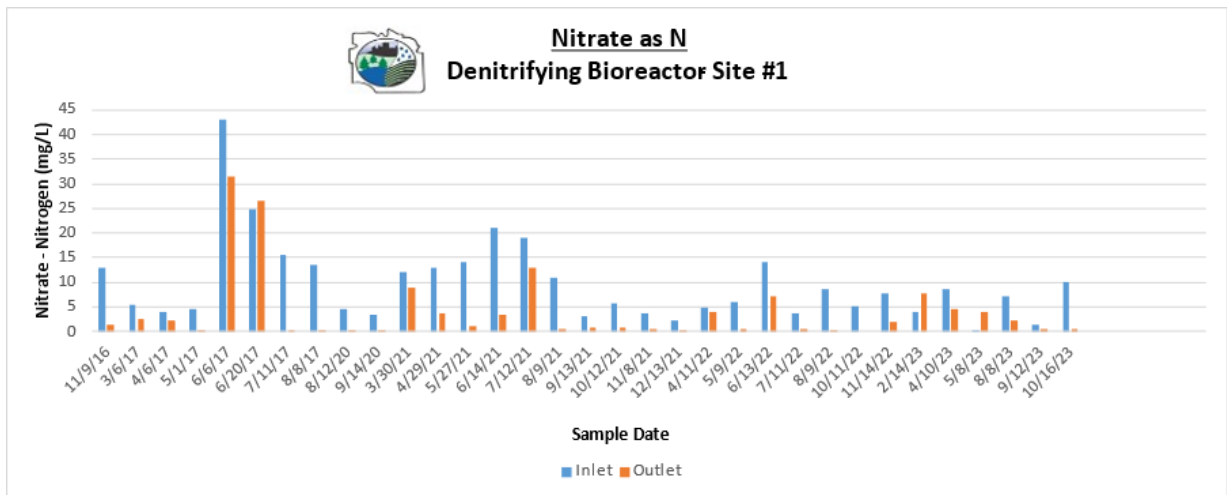
Denitrifying bioreactors, also called wood chip bioreactors, utilize a carbon source in the form of wood chips which support denitrifying bacteria, converting nitrates into nitrogen gas that is released to the atmosphere. Tile drainage water is diverted by a water control structure through the bed of wood chips. This practice does not require land to be pulled out of production and does not inhibit the normal operation of subsurface drainage systems. Monitoring of previously installed bioreactors in the Susquehanna and Finger Lakes watersheds has shown a 57% reduction in nitrogen that enters our streams.

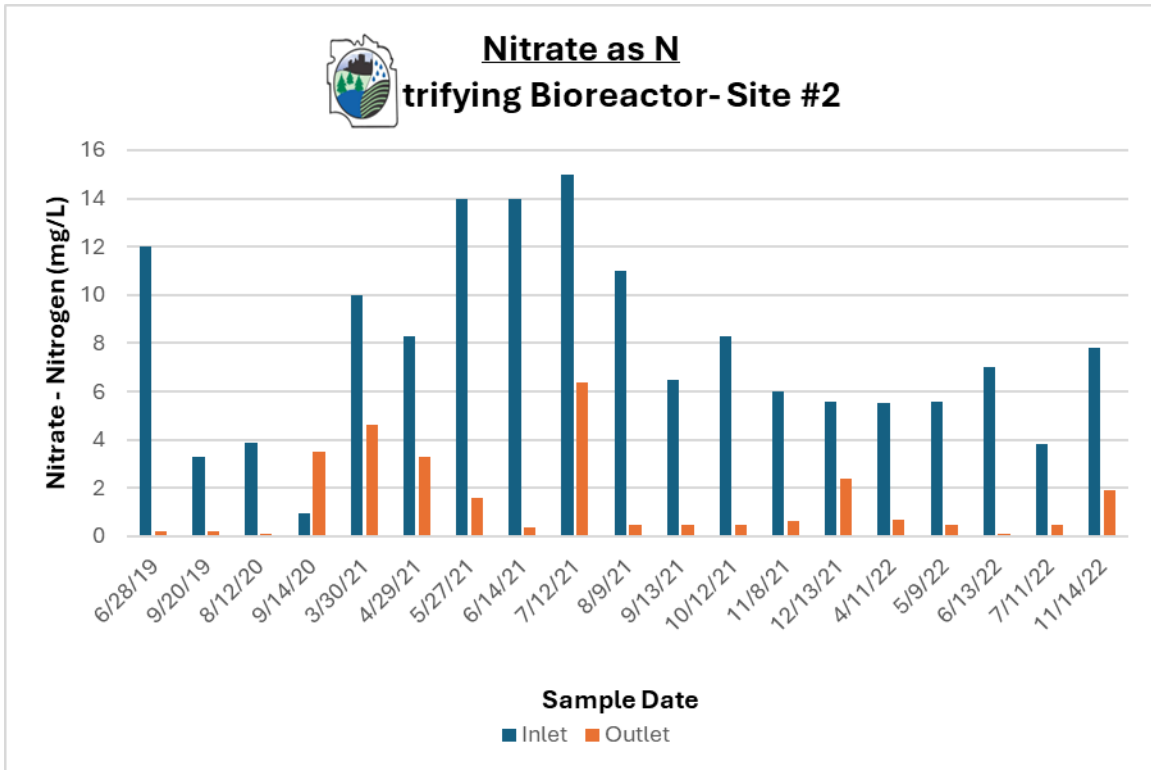
The performance of the denitrifying bioreactors is being monitored to determine if these can become part of the NRCS best management practices and to further develop a Conservation Practice Standard for New York to design and implement them. The cost of implementation is quite reasonable, typically less than \$10,000, since woodchips are readily available and the diversion structures to control the flow of the water through the bioreactor are less than \$1000 each. Operation and maintenance costs are also low because they work passively underground (Figure 3). Since the denitrifying bacteria are always hungry, as long as there is a supply of nitrate and some woodchips to decompose, they are expected to continue to work. The decomposition of the woodchips is very slow because the intent is to keep the woodchip bed saturated and in an anaerobic, oxygen deficient type of environment where the nitrate-consuming bacteria thrive best.

Results in 2017 have shown a 43% (2017 – high of 42.9 ppm on inlet side and low of <0.5 ppm on outlet side) to 68% (2021 – high of 21 ppm inlet side

to low of <0.5 ppm on outlet side) reduction in Nitrate as N in one bio reactor during the months of June and early July and an 85% (2021 – high of 15 ppm on inlet side to low of <0.5 ppm on outlet side) reduction in Nitrate at N in a second bio reactor during that same time period.

Regular sampling and analysis of the inlet and outlet are crucial for understanding the effectiveness of the bioreactors. OCSWCD has been actively monitoring the performance of the bioreactors since 2017. There was an absence of sampling in the summer of 2023 because there were low precipitation rates at the time of sampling and both outlets were dry. The yearly analysis and graphing of the data indicate that, while there may not be a specific trend observable, both bioreactors are still effective and there is no immediate need to replace the woodchips. It's essential to continue sampling to detect any potential changes or issues that may arise in the future. This frequency allows for close monitoring of the bioreactors' performance and ensures timely detection of any problems that may require intervention, such as replacing woodchips if necessary and contributing to the sustained performance of the bioreactors over time.





- The SLWAP has also participated in graduate level research projects with SUNY College of Environmental Science and Forestry. Those research projects included:

Pradhanang, Soni. 2009. Monitoring and Modeling of Water Quality in Streams of Skaneateles Lake Watershed, NY. 185 p.

Abe, Noaya. 2006. Dissertation. Studies in Resources Economics: Scrap Tire Management and Watershed Management for Water Source Protection. 321 p.

- When a farm goes out of business, there is a “vacuum” in the watershed. Typically, there are 3 to 5 farms bidding to purchase the outgoing farm to keep that land base and the BMPs in active agricultural production.
- Fertilizer recommendations have been made for all 36 farms with a Tier III Whole Farm Plan. Nutrient savings in the watershed are achieved through better timing and placement of the nutrient application, as compared to traditional practices. Today, nutrient recommendations are based upon maximum economic yields, as determined by Cornell University’s “Cropware” program. The end-result of using Cropware is that nutrients are applied at a scientifically-balanced rate as opposed to a producer “guessing” as to what a crop needs to grow.

- Crop rotations and BMPs have helped reduce soil erosion by an average of 3,770 tons/year.
- Three barriers to pathogen movement (heard health, following barnyard maintenance and manure spreading schedules at agronomic applications on approved fields, and excluding livestock from water courses), are established on 18 out of 21 “active” livestock farms enrolled in the watershed agricultural program. Progress is being made to establish the three barriers to pathogen movement on all remaining livestock farms.
- According to the Procedure for Estimating Agricultural Nonpoint Source Phosphorus Runoff (Lake Champlain Basin Program – USDA/NRCS and University of Vermont), BMPs implemented through the SLWAP will prevent approximately 19,525 pounds of phosphorus/year from entering Skaneateles Lake. BMPs responsible for the reduction include Barnyard Runoff Management, Milking Center Waste Water Treatment & Disposal Systems, Animal Waste Management Systems, and Short Duration Grazing Systems.

There are currently three remaining livestock farms in the watershed that require some amount of implementation to complete their whole farm plan goals. Implementation has commenced on these farms.

## **V. Whole Farm Plan Annual Evaluation (Tier V)**

Tier V of the Tiered Approach to Whole Farm Planning is the annual review, evaluation, operation, maintenance, update and potential revision of completed whole farm plans. SLWAP has been developing and implementing plans since 1995, therefore the evaluation of previously completed plans is critical. It is important to determine if the plan agreed to by the farmer is effectively being followed and protecting water quality as designed. Tier V provides the opportunity to revise and update the plan as needed and reinforces the objectives of the plan with the farm manager. Most plans require revisions in crop rotations and an update to the nutrient management plans (i.e. fertilizer recommendations and manure spreading schedules). Accordingly, Whole Farm Plans are “living” documents that are always changing.

In January 2013, SLWAP initiated a more-in-depth annual evaluation of whole farm plans for farms in the watershed with completed plans. Specifically, all the BMPs from the long-form of the whole farm plan were plotted on an aerial photo base GIS map. Staff went farm-to-farm to identify and evaluate BMP installations on the farm. Staff also continued to hold one-on-one meetings to collect information necessary to update the plans. In addition, this meeting allows SLWAP to determine how well the plan and the BMPs are being operated and maintained. It has helped staff to anticipate any new revision projects that will be needed to protect water quality. Reviews were conducted between January and



March 2019. Any new revision projects will be added to the existing data base and will be planned and implemented as revision projects are completed and removed from the existing database, subject to the availability of unencumbered funds.

The Annual Farm Consumption Reviews of the recent years have been most comprehensive, stream-lined reviews ever completed in recent history of the watershed program. The data collected was extremely accurate and took into account amounts of items such as livestock housed, manure applied, fertilizer applied, etc. for land that the farms owned and/or operated both inside of and outside of the watershed. The farmers were provided with an “annual review refresher letter” as to what data was necessary to collect and present during the annual review to stream-line future annual reviews.

In the winter of 2016, SLWAP utilized services of an Intern from Onondaga Community College (OCC) to graphically analyze data from past Farm Consumption Reviews. The results were inconclusive, so the project was redone by a new OCC intern to achieve more accurate results and results were reviewed by the SLWAP Whole Farm Planner. The goal of the project was to observe trends in livestock numbers, manure volumes spread, production acreage, fuel, and pesticide usage. These data were last updated in 2020.

## **VI. Conservation Reserve Enhancement Program (CREP)**

In 2001, the USDA Secretary of Agriculture approved a Conservation Reserve Enhancement Program (CREP) for Syracuse and the Skaneateles Lake Watershed. This USDA program focuses on removing highly erodible cropland, within 800 feet of eligible water bodies and marginal pasture found adjacent to open water bodies (riparian areas), from active agricultural use. Participating Landowners are compensated by USDA’s Farm Service Agency (FSA) with land rental payments, multiple incentive payments, maintenance fees, and cost share for the installation of associated BMPs. Land entered into the Skaneateles Lake Watershed CREP must be included in a whole farm plan. All pasture acreage enrolled in the program must be established with trees and shrubs, while any cropland entered can be established with either grasses or woody vegetation. All BMP’s through CREP must be maintained for the life of the contract (ten to fifteen years). The intent of establishing a vegetative cover is to effectively reduce/remove pathogens, nutrients, and sediments from field and pasture runoff, while providing high quality wildlife habitat. The agreement between USDA and Syracuse allows for a total of 1000 acres to be enrolled in CREP, with a combined contribution of \$900,000 over 15 years (\$250,000 from Syracuse and \$650,000 from USDA).

No farms enrolled land into CREP in 2023. A continued effort is being made to identify potential farms for CREP enrollment and then to sell these farms on the conservation benefits of CREP participation. To this end, SLWAP and the Onondaga County Soil & Water Conservation District posted a USDA-authored article on the benefits of participating in CREP on their websites as well as in both programs’

quarterly newsletters. The efforts have not yet resulted in any new CREP enrollments in either the Skaneateles Lake watershed.

<b>Year</b>	<b># of CREP Farms Planned</b>	<b>Acres of CREP Planned</b>	<b>Farms Implemented</b>	<b>Acres Implemented</b>	<b># Farms / Acres – Enhanced</b>	<b># Farms / Acres – Re-enrolled</b>
2023	0	0	0	0	0	0
2022	0	0	0	0	0	0
2021	0	0	0	0	1 / 1.2	1 / 1.2
2020	0	0	0	0	0	
2019	0	0	0	0	1 / 1.4	
2018	0	0	0	0	2 / 8.4	
2017	0	0	0	0		
2016	0	0	0	0		
2015	0	0	0	0		
2014	0	0	0	0		
2013	0	0	0	0		
2012	0	0	0	0		
2011	0	0	0	0		
2010	1	0.7	1	0.7		
2009	0	0	2	3.3		
2008	3	5.8	1	2.5		
2007	2	5.9	2	6.7		
2006	0	0	1	6.3		
2005	4	84	3	74		
2004	2	9	3	18		
2003	3	21	2	13		
2002	1	22	1	22		
<b>TOTAL</b>	<b>16</b>	<b>148.4</b>	<b>16</b>	<b>146.5</b>	<b>4 / 11 ac</b>	<b>N/A</b>

Using the Chesapeake Assessment Scenario Tool (CAST), which is a web-based nitrogen, phosphorous and sediment load estimator tool that streamlines environmental planning, the CREP acres in the watershed provide the following environmental benefits, listed in the table below.

CAST N Reduction Estimate (lbs/yr)	CAST P Reduction Estimate (lbs/yr)	CAST Sediment Reduction Estimate (lbs/yr)	MT/yr CO <sub>2</sub> e Sequestration Estimate
4,740	38	409,974	569

## **VII. Soil Conservation Tools in the Watershed**

In the summer of 2017, the SLWAP sold the 6-Row John Deere 1750 Conservation Planter and the 10' Great Plains 1006 No-Till Drill that was purchased in 2009 by the City of Syracuse. It is important to note that the City's goal of the program was to provide these implements for usage on farms (at a nominal fee). Ideally, the farm would be satisfied with the results of the implements on their land and then would purchase this type of conservation implement when they update their equipment in future years. The program was very successful.

Since the City of Syracuse purchased these implements in 2009, four farms operating large acreages have purchased the conservation-type implements. Two farmers have purchased the 30-foot AerWay manure incorporation tool (these two large farms work a combined 5,500 acres of tillable land, which accounts for approximately 20% of the tillable land in the watershed), one farm has purchased a 30-foot Great Plains drill and one farm has purchased a 12-row planter that utilizes some of the conservation technology.

A new 12-foot Esch 5512 no-till drill was purchased during the summer of 2017. The drill is two-foot wider to help the farmers plant more ground with each pass. A unique feature of the drill is that it has a folding draw bar so that it is only 8.5 feet wide when trailering down the road between farms. This was a great advancement for safety of the staff member that delivers the implement to farms.

The drill can plant small grains, cover crops, small seeds, soybeans, and buffer strips. It has 5.5-inch row spacing, two seed boxes, and requires a 100-horse power tractor to operate.

In 2023, it was determined that the drill will need replacing due to wear and tear. Bids will go out in the Spring of 2024 to secure a replacement.



### **Implement Usage Summary**

In 2023, the Esch was utilized on 275 acres of cropland between the watershed and Onondaga County. SLWAP staff advertised these implements to SLWAP producers utilizing the following means: printer flyers, website, and by posting a video of the equipment being used on YouTube.

SLWAP staff, the City of Syracuse, WAPRC, and Onondaga County SWCD District Board of Directors review the rental rates annually for each equipment rental season. The rental rates will remain affordable enough so that farmers will continue to try the equipment, be satisfied with the results, and “will purchase these types of implements when their current implements wear out.” The 2023 rental rate stayed the same at \$15/acre with a \$100 delivery fee.

### **New Technology Applied - Cover Crop Drone Seeding Project**

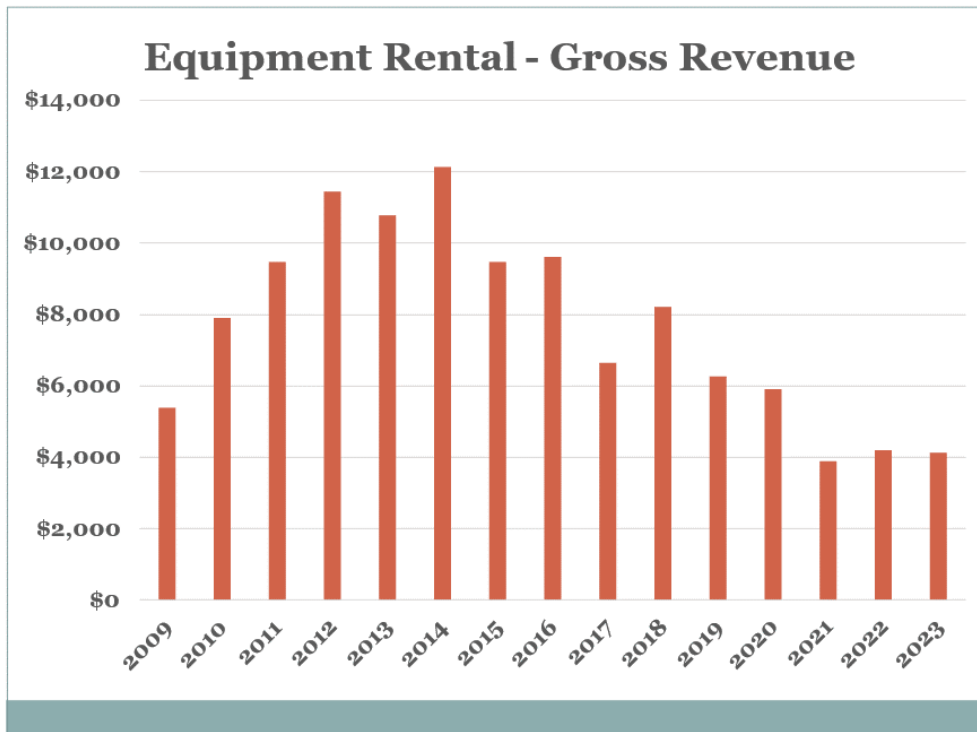
Beginning August 21<sup>st</sup>, the Skaneateles Lake Watershed Ag Program (SLWAP) contracted with Auburn Ag Products to apply over 16,500 pounds of annual ryegrass cover crop seed on over 660 acres of standing corn silage fields in the Skaneateles Lake watershed. We used a large Hylio AG-130 drone with a hopper/spreader capable of applying seed on 0.8 acres per flight. The cover crop seeding project is in the first year of a 3-year NYS Climate Resiliency Farming grant. Eight Skaneateles Lake watershed farms volunteered to test this technology for the project. Our experience is that advancing drone technology has promising uses on the farm as we learn how to use it effectively. The new models of drones will more than double the capacity and dramatically improve efficiency.

Annual ryegrass is shade tolerant, so it will germinate and establish under the canopy of corn leaves. It has a successful history of being applied by aircraft in the Midwest about 6 weeks before the crop is harvested. Rainy weather conditions can delay corn harvest or delay cover crop planting after the corn harvest. Without cover crop protection, the soil is vulnerable to erosion from storm and spring runoff events during the dormant season.

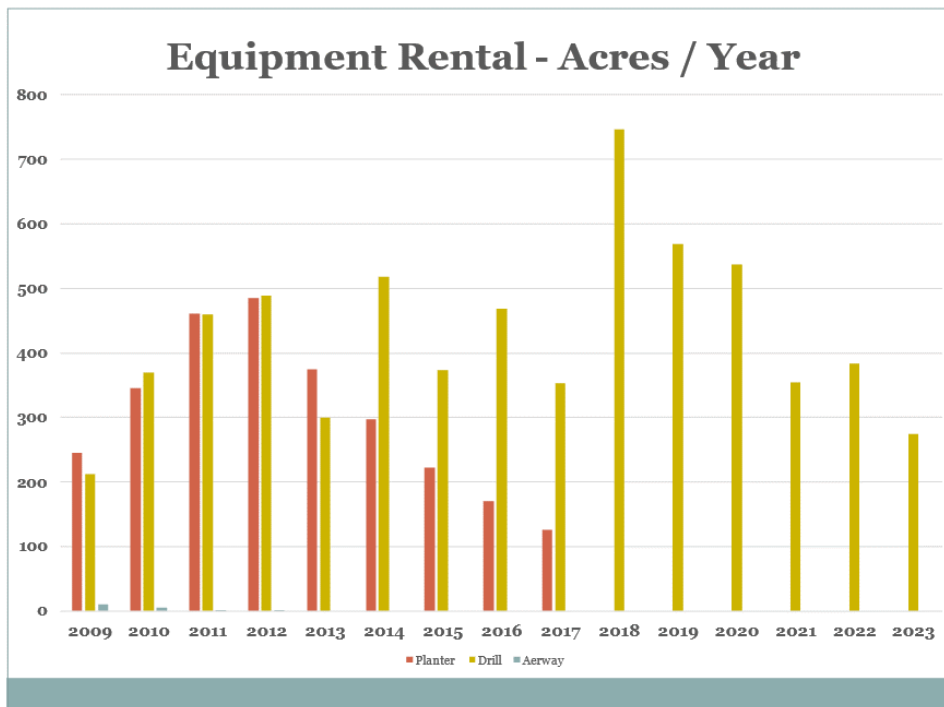
The agricultural fields selected for this project are in high priority watersheds of Skaneateles Lake that has a high impact on the quality of drinking water for over 200,000 city residents. Planting of cover crops with drone technology will allow for a quick establishment of a 'green carpet' of growing plants as enhanced protection for this great resource. Cover crops also increase infiltration of water into the soil profile to reduce storm water runoff potential from the fields. Another benefit is that cover crops increase soil aggregates and organic matter which increases overall soil health. This is a win-win for the farm and the environment.



A bar graph showing gross revenue from the equipment rental program is presented below.



A bar graph showing implement usage is presented below. (Please note: Aerway usage is reported as number of users per year. Aerway sold in fall of 2012).



## VIII. Funding Assistance

A component of the SLWAP contract with the City of Syracuse is to secure additional funding sources to assist with whole farm planning and implementation.

Five outside funding sources were applied for in 2023 for a total of \$741,862 to supplement City funds. They are as follows.

-\$65,390	EPF 29 – Pasture grant for 2 farms
-\$258,748	EPF 29 – Silage leachate management (1 farm)
-\$258,735	EPF 29 – Manure NUTRIENT storage (1 farm)
-\$107,489	CRF 7 – Water reuse for milk cooling & livestock consumption (1 farm)
-\$51,500	Senator Mannion CREST – Sweeper Vac (for dry fertilizer spills)

As new project opportunities arise, SLWAP staff will certainly apply for grant funding to continue to offset implementation cost to the City.

The total of grant funds secured by SLWAP for implementing projects on the land since the beginning of the program is \$6,923,535.80.

## IX. Awards & Recognition

### **Aldo Leopold Conservation Award (NYS)**

On August 11, 2022, New York State Agriculture Commissioner Richard A. Ball joined the Sand County Foundation to announce that Greenfield Farms of Skaneateles was selected for the 2022 New York AEM-Leopold Conservation Award. The distinguished award honors a farm for its extraordinary efforts to promote and protect the environment through the preservation of soil and water quality while ensuring farm viability for future generations.





Greenfield Farms. The best view of Skaneateles Lake from anywhere in the watershed!

### **Environmental Steward of the Year**

The SLWAP recognizes outstanding cooperators in the watershed agricultural program throughout the years .Below is a table of past recipients.

Award recipients are listed below.

<b>Year</b>	<b>Farm Name</b>	<b>Farm Type</b>
<b>2019</b>	<b>City of Syracuse Watershed Agricultural Program</b>	<b>Water Purveyor</b>
<b>2018</b>	<b>Ireland Farms</b>	<b>Crop</b>
<b>2015</b>	<b>Birdsall Farm</b>	<b>Beef</b>
<b>2014</b>	<b>John F. Tucker &amp; Sons</b>	<b>Dairy/Crop</b>
<b>2013</b>	<b>McMahon's E-Z Acres</b>	<b>Dairy</b>
<b>2008</b>	<b>Congressman James T. Walsh</b>	<b>Government</b>
<b>2006</b>	<b>Fesko Farms</b>	<b>Dairy</b>
<b>2005</b>	<b>Weeks Farm</b>	<b>Crop/Beef</b>
<b>2004</b>	<b>Greenfield Farms</b>	<b>Crop</b>



## U.S. Outstanding Dairy Farm Sustainability Award Recipients

Award recipients are listed below.

Year	Farm Name
2020	Young's Twin Birch Dairy Farm
2018	McMahon's E-Z Acres Dairy Farm

## Municipal Partner of the Year

Award recipients are listed below.

Year	Farm Name
2021	Town of Spafford / Highway Department
2015	Onondaga County / Highway Department

## X. Information & Education Activities

SLWAP has established an Information & Education program designed to support, reinforce and expand planning, implementation and revision efforts. A summary of Information & Education activities is listed below:

- Watershed Journal – our program's newsletter, is designed to keep all farmers in the watershed up to date with program activities. Our articles focus on various water quality BMPs, timely reminders on BMP Operation and Maintenance, a calendar of environmentally oriented meetings and seminars in the area, and the results of farmer experiences with various BMPs. The journal publication is published four times a year and sent out by US Mail and electronically. Distribution is 1,454 copies.
- The SLWAP web page is integrated with the Onondaga County Soil and Water Conservation District home page. Updates are made to the site periodically and current newsletters are available on the website. The web address is [www.ocswcd.org](http://www.ocswcd.org). During peak viewership we receive in excess of 400 hits per day.
- The Skaneateles Lake Watershed Agricultural Program Watershed Agricultural Program Review Committee had five meetings in 2023. (Jan. 30, Mar. 1, Jun. 21, Sept. 21, Dec. 13).
- Program Manager Burger attended numerous regularly scheduled and special meetings of the Skaneateles Lake Municipal Website Committee meeting. (Jan. 20, Mar. 3, Apr. 21, Jul. 9, Aug. 25, Dec. 15)
- Program Manager Burger attended the State of the City address at Corcoran High School (Jan. 26)

- On February 23, the book “Tomatoes for Neela” was read for Ag Literacy Week by Chris Travis and Eric Jensen at Dr. King Elementary School in Syracuse. Then, on March 25, Chris read the book at Brighton Academy (Syracuse).



- Six annual reports sent to NYS Department of Agricultural and Markets for 2023 activity. February 15, 2024. The Annual Report of the Treasurer was submitted by April 15, 2024.
- SLWAP farmer Dirk Young did an interview about agriculture and conservation with WCNY Central on Feb. 23.
- SLWAP Program Manager Burger and Onondaga County Conservation District Technician Conor Larkin participated in Legislative meetings w/ NYS elected officials in Albany (Feb. 27 & 28).
- SLWAP and the District provided refreshments for the Manure Safety Day training for farmers on the safe spreading of manure nutrients in central NY, and spill response recommendations (Mar. 10).
- Burger participated in Congressman Williams Agricultural Advisory Committee meeting at SUNY Morrisville (Mar. 16) (Sept. 5).
- Staff members attended annual training at Water Quality Symposium by Zoom to enhance staff skills and study new approaches (and BMPs) to address environmental concerns on farms in the watershed. March 14-17, 2023.

- Burger participated in the 9-E Plan meeting (Mar. 28).
- Burger participated in the Onondaga County Emergency Preparedness meeting (Apr. 4, May 24). The District and SLWAP are part of the Emergency Operation Center (EOC) team in the event natural disasters or other emergencies effect farms in the County and the watershed. We maintain a binder for each watershed of each farms ability to sustain (for how long) and what their limiting factors to sustainability will be, post-storm.
- Program Manager Burger attended Water Fest in Cortland to promote accomplishments of the ag program (Jun. 3).
- Resource Conservation Specialist E. Jensen submitted a grant application for \$50,000 to Senator Mannion to help secure funds for a tow-behind sweeper for ag spill response related to dry fertilizer (Jul. 22).
- Three EPF 29 grant applications submitted to NYS Dept. Agriculture Markets (Jun. 26). All grants were funded! Twenty one BMPs will be implemented on four farms. \$582,873 secured by staff!
- Jensen and Burger met w/ Senator Mannion’s office to discuss the CREST grant application SLWAP submitted. (Jul. 14). Jensen demonstrated another sweeper in Ithaca; liked the results. (Jul. 18) (Sept. 12).
- Clark submitted (and was awarded) a Climate Resilient Farming (CRF) grant application to NYS for Richards Water Reuse and Reclamation project. \$\$107,489 secured! (Jul. 7)
- Burger attended kickoff meeting for Coalition of Eastern Finger Lakes Districts at Cayuga SWCD (Jul. 17)
- Burger participated in CREP meeting (for 2023 annual report to USDA) (Sept. 29).
- Burger attended Onondaga County Farmland Protection Board training on Solar Production (Oct. 18).
- Jensen and Burger participated in the 9-Element Plan committee meetings for “Stormwater/Landscape” (Nov. 3) and “Roads” (Oct. 9).

- Burger joined Abbott at NYS DEC Resilient NY Flood Mitigation meeting at Skaneateles Library (Nov. 7).
- SLWAP Annual Meeting (virtual). December 13, 2023. On December 13<sup>th</sup>, the Skaneateles Lake Watershed Ag Program held its annual meeting at the First Presbyterian Church in Skaneateles. Fourteen farms in the Skaneateles Lake watershed and seven other county farmers were present representing 50 percent of the watershed land base.

The fifty guests listened to Leah Ziemba, a partner at Michael Best & Friedrich Law Firm, discuss how NYS regulations, the agribusiness industry, and how compliance records can be used to defend a farm in the face of disagreement within the community. Zachary Larson of Bayer Sustainable Ag, spoke on the future of carbon credit markets.

Mike McMahon, chairman of the Watershed Ag Program Review Committee, recognized Janet Aaron, Town Supervisor of Skaneateles, for her nearly 40 years of service to the community and farmers in the watershed. She was presented with a unique plaque and bouquet of flowers.



- Burger presented with award. “Fesko Dairy, LLC recognizes and appreciates your continued efforts and support for agriculture in the Skaneateles Lake Watershed. The most precious thing a person can give is time. We thank you for yours.” (Dec. 14).

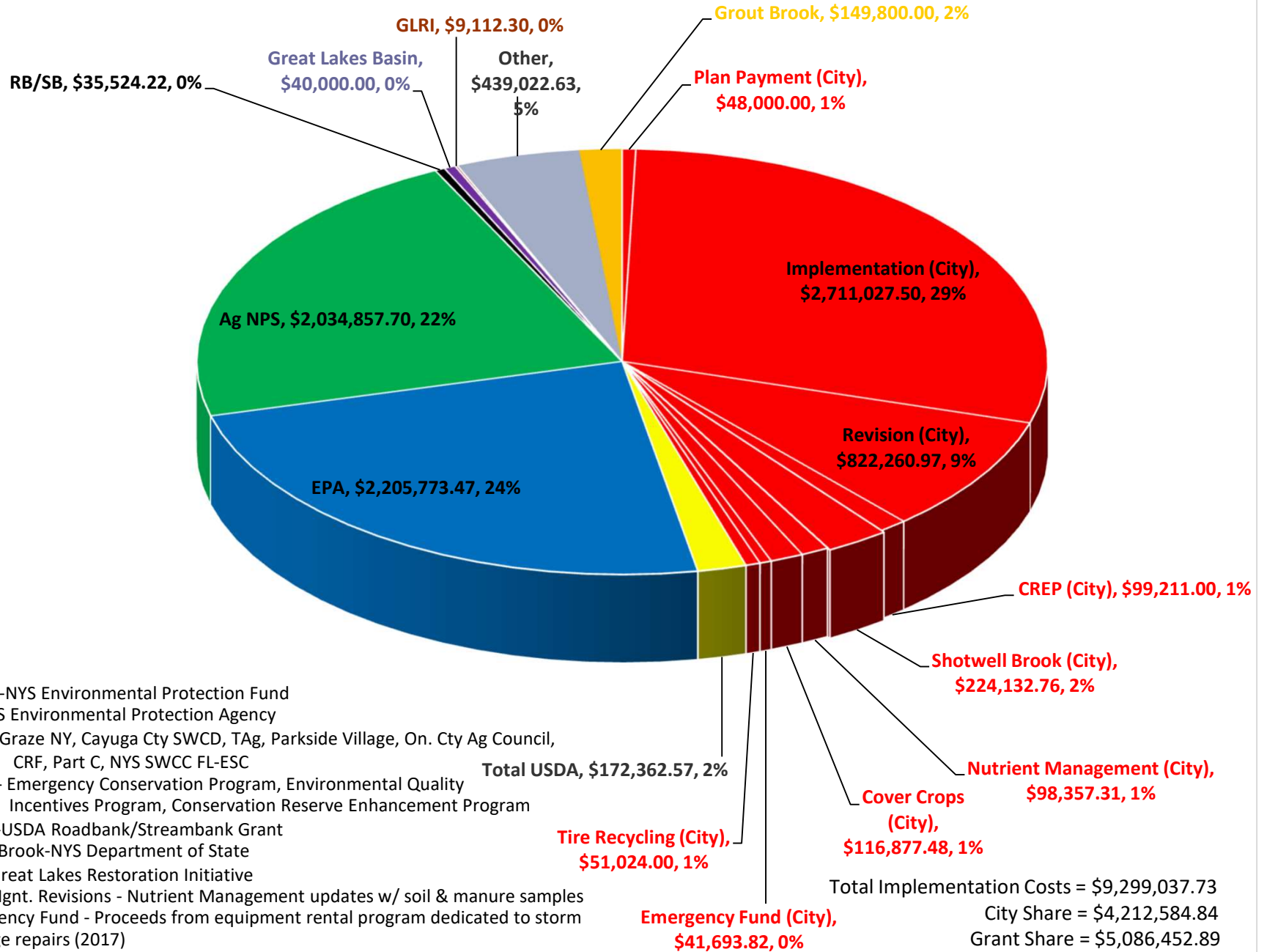
- The OCSWCD participated in a React Snowplow Blade Study in the winter of 2022/2023. The goal of the project was to determine if snowplow blades that contour the road surface could remove more snow/ice and thereby reduce road salt applications. The results were very promising and authored into a final report (available by request from OCSWCD). The award-winning town highway departments of Spafford (2020) Skaneateles (2021) have purchased blades for use in their communities.

## **XI. Conclusion**

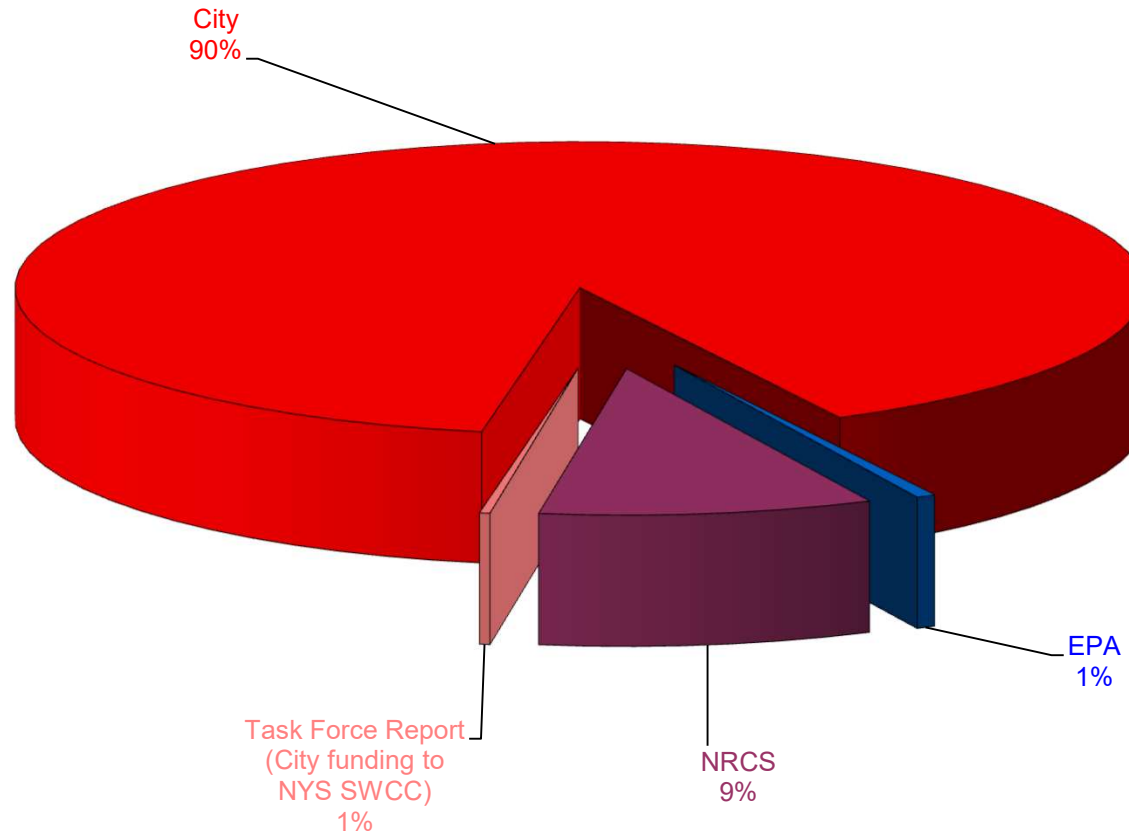
The SLWAP remains a successful model of the Agricultural Environmental Management approach to whole farm planning. The program has been an excellent opportunity for farmers in the Skaneateles Lake watershed to voluntarily work towards water quality protection while keeping agriculture viable within the watershed. Secondary benefits of the program include preservation of open space and continued maintenance of a safe and reliable food supply.

## SLWAP Implementation Costs 1/1995 Through 2/28/2024

Note: 0% is equivalent to less than 1%. Please use available financial data for calculations.



**SLWAP Operating Costs 1/1994 Through 2/28/2024**



**Total Operating Costs = \$11,703,202.93**  
**City Share = \$10,488,918.98**  
**Grant Share = \$1,214,283.95**

**Key:**  
**NRCS - USDA Natural Resource Conservation Service**  
**EPA - US Environmental Protection Agency**  
**NYS SWCC - NYS Soil and Water Conservation Committee**

Note: 1% may actually be less than 1%. Please use available financial data for calculations.

Please note: figures denoted as 1% are actually less than 1%.

## **Appendix C** - CCE Water Quality Education Program for the Skaneateles Lake Watershed



## Skaneateles Lake Watershed Water Quality Education Program Program Report for January - December 2023

### **Workshops and Events**

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
2/22	Helping our Hemlocks: An Update on Research and Actions to Protect Hemlocks in Skaneateles	43	Online (Zoom)
3/8	The Ups and Downs of Skaneateles Lake	72	Online (Zoom)
4/6	Introducing Shore Zones: Their Ecology and Management	38	Online (Zoom)
6/21	Keeping Up with the Joneses – How Neighbors Influence Shoreline Type	18	Online (Zoom)
7/13	Naturalizing Your Shoreline	9	St. James Episcopal Church, Skaneateles

### **Trainings and Stewardship Opportunities**

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
5/15, 6/30, 10/3	Skaneateles Rain Garden Project	6	Syracuse Water Department Building, Skaneateles
6/1	Skaneateles Shoreline Visit	4	Terrace Lane, Skaneateles

### **Municipal/Organizational Support**

<i>Date(s)</i>	<i>Constituent/ Meeting</i>	<i># of Participants</i>	<i>Location(s)</i>
1/20, 3/3, 4/21, 6/9, 9/15, 12/15	Skaneateles Municipal Stakeholders Website Meetings	9-12	Online (Zoom)
3/1, 5/3, 7/5, 9/6, 11/1	Skaneateles Lake Association (SLA) Lake Ecology Team Meetings	30	Online (Zoom)
3/3, 3/24, 4/11, 4/12, 7/6, 11/2, 11/3, 11/9	Nine Element Plan Watershed Advisory Committee Meetings	10-20	Online (Zoom)
10/19	CCE Onondaga Annual Meeting	30	Camp Brockway, Pratts Falls Park, Manlius

**Community Outreach**

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
1/9	SUNY ESF Job Shadow	1	Online (Zoom)
4/22	Baltimore Woods Earth Day	120	Baltimore Woods, Marcellus
5/6	Green Resource Fair	11	SUNY ESF
7/10	4-H Stream Systems and Water Quality Program	25	Camp Brockway, Pratts Falls Park, Manlius
7/20	Skaneateles Curbstone Festival	15	Skaneateles
9/30	Green Vendor Fair	23	Village Hall, Skaneateles
10/6	Environmental Field Days	94	Green Lakes State Park

**FEATURED on Local News Sources: Video, Online, Print**

<i>Date</i>	<i>Title</i>	<i>Newspaper/ Channel</i>	<i>Format</i>
2/22	<i>Town recognized for partnership</i>	Skaneateles Press	Print Article
3/2	<i>March 8 CCE program to discuss lake levels</i>	Skaneateles Press	Print Article
3/22	<i>Cornell Cooperative Extension program discusses lake elevation</i>	Skaneateles Press	Print Article
6/9 & 6/21	<i>CCE plans educational programs</i>	Skaneateles Press	Print & Online Article

**CCE Onondaga Water Quality E-newsletters: MailChimp**

<i>Date</i>	<i>Topics (s)</i>	<i>Reach</i>
1/30	Skaneateles Education Program January Updates 2023	224
2/21	Skaneateles Education Program Helping Our Hemlocks Event	209
2/27	Skaneateles Education Program February Updates 2023	234
3/8	Skaneateles Education Program Ups and Downs of Skaneateles Lake	216
3/27	Skaneateles Education Program March Updates 2023	229
4/5	Skaneateles Education Program Introducing Shore Zones	218
4/28	Skaneateles Education Program April Updates 2023	246
5/17	Skaneateles Education Program May Updates 2023	234
6/13	Skaneateles Education Program June Updates 2023	224
6/20	Keeping Up with The Joneses Reminder Email	199
6/29	Cortland Septic System Program	222
7/3	Skaneateles Education Program WAVE Newsletter and July Updates 2023	236
7/12	Skaneateles Education Program Final Shorelines Program Reminder!	208
8/10	Skaneateles Education Program August Updates 2023	246
9/15	Skaneateles Education Program September Updates 2023	245
10/6	Skaneateles Education Program October Updates 2023	248
10/28	Skaneateles Education Program November Updates 2023	257
12/19	Skaneateles Education Program December Updates 2023	243

**Skaneateles Lake Watershed Website Analytics**

<i>Month</i>	<i>Visits</i>	<i>Unique Visitors</i>	<i>Page views</i>
January	448	340	679
February	515	355	808
March	725	533	1,099
April	703	533	1,093
May	901	663	1,237
June	1,188	913	1,722
July	1,444	1,133	2,081
August	1,100	839	1,642
September	836	659	1,160
October	606	461	806
November	391	287	610
December	402	300	545

**Water Quality Social Media Posts**

<i>Month</i>	<i>Facebook Posts (#)</i>	<i>Twitter Posts (#)</i>	<i>Instagram Posts (#)</i>
January	0	0	0
February	3	2	2
March	2	2	1
April	1	1	1
May	1	1	1
June	3	4	1
July	1	0	0
August	0	0	1
September	1	0	2
October	0	0	0
November	1	1	1
December	1	1	1

**Consumer Calls and E-mail Inquiries**

<i>Month</i>	<i># of calls/e-mails</i>
January	2
February	1
March	2
April	4
May	1
June	6
July	2
August	2
September	4
October	0

November	2
December	0

**Program Evaluations, Surveys, and Feedback \***

<i>Date</i>	<i>Evaluation/Survey Title</i>	<i>Attendees</i>	<i>Responses</i>	<i>Response Rate (%)</i>
2/22	<i>Program Evaluation: Helping our Hemlocks: An Update on Research and Actions to Protect Hemlocks in Skaneateles</i>	43	14	33%
3/8	<i>Program Evaluation: The Ups and Downs of Skaneateles Lake</i>	72	23	32%
4/6	<i>Program Evaluation: Introducing Shore Zones: Their Ecology and Management</i>	38	13	34%
6/21	<i>Program Evaluation: Keeping Up with The Joneses – How Neighbors Influence Shoreline Type</i>	18	4	22%
7/13	<i>Program Evaluation: Naturalizing Your Shoreline</i>	9	2	22%

\* Surveys were distributed electronically in 2023.

Report compiled and submitted by Camille Marcotte, CCE Onondaga, on 2/23/2024.

# Cornell Cooperative Extension Onondaga County

6505 Collamer Road  
East Syracuse, NY, 13057  
t. 315 424-9485  
f. 315 424-7056  
e. onondaga@cornell.edu  
www.cceonondaga.org

## Water Quality Education Program for the Skaneateles Lake Watershed - 2023 Report

Cornell Cooperative Extension of Onondaga County provides environmental education and outreach to four primary groups within the Skaneateles Lake Watershed, including:

1. Residents and property owners within the watershed,
2. Rural landowners managing agricultural, forested or open space land within the watershed,
3. Municipal leaders and officials of the towns, villages and counties within the watershed, and
4. Community groups, lake associations, and other organizations that currently act as stewards of the lake and watershed or may potentially in the future.

Education and outreach are provided by CCE Onondaga Natural Resources Team Educators. In 2023, Educators covered topics including Hemlock Woolly Adelgid and invasive species, lake elevation, landscaping for water quality (shorelines), stormwater management and rain gardens, riparian buffers, non-point source pollution, land stewardship, flood resiliency, and overall water quality protection efforts. These topics were developed and delivered by educators in the following ways:

### Workshops and Events

- **Helping our Hemlocks: An Update on Research and Actions to Protect Hemlocks in Skaneateles** (February 22<sup>nd</sup>, Zoom): This program shared research and actions focused on protecting Hemlock trees in the Skaneateles watershed and across NY State from Hemlock Woolly Adelgid (HWA), an invasive insect that kills Hemlocks. The NYS Hemlock Initiative presented research updates on HWA, including the different biocontrol options. The independent work of both Skaneateles Lake Association and Onondaga County Soil and Water Conservation District to treat Hemlocks in high priority steep ravines in the Skaneateles watershed, on both public and private property, was also included. Attendees learned about HWA identification, management, and biological control research to find a long-term solution for hemlock conservation in New York. 43 attendees
- **The Ups and Downs of Skaneateles Lake** (March 8<sup>th</sup>, Zoom): Presented by Bill Kappel, USGS Emeritus Scientist, this presentation provided context on Lake elevations over long- and short-term periods of time, and shared information on the natural hydrology of the Lake. This program also illustrated how Skaneateles Lake is connected to the other Finger Lakes as part of the greater Oswego River Basin, and why that matters for the management of lake elevation. 72 attendees
- **Introducing Shore Zones: Their Ecology and Management** (April 6<sup>th</sup>, Zoom): This was the first of three events in the Shorelines Matter educational series about Skaneateles Lake shoreline protection and restoration. This first program defined shore zones and

*Helping Put Knowledge to Work*

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.

explained why they are important. This presentation also highlighted the ways that humans impact shorelines and shared some general tips to protect shoreline ecosystems. Presented by Dr. Dave Strayer from the Cary Institute of Ecosystem Studies. 38 attendees

- **Keeping Up with The Joneses – How Neighbors Influence Shoreline Type** (June 21<sup>st</sup>, Zoom): This was the second of three events in the Shorelines Matter educational series about Skaneateles Lake shoreline protection and restoration. This session provided context on human behavior related to shorelines, and shared research-based information on predictors of shoreline type, or what influences a property owner’s shoreline type. This event also explored research about peoples’ willingness to participate in different hypothetical shoreline programs. Additionally, this program included a presentation introducing the Vermont Lake Wise program – an example of an initiative by a neighboring state to encourage natural shorelines and protect lake health. 18 attendees
- **Naturalizing Your Shoreline** (July 13<sup>th</sup>, Parish Hall, St James Episcopal Church, Skaneateles): This session presented the importance of naturalizing a shoreline, creating a more sustainable and resilient alternative than hardscaping (Ontario County SWCD). This presentation also covered the types of plants best suited for natural shorescaping, planting strategies, and natural shoreline management (Krissy Boys, Cornell Botanic Gardens). 9 attendees

### **Trainings and Stewardship Opportunities**

- **Skaneateles Shorelines Site Visit** (June 1<sup>st</sup>, Terrace Lane, Skaneateles): CCE and SLA staff conducted a shoreline site visit on the west side of Skaneateles Lake. Staff met with a group of homeowners who wanted to make changes to their shoreline. CCE and SLA staff shared shoreline best management practices, and CCE staff provided packets for all four homeowners (with extras for others that are part of the homeowners’ association). Packets contained information on soil and erosion control plans required for any construction, shoreline and landscaping best practices, and more.
- **Skaneateles Rain Garden Project:** In June 2023, CCE Onondaga staff and Master Gardener volunteers, along with GoNative! perennials worked to restore the rain garden in front of the City of Syracuse Gatehouse building at 20 West Genesee Street in Skaneateles. The garden was originally installed in 2010 by Master Gardener volunteers and had suffered a lack of maintenance and care. The garden was restored with a diverse array of native plants and wildflowers, which are already attracting pollinators (like Monarchs) and helping to soak up runoff from the building's roof. The garden and continued education and outreach around rain gardens will provide guidance, support, and inspiration for all those who stop by to experience its beauty! Plant identification tags were installed to offer examples of different native plants that do well in rain gardens. A new Rain Gardens brochure is coming in 2024, and other outreach ideas are also being explored.
  - **Garden workdays** (in addition to regular maintenance and watering) were held on 5/15/23 (site visit and design day), 6/30/23 (rain garden planting and restoration workday), and 10/3/23 (garden clean up and weeding day)
  - **List of plants in the rain garden (common names):** Buttonbush; Swamp Milkweed; Joe Pye Weed; Blue Vervain; White Meadowsweet; Purple Coneflower; Cut-Leaf Coneflower; Narrow-Leafed Mountain Mint; Whorled



Mountain Mint; Tickseed; False Sunflower; Wrinkle-Leaf Goldenrod; Stiff Goldenrod; Blazing Star; Northern Sea Oats; Culver's Root; Wild Geranium; Canadian Wild Rye; Common Boneset; Native Sedge; and Hairy Beardtongue

### **Municipal and Organizational Support**

Municipal Stakeholders Meetings are meant to encourage communication and collaboration between the municipalities and organizations within the Skaneateles Lake Watershed towards protecting and maintaining water quality. CCE Onondaga participated in several stakeholder and municipal meetings in 2023 (below). Additional one-on-one meetings were held with municipal stakeholders and partner organizations as needed throughout the year (CCE Schuyler, Skaneateles Lake Association, Central New York Land Trust, and Syracuse University).

- **Skaneateles Lake Association (SLA) Lake Ecology Team Meetings** (March 1<sup>st</sup>, May 3<sup>rd</sup>, July 5<sup>th</sup>, September 6<sup>th</sup>, and November 1<sup>st</sup>, Zoom) CCE Water Quality Educator attended regular meetings for the SLA Lake Ecology Team focused on preventing nonpoint source pollution and harmful algal blooms in Skaneateles Lake, and other water quality related initiatives. About 30 attendees on average
- **Skaneateles Municipal Stakeholders Meetings:** CCE Water Quality Educator shared updates and analytics on the Skaneateles Lake Watershed website and received feedback and input from municipal stakeholders. Efforts to promote, publicize, and update the website were also discussed, as well as additional initiatives the group could undertake. A list of meetings by date is included below (all meetings were held via Zoom):
  - January 20<sup>th</sup>, 10 municipal leaders and decision makers attended
  - March 3<sup>rd</sup>, 11 municipal leaders and decision makers attended
  - April 21<sup>st</sup>, 11 municipal leaders and decision makers attended
  - June 9<sup>th</sup>, 10 municipal leaders and decision makers attended
  - September 15<sup>th</sup>, 9 municipal leaders and decision makers attended
  - December 15<sup>th</sup>, 12 municipal leaders and decision makers attended
- **Nine Element Plan Watershed Advisory Committee Meetings** (March 3<sup>rd</sup>, March 24<sup>th</sup>, April 11<sup>th</sup>, April 12<sup>th</sup>, July 6<sup>th</sup>, November 2<sup>nd</sup>, November 3<sup>rd</sup>, and November 9<sup>th</sup>, Zoom): CCE Onondaga attended the Nine Element Plan Watershed Advisory Committee meetings to provide feedback on the plan's process and recommendations. About 10-20 attendees
- **CCE Onondaga Annual Meeting** (October 19<sup>th</sup>, Camp Brockway at Pratt's Falls Park, Manlius): CCE Water and Ecology Educator provided a display with general information on the Skaneateles Lake Education Program and water quality topics. 30 attendees

### **Community Outreach**

Typically, to expand reach, increase water quality awareness, and promote stewardship in the watershed community and amongst water supply consumers, CCE educators provide education and outreach, mostly through tabling, on water quality topics. Topics include, but are not limited to watersheds, nonpoint source pollution and water quality, HABs and other contaminants, and best practices for homeowners and landowners.

- **SUNY ESF Job Shadow** (January 9<sup>th</sup>, Zoom): Connected with a student and shared information on current job duties and water quality work. Answered questions about water quality field and current position. 1 student
- **Baltimore Woods Earth Day** (April 22<sup>nd</sup>, Baltimore Woods, Marcellus): CCE Onondaga tabled at this Earth Day event, providing information and hand-outs on water quality and natural resource topics. 60 youth and 60 adults reached
- **Green Resource Fair** (May 6<sup>th</sup>, SUNY ESF): CCE Onondaga tabled at this event and had resources on protecting water quality, as well as a hands-on watershed activity for youth. 11 people reached
- **4-H Stream Systems and Water Quality Program** (July 10<sup>th</sup>, Camp Brockway at Pratt's Falls Park, Manlius): CCE Onondaga 4-H youth learned about watersheds, stream systems and different measures of water quality (like velocity, temperature, pH), as well as aquatic life that exist in our waterbodies (macroinvertebrates). The youth were able to get into the stream and do some hands-on water quality testing. 25 youth participated
- **Skaneateles Curbstone Festival** (July 20<sup>th</sup>, Skaneateles): CCE Onondaga set up a table outside in front of the Gatehouse Rain Garden and distributed materials on the rain garden demonstration site and landscaping for water quality. 15 people reached
- **Green Vendor Fair** (September 30<sup>th</sup>, Village of Skaneateles): This event was organized by the Village of Skaneateles Environmental Committee. CCE staff tabled and provided information on water quality protection and best management practices. 23 people reached
- **Environmental Field Days** (October 6<sup>th</sup>, Green Lakes State Park): Youth from different schools in the county learned about watersheds through a hands-on activity at this outdoor event. 94 youth participated

### **Skaneateles Lake Wave Reviews**

The *Skaneateles Lake WAVE Review* is a newsletter by CCE Onondaga that includes updates and information from important watershed agencies and organizations. The newsletter is delivered to watershed residents in print, as well as shared online through CCE's listservs. In 2023, CCE Onondaga published two editions of the Skaneateles WAVE Review newsletter on June 30<sup>th</sup>, 2023 (summer) and December 19<sup>th</sup>, 2023 (winter). The summer newsletter was printed through Zoom Printing, Inc. and mailed directly to 2,552 watershed properties.

[Summer Skaneateles Lake WAVE Review Newsletter](#): Topics for the summer edition included:

- Shorelines Matter Educational Series by CCE Onondaga
- Skaneateles Lake Watershed Nine Element Plan Update by Central New York Regional Planning and Development Board
- City of Syracuse Aids SLA in Fight Against Invasive Species by the Skaneateles Lake Association
- New 86-Acre Conservation Easement to Protect Skaneateles Lake Water Quality by Finger Lakes Land Trust
- Helpful Contacts and Resources for Watershed Residents

[Winter Skaneateles Lake WAVE Review Newsletter](#): Topics for the winter newsletter included:

- Have you visited the Gatehouse Garden lately? by CCE Onondaga

- Steep Slope Erosion Control Project by Central New York Land Trust
- Cover Crop Drone Seeding Project by Onondaga County Soil and Water Conservation District
- Emergency Work in the Skaneateles Watershed by Onondaga County Soil and Water Conservation District
- Helpful Contacts and Resources for Watershed Residents

### **FEATURED in local media (print/online/video)**

To promote programming, in 2023, Educators worked with various news outlets and tracked the Skaneateles Lake Education Program. Educational events and CCE Onondaga were highlighted/featured in 4 articles created, published, and/or broadcasted by outside publications and news platforms:

- *“Town recognized for partnership”* (February 22<sup>nd</sup>, Skaneateles Press): Print Article (article mentions CCE Onondaga’s partnership with municipal and other Skaneateles partners and website)
- *“March 8 CCE program to discuss lake levels”* (March 2<sup>nd</sup>, Skaneateles Press): Print Article
- *“Cornell Cooperative Extension program discusses lake elevation”* (March 22<sup>nd</sup>, Skaneateles Press): Print Article
- *“[CCE plans educational programs](#)”* (June 9<sup>th</sup> - online and June 21<sup>st</sup> - print, Skaneateles Press): Print and online article

### **Electronic Communications**

Throughout 2023, periodic newsletters and announcements were distributed through the CCE Onondaga Skaneateles Lake mailing lists informing stakeholders of ongoing educational programming and stewardship opportunities in the Skaneateles Lake Watershed. The Skaneateles Lake e-mail list includes over 700 residents, municipal officials, partners, and businesses. Educators also shared information and upcoming events digitally via the CCE Onondaga website, Skaneateles Lake Watershed website, and CCE Onondaga Facebook, Twitter and Instagram accounts.

### **E-Newsletters**

Summarized by e-mail subject, date sent, # of recipients/opens/and link clicks, and a brief description of content. E-mails are all sent through MailChimp to the Skaneateles Lake Watershed listserv. E-mail archives can be accessed by right clicking hyperlinked e-mail subjects below.

- [Skaneateles Education Program January Updates 2023](#) (January 30<sup>th</sup>). This newsletter shared information on the Helping our Hemlocks event, as well as other Hemlock Woolly Adelgid information. It was sent to 480 recipients, with 224 opens and 33 clicks on links for more information.

- [Skaneateles Education Program Helping Our Hemlocks Event](#) (February 21<sup>st</sup>). This included a reminder for the Helping our Hemlocks educational event, and was sent to 480 recipients, with 209 opens and 15 clicks on links for more information.
- [Skaneateles Education Program February Updates 2023](#) (February 27<sup>th</sup>). This email provided information on the Ups and Downs of Skaneateles Lake event and shared the recording from the Helping our Hemlocks event. Also included were announcements on upcoming municipal trainings, and information on the NYS DEC's annual Buffer in a Bag program, and was sent to 479 recipients, with 234 opens and 35 clicks on links for more information.
- [Skaneateles Education Program Ups And Downs Of Skaneateles Lake](#) (March 8<sup>th</sup>). This email shared a reminder for the Ups and Downs of Skaneateles Lake program. It was sent to 478 recipients, with 216 opens and 21 clicks on links for more information.
- [Skaneateles Education Program March Updates 2023](#) (March 27<sup>th</sup>). This newsletter shared information on the Shorelines Matter educational series and shared the recording from the Ups and Downs of Skaneateles Lake. Also included was information on municipal training opportunities, the DEC's Buffer in a Bag Program, and Soil and Water Conservation District tree sales. It was sent to 478 recipients, with 229 opens and 29 clicks on links for more information.
- [Skaneateles Education Program Introducing Shore Zones](#) (April 5<sup>th</sup>). Shared a reminder for the first Shorelines Matter program. It was sent to 478 recipients, with 218 opens and 20 clicks on links for more information.
- [Skaneateles Education Program April Updates 2023](#) (April 28<sup>th</sup>). Shared information and recordings from the Shorelines Matter educational series; upcoming programs about climate change and soils; and Earth Day volunteer opportunities and tips. It was sent to 482 recipients, with 246 opens and 20 clicks on links for more information.
- [Skaneateles Education Program May Updates 2023](#) (May 17<sup>th</sup>). Shared information on the Shorelines Matter programs and Lake Friendly Living Awareness Month events. It also included information on the CCE Onondaga Master Gardener Plant Sale and Finger Lakes Land Trust event in Skaneateles, and was sent to 480 recipients, with 234 opens and 25 clicks on links for more information.
- [Skaneateles Education Program June Updates 2023](#) (June 13<sup>th</sup>). Shared information on the Shorelines Matter series, HABs documentary, lawn to meadow resources, and Clean, Drain and Dry information. It was sent to 477 recipients, with 224 opens and 19 clicks on links for more information.
- [Keeping Up With The Joneses Reminder Email](#) (June 20<sup>th</sup>). This newsletter shared a reminder for the second Shorelines Matter program and information on the Rain Barrel Program, and was sent to 476 recipients, with 199 opens and 14 clicks on links for more information.
- [Cortland Septic System Program](#) (June 29<sup>th</sup>). Shared information on Cortland County Soil and Water Conservation District's Septic System Workshop. It was sent to 474 recipients, with 222 opens and 4 clicks on links for more information.
- [Skaneateles Education Program WAVE Newsletter And July Updates 2023](#) (July 3<sup>rd</sup>). This email shared information on the Shorelines Matter series, the Summer WAVE newsletter, and aquatic invasive species prevention resources and events. It was sent to 472 recipients, with 236 opens and 19 clicks on links for more information.

- [Skaneateles Education Program Final Shorelines Program Reminder!](#) (July 12<sup>th</sup>). This edition included a reminder for the final Shorelines Matter program and information on a septic system research project looking for participants. It was sent to 470 recipients, with 208 opens and 16 clicks on links for more information.
- [Skaneateles Education Program August Updates 2023](#) (August 10<sup>th</sup>). Shared information on the Gatehouse Garden renovation project, Upstate Freshwater Institute buoy data, and Finger Lakes Land Trust event. It was sent to 471 recipients, with 246 opens and 29 clicks on links for more information.
- [Skaneateles Education Program September Updates 2023](#) (September 15<sup>th</sup>). This newsletter shared information on the Green Vendor Fair in Skaneateles, HABs, Finger Lakes Land Trust event, and Upstate Freshwater Institute’s data on Skaneateles Lake. It was sent to 473 recipients, with 245 opens and 31 clicks on links for more information.
- [Skaneateles Education Program October Updates 2023](#) (October 6<sup>th</sup>). This edition included information on the CCE Onondaga Annual Meeting, HABs, and a Central New York Land Trust update. It also provided information on the 2022 harmful algae bloom summary, and was sent to 479 recipients, with 248 opens and 15 clicks on links for more information.
- [Skaneateles Education Program November Updates 2023](#) (October 28<sup>th</sup>). This edition shared links to CCE Onondaga’s video library of recordings of past educational programs, a Finger Lakes Land Trust update and conservation event, and Central New York Land Trust news. It also provided information on how to check for leaks in home heating oil storage tanks and municipal training opportunities, and was sent to 476 recipients, with 257 opens and 32 clicks on links for more information.
- [Skaneateles Education Program December Updates 2023](#) (December 19<sup>th</sup>). This edition included the Winter WAVE newsletter. It also included updates and articles from Onondaga County Soil and Water Conservation District and the Skaneateles Lake Association, as well as a reminder of the lawn fertilizer cutoff deadlines. It was sent to 478 recipients, with 243 opens and 38 clicks on links for more information.

### **Skaneateles Lake Watershed Website**

Starting in 2019, CCE Onondaga began putting together a website for the Skaneateles Lake watershed. The website contains sections on: watershed rules and regulations; boating; agriculture; soil and erosion control; septic systems; wells; landscaping; timber harvesting; frequently asked questions; road salt use; and city watershed programs. It presents regularly updated data on lake temperatures, elevation, and dam discharges and has maps of the watershed and protected parcels. The site also provides information on Harmful Algae Blooms (HABs) and invasive species, both critical environmental issues facing the lake. The website was completed and launched July 1, 2020. New content added in 2023 included: Upstate Freshwater Institute monitoring buoy link; new page titled “About Skaneateles Lake;” information about the City of Syracuse Water Department to the City of Syracuse Programs page; information on the Central New York Land Trust’s steep bank erosion project on the Protected Parcels page; the definition of a watershed on the Skaneateles Watershed Map page; a map with Subwatershed Septic System Fails from 1994 – 2021 on the Septic Systems page; answers to common questions about Skaneateles Lake drinking water to the FAQ page; and the harmful algae blooms documentary “Bloom: the Toxic Threat to the Finger Lakes” on the HABs and Blue-Green Algae page. All

pages were also updated to reflect City of Syracuse messaging related to Skaneateles Lake. For more detailed information on website analytics, view the Skaneateles Lake Watershed Website 2023 Analytics report.

Information on website visits and pageviews for January 1, 2023 – December 31, 2023, are included below:

- Total visits: 9,259 (average visits per month: 772)
- Unique visitors: 7,016 (average number of unique visitors per month: 585)
- Total pageviews: 13,482 (average pageviews per month: 1,124)
- Top 5 most viewed pages:
  - Home (3,876 views)
  - Lake Data (2,868 views)
  - Boat Launch Locations (2,073 views)
  - Skaneateles Watershed Map (682 views)
  - HABs and Blue-Green Algae (492 views)

### **Facebook, Twitter, Instagram and YouTube**

CCE educators posted a total of 14 Facebook posts, 12 Twitter posts, and 11 Instagram posts in 2023 regarding water quality issues of interest for the Skaneateles watershed. The average reach per Facebook post was 133 views, and the average amount of engagements (clicks, reactions, comments, saves and shares) per Facebook post was 3. The average reach per Twitter post was 37 views and the average amount of engagements (clicks, retweets, replies, follows and likes) per Twitter post was 2. On Instagram, the average number of likes per post was 11, with an overall total of 123 likes for the year. Two reels were posted to Instagram in 2023 with a total of 343 views. Additionally, multiple Instagram stories were posted throughout 2023 – however, because stories only remain viewable for 24 hours, data is not available to report here. Total CCE Onondaga social media followers (potential reach for posts): 1,146 Facebook followers, 587 Twitter followers and 644 Instagram followers (as of February 13, 2024).

CCE Onondaga shifted to virtual programming at the onset of the COVID-19 pandemic and has since transitioned to a hybrid educational model. As a result, many programs are recorded and posted to the [CCE Onondaga YouTube page](#). As of February 7, 2023, videos of programs have the following numbers of views:

- Stewardship in Skaneateles (2020 event): 156 views
- Landscaping for Shorelines (2020 event): 167 views
- Hemlock Woolly Adelgid Planning and Management in Skaneateles (2021 event): 142 views
- Transitioning Your Lawn to a Meadow (2021 event): 340 views
- What's a watershed video (filmed in 2021): 35 views
- Public Information Session for EarthTec Treatment of Harmful Algal Blooms in Skaneateles Lake (2021 event): 51 views
- Stream Systems 101 for Skaneateles (2021 event): 71 views
- Road Salt Impacts on Water Quality (2022 event): 181 views
- Meadow, Thicket, Woods and Water: The Patterns of Native Landscape Design (only available from 3/23/22 to 4/25/22 per the presenter's request): 114

- Planning for the Unplanned: Native Design as an Ecological Process (only available from 4/27/22 to 5/31/22 per the presenter's request): 142
- Helping our Hemlocks: An Update on Research and Actions to Protect Hemlocks in Skaneateles (2023 event): 128 views
- The Ups and Downs of Skaneateles Lake (2023 event): 508 views
- Introducing Shore Zones: Their Ecology and Management (2023 event): 80 views
- Keeping Up with The Joneses – How Neighbors Influence Shoreline Type (2023 event): 42 views

### **Consumer Calls and E-mail Inquiries for Water Quality/ Skaneateles**

CCE educators also provide direct support to constituents who inquire about water quality issues and watershed protection for both the Skaneateles Lake watershed and greater Onondaga County. Consumer requests for information come to CCE as phone calls, e-mails, and sometimes drop-in visits. Educators provide information, support, and resources depending on the inquiry. All inquiries are provided with a response within 2 weeks. In 2023, the average number of consumer calls answered related to water quality and/or the Skaneateles watershed was about 2 inquiries per month; with 26 total consumer calls answered for the year.

### **Program Evaluations, Surveys, and Feedback**

In order to continuously improve and grow our programming to effectively reach, engage, educate, and support our target audience and constituents, CCE educators develop and distribute confidential surveys for program participants to fill out after programming, events, and workshops. Educators use the results to evaluate, update, and grow our programming and meet the needs of our constituents. Surveys were mainly distributed electronically in 2023.

- *Program Evaluation: Helping our Hemlocks: An Update on Research and Actions to Protect Hemlocks in Skaneateles.* This evaluation was distributed after the 2/22/23 program to record and evaluate feedback from the program. There were 43 attendees and 14 evaluation responses, for a response rate of 33%.
- *Program Evaluation: The Ups and Downs of Skaneateles Lake.* This survey was distributed after the 3/8/23 webinar to record and evaluate feedback. There were 72 attendees and 23 evaluation responses, for a response rate of 32%.
- *Program Evaluation: Introducing Shore Zones: Their Ecology and Management.* This survey was distributed after the 4/6/23 webinar to record and evaluate feedback. There were 38 attendees and 13 evaluation responses, for a response rate of 34%.
- *Program Evaluation: Keeping Up with The Joneses – How Neighbors Influence Shoreline Type.* This survey was distributed after the 6/21/23 webinar to record and evaluate feedback. There were 18 attendees and 4 evaluation responses, for a response rate of 22%.
- *Program Evaluation: Naturalizing Your Shoreline.* This survey was distributed after the 7/13/23 event to record and evaluate feedback from the program. There were 9 attendees and 2 evaluation responses, for a response rate of 22%.



**Salary Full-Time Equivalent used to deliver the program 2023**

Team Coordinator (Water Quality)	0.23
Subject Educator (Water Quality)	0.95
Subject Educator (Water Quality/Forestry)	0.00
Resource Educator (Agriculture)	0.03
Social Media Platform & IT	0.06
Administrative Assistant (Water Quality)	0.09
Total FTE	1.36

Report compiled and submitted by Camille Marcotte, CCE Onondaga, on 2/23/2024.



Cornell Cooperative Extension  
Onondaga County



## HELPING OUR HEMLOCKS

### AN UPDATE ON RESEARCH AND ACTIONS TO PROTECT HEMLOCKS IN SKANEATELES

Join us for a presentation sharing research and actions focused on protecting Hemlock trees from Hemlock Woolly Adelgid (HWA), an invasive insect that kills Hemlocks. As a "foundation" species, hemlocks play a critical ecological role, providing many ecosystem services including protection of water quality. The Hemlock Woolly Adelgid lives and feeds on Hemlock trees, killing them about 6-20 years after infestation. Come learn about HWA identification, management, and biological control research to find a long-term solution for hemlock conservation in New York.

**WEDNESDAY, FEBRUARY 22, 2023 AT 10:00AM**

**[CLICK HERE TO REGISTER](#)**

Questions? Contact Camille Marcotte at (315) 424-9485 ext.232 or [ctm78@cornell.edu](mailto:ctm78@cornell.edu).

Support for this workshop comes from the City of Syracuse, NYS Hemlock Initiative and the Skaneateles Lake Association.



SKANEATELES PARTNERS PRESENT

# SHORELINES MATTER!

An educational series about Skaneateles Lake shoreline protection and restoration

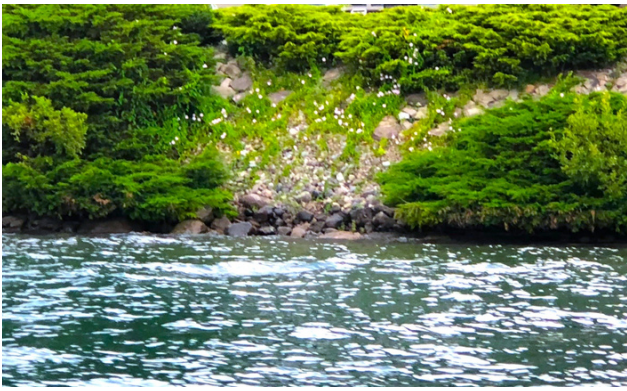


Cornell Cooperative Extension  
Onondaga County



[www.skanlakeinfo.org/events/shorelines-matter](http://www.skanlakeinfo.org/events/shorelines-matter)





**THURSDAY,  
APRIL 6, 7-8PM  
(ZOOM)**

**INTRODUCING SHORE  
ZONES: THEIR ECOLOGY  
AND MANAGEMENT**

This program will define shore zones and explain why they are important. Recording available!

**WEDNESDAY,  
JUNE 21, 7-  
8:30PM (ZOOM)**

**KEEPING UP WITH THE  
JONESES - HOW  
NEIGHBORS INFLUENCE  
SHORELINE TYPE**

This presentation will share research-based information on predictors of shoreline type, or what influences a property owner's shoreline type.

**THURSDAY, JULY  
13, 7-8:30PM**

**NATURALIZING YOUR  
SHORELINE**

Parish Hall, St James Episcopal  
Church, 96 E Genesee St,  
Skaneateles, NY 13152

**SESSION 4**

**IN-PERSON SITE VISIT**

Details TBA

Register here: [www.skanlakeinfo.org/events/shorelines-matter](http://www.skanlakeinfo.org/events/shorelines-matter)  
Questions? Call (315) 424-9485 ext.232 or email [ctm78@cornell.edu](mailto:ctm78@cornell.edu).

# Cornell Cooperative Extension Onondaga County

6505 Collamer Road  
East Syracuse, NY, 13057  
t. 315 424-9485  
f. 315 424-7056  
e. [onondaga@cornell.edu](mailto:onondaga@cornell.edu)  
[www.cceonondaga.org](http://www.cceonondaga.org)

June 5, 2023

## FOR IMMEDIATE RELEASE:

Contact: Camille Marcotte  
Organization: Cornell Cooperative Extension Onondaga County  
Email: [ctm78@cornell.edu](mailto:ctm78@cornell.edu)  
Phone: 315-424-9485 x 232

### SHORELINES MATTER

*An educational series about Skaneateles Lake shoreline protection and restoration*

**Skaneateles, N.Y.** – Shorelines are the areas along the edge of a lake or waterbody, connecting the land and water. These areas are important for protecting water quality and provide habitat for many different animals (fish, birds, amphibians, and more). Humans also enjoy and benefit from shore zones for drinking water, recreation, and beauty – and have built homes along shorelines for many years.

Cornell Cooperative Extension (CCE) Onondaga County is partnering with the Skaneateles Lake Association and Go Native! perennials LLC to offer an educational series focused on shorelines. This series of programs is meant to build upon itself – first, defining and highlighting the importance of shorelines; then exploring the human behaviors related to shorelines, including why homeowners opt for certain shoreline types over others and what other states are doing to encourage natural shorelines; and finally, how to naturalize your shoreline, specifically techniques and native plants to use for shoreline restoration.

The series opened in April with ‘Introducing Shore Zones – Their Ecology and Management’ presented by freshwater ecologist Dr. Dave Strayer from the Cary Institute of Ecosystem Studies. This first program defined shore zones and explained why they are important. This presentation also highlighted the ways humans impact shorelines and shared some general tips to protect shoreline ecosystems. A recording of the program is available to watch on the CCE Onondaga YouTube page at [www.youtube.com/@cceonondaga/videos](http://www.youtube.com/@cceonondaga/videos).

The next program, ‘Keeping up with the Joneses – How Neighbors Influence Shoreline Type,’ will be on June 21<sup>st</sup> at 7 PM on Zoom. This presentation will share research-based information on what influences a property owner’s shoreline type. This event will also explore research about peoples’ willingness to participate in different hypothetical shoreline programs. Additionally, there will be a presentation introducing the Vermont Lake Wise program – an example of an initiative by a neighboring state to encourage natural shorelines and protect lake health.

The series will wrap up on July 13<sup>th</sup> at 7 PM with ‘Naturalizing your Shoreline’ held in the Parish Hall at St. James Episcopal Church in Skaneateles. This session will present the importance of naturalizing a shoreline, creating a more sustainable and resilient alternative than hardscaping (presented by Ontario County Soil and Water Conservation District). This event will also cover

*Helping Put Knowledge to Work*

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.

the types of plants best suited for natural shorescaping, planting strategies, and natural shoreline management (presented by Krissy Boys, Cornell Botanic Gardens).

**Session Details:**

- Keeping up with the Joneses – How Neighbors Influence Shoreline Type, Wednesday, June 21, 7:00 PM. (Zoom)
- Naturalizing your Shoreline, Thursday, July 13, 7:00 PM at the Parish Hall, St. James Episcopal Church (96 E. Genesee St., Skaneateles, NY 13152)

For more information and to register, visit: [www.skanlakeinfo.org/events/shorelines-matter](http://www.skanlakeinfo.org/events/shorelines-matter).

Questions? Contact Camille Marcotte, Water and Ecology Educator at Cornell Cooperative Extension Onondaga County, at [ctm78@cornell.edu](mailto:ctm78@cornell.edu) or (315) 424-9485 ext.232.

*This program is presented by Cornell Cooperative Extension of Onondaga County. Support for this event comes from the City of Syracuse.*

*Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities. Please contact our office if you need special accommodations.*

*###*

# Cornell Cooperative Extension Onondaga County

6505 Collamer Road  
East Syracuse, NY, 13057  
t. 315 424-9485  
f. 315 424-7056  
e. [onondaga@cornell.edu](mailto:onondaga@cornell.edu)  
[www.cceonondaga.org](http://www.cceonondaga.org)

February 21, 2023

## FOR IMMEDIATE RELEASE:

Contact: Camille Marcotte  
Organization: Cornell Cooperative Extension Onondaga County  
Email: [ctm78@cornell.edu](mailto:ctm78@cornell.edu)  
Phone: 315-424-9485 x 232

### THE UPS AND DOWNS OF SKANEATELES LAKE

*This new program will provide context on Skaneateles Lake elevation changes over time*

**Skaneateles, N.Y.** – Lake elevation plays an important role in the different uses of Skaneateles Lake, including drinking water supply, wildlife habitat, and recreation. Join Cornell Cooperative Extension Onondaga County on March 8<sup>th</sup> for a presentation by Bill Kappel, US Geological Survey (USGS) Emeritus Scientist, on the dynamics of lake elevation changes over long- and short-periods of time in Skaneateles Lake.

Lake elevation in Skaneateles is an important consideration for supplying drinking water to the City of Syracuse, Skaneateles, the villages of Jordan and Elbridge, and homes around the lake. Skaneateles Lake also serves as an important recreational resource for swimming, boating, fishing, and more – all of which are impacted by lake elevation. Homes around the lake can also be affected by changes in lake level such as those from heavy precipitation and flooding events. Skaneateles Lake flows into Skaneateles Creek, which is home to fish species, like trout. Lake levels impact water levels in the creek, which is important for fish and other wildlife habitat.

This presentation will discuss the natural and human influences on lake elevation, and will also share information on lake hydrology, or how water flows into and out of Skaneateles Lake. This program will also illustrate how the lake is connected to other Finger Lakes as part of the greater Oswego River Basin, and why that matters for the management of lake elevation.

#### Session Details:

- The Ups and Downs of Skaneateles Lake, Wednesday, March 8, 7:00 PM. (Zoom)

For more information and to register, visit: [www.skanlakeinfo.org/events/the-ups-and-downs-of-skaneateles-lake](http://www.skanlakeinfo.org/events/the-ups-and-downs-of-skaneateles-lake)

Questions? Contact Camille Marcotte, Water and Ecology Educator at Cornell Cooperative Extension Onondaga County, at [ctm78@cornell.edu](mailto:ctm78@cornell.edu) or (315) 424-9485 ext.232.

*This program is presented by Cornell Cooperative Extension of Onondaga County. Support for this event comes from the City of Syracuse.*

*Helping Put Knowledge to Work*

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.



*Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities. Please contact our office if you need special accommodations.*

**###**

# Skaneateles Lake Watershed Website

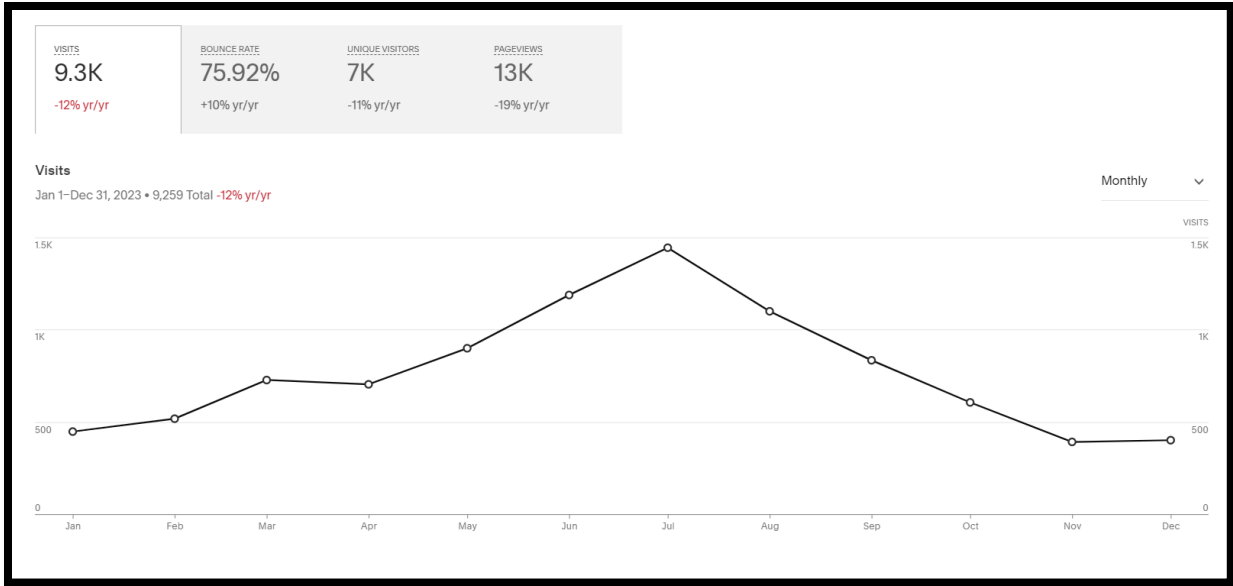
## 2023 Analytics Report

### Highlights

- Seasonally, most of the website traffic is still during the summer. That means this is still a great time to update and promote the website (the sandwich board signs do make a difference!).
- The top three pages with the most views remain: the homepage, lake data, and boat launch locations.
- The most popular search keywords that returned clicks to our website are still related to lake data and boat launch information. Our average position for all queries is 21. This is where the website falls when people search in Google (so on average, we are the 21<sup>st</sup> website listed).
- The average time spent on a page is 2 minutes and 12 seconds.
- Website traffic slightly decreased from previous years, with a 12% reduction in visits, an 11% reduction in unique visitors, and a 19% reduction in pageviews.
- Since launching the website on July 1, 2020, we have had 32,800 visits; 24,190 unique visitors; and 53,314 pageviews.

### Visits, Unique Visitors and Overall Pageviews

- Visits: The total number of visits in a selected time. Any hits within a 30-minute browsing session count as one visit.
- Unique Visitors: An estimate of the total number of actual visitors that reached the site.
- Pageviews: The total number of views (page requests) across all pages.



This image graphically depicts the visits by month, showing the overall trend of website traffic peaking during the summer months.

This table shows the number of visits, unique visitors and pageviews for each month, as well as the yearly totals.

Month	Visits	Unique Visitors	Pageviews
January	448	340	679
February	515	355	808
March	725	533	1,099
April	703	533	1,093
May	901	663	1,237
June	1,188	913	1,722
July	1,444	1,133	2,081
August	1,100	839	1,642
September	836	659	1,160
October	606	461	806
November	391	287	610
December	402	300	545
<b>Yearly Total</b>	<b>9,259</b>	<b>7,016</b>	<b>13,482</b>

## Acquisition

### Traffic Sources

- Direct: Direct represents when someone typed the URL directly into their browser, rather than coming to the site from another page. Links opened in a new window also count as Direct.
- Search: The Search channel represents organic traffic from Google and other search engines.
- Referral: Referral represents websites and blogs that link to the website that don't fit under other channels.

- Social: Social represents traffic to the site from social media platforms like Facebook, Twitter, Pinterest, LinkedIn, Instagram, and YouTube.
- Email: Email represents traffic from email marketing campaigns (like MailChimp).

*This table shows the traffic sources and corresponding numbers of visits, as well as the percentage of visits from that traffic source*

Source	Visits
Direct	4,197 (45.3%)
Search	4,694 (50.7%)
Referral	262 (2.83%)
Social	101 (1.09%)
Email	5 (0.05%)

*This table shows the top devices (mobile, desktop, etc.) by both visits and users and percentages of each*

Top Devices by Visits and Users	Visits
Mobile	5,188 (56%)
Desktop	3,942 (43%)
Tablet	129 (1%)

## Website Search Keywords (Google Search)

Clicks: 3,559

*The number of times a user clicked through to the website from a Google search result.*

Impressions: 106,674

*The number of times a user saw a link to the website in the Google search results.*

Click Rate: 3.34%

*The percent of times a user clicked through to the website after seeing it in Google search results.*

Average Position: 21

*The average position where the website appeared in Google search results.*

*This table shows search keywords that returned 50 or more clicks.*

Search Keyword	Page	Clicks	Impressions	Click Rate	Average Position
Skaneateles lake temperature	Weekly Lake Data	194 (5.45%)	1,925	10.08%	3.357
Skaneateles lake water temperature	Weekly Lake Data	133 (3.74%)	1,244	10.69%	3.884
Skaneateles lake boat launch	Boat Launch Locations	115 (3.23%)	535	21.5%	1.852

<b>Skaneateles boat launch</b>	Boat Launch Locations	78 (2.19%)	520	15%	1.902
<b>Skaneateles lake data</b>	Weekly Lake Data	55 (1.55%)	83	66.27%	1.217

## Website Content

### Summary Statistics for Pages and Site Content

Average Bounce Rate: 75.92%

The percent of visits that contained only a single pageview (calculated by the number of visits that contained only a single pageview divided by the total number of visits).

Average time spent on a page: 2 minutes and 12 seconds.

This is the average amount of time a user spends on a single page before navigating to another part of the site.

Exit rate: 67.46%

This metric is the percentage of views to a given page that did not result in any more pageviews on the website (left the website). This is helpful for identifying pages that cause visitors to exit the site.

### Top Viewed Pages

*This table shows the top ten viewed pages and the time spent on each page, as well as bounce and exit rates for each of the top ten viewed pages.*

Page Name	Views	Time on Page (min:sec)	Bounce Rate (%)	Exit Rate (%)
<b>1. Home</b>	3,876	1:45	70.52%	67.54%
<b>2. Lake Data</b>	2,868	2:09	80.57%	76.22%
<b>3. Boat Launch Locations</b>	2,073	2:50	76.27%	72.74%
<b>4. Skaneateles Watershed Map</b>	682	3:49	85.03%	74.63%
<b>5. HABs and Blue-Green Algae</b>	492	3:18	83.66%	75.41%
<b>6. FAQ</b>	346	1:02	81.63%	43.64%
<b>7. Watershed Rules &amp; Regs</b>	259	1:49	62.28%	45.17%
<b>8. Events</b>	228	0:52	51.35%	24.56%
<b>9. Shorelines Matter</b>	225	4:05	81.2%	70.22%
<b>10. Contact</b>	221	2:07	70.91%	49.77%

New Content Added in 2023:

- A link to the [Upstate Freshwater Institute buoy](#)
- New page “[About Skaneateles Lake](#)”
- Information on the City of Syracuse Water Department to the [City of Syracuse Programs](#) page
- Information on the Central New York Land Trust’s steep bank erosion project on the [Protected Parcels](#) page
- The definition of a watershed on the [Skaneateles Watershed Map](#) page
- A map with Subwatershed Septic System Fails from 1994 – 2021 on the [Septic Systems](#) page
- Answers to common questions about Skaneateles Lake drinking water to the [FAQ](#) page
- The harmful algae blooms documentary “Bloom: the Toxic Threat to the Finger Lakes” on the [HABs and Blue-Green Algae](#) page

## Form and Button Clicks

Form Submissions (newsletter sign up):

- Total submissions = 22; Unique views = 3,349; and Conversion rate 0.6%

Button clicks:

- Total for the year for all buttons was 363 clicks.

*This table shows specific details by button (clicks, unique views and conversion rate)*

Button Name/Details	Clicks	Unique Views	Conversion Rate
<b>Upstate Freshwater Monitoring Buoy</b>	63	1,928	3.2%
<b>Ups and Downs of Skaneateles Lake Webinar Recording</b>	62	2,157	2.8%
<b>Nine Element Plan</b>	48	3,320	1.4%
<b>Summer 2023 WAVE Newsletter</b>	40	1,101	3.6%
<b>NY Septic Study (pop-up)</b>	33	716	4.3%
<b>Skaneateles WAVE Newsletter</b>	32	818	3.6%
<b>The Ups and Downs of Skaneateles Lake (pop-up)</b>	21	325	6.5%
<b>Septic System Survey Flyer (pop-up)</b>	18	718	2.5%
<b>Helping Our Hemlocks Event (pop-up)</b>	8	318	2.5%
<b>Take the Lake Friendly Land Care Pledge</b>	4	111	3.6%
<b>Program Registration (pop-up)</b>	13	844	2.7%

# Skaneateles Lake Watershed Wave Reviews

Summer 2023 Edition

Visit the Skaneateles Lake website for resources and tips on how to protect the water quality of Skaneateles Lake  
[www.skanlakeinfo.org](http://www.skanlakeinfo.org)

## *In this Issue:*

Shorelines Matter Educational Series (p.1) - CCE Onondaga

Skaneateles Nine Element Plan Update (p.2) - Central New York Regional Planning & Development Board

City of Syracuse Aids SLA in Fight Against Invasive Species (p.2) - Skaneateles Lake Association

New 86-Acre Conservation Easement to Protect Skaneateles Lake Water Quality (p.3) - Finger Lakes Land Trust

Helpful Contacts and Resources for Watershed Residents (p.4)

*Brought to you by the City of  
Syracuse Department of Water  
Ben Walsh, Mayor*

## Shorelines Matter: An educational series about Skaneateles Lake shoreline protection & restoration

By: Camille Marcotte, Cornell Cooperative Extension Onondaga County

Shorelines are the areas along the edge of a lake that connect land and water. They are important for protecting water quality and providing wildlife habitat. Humans enjoy and benefit from shore zones for access to drinking water, recreation, and beauty – and have built homes along shorelines for many years. To help address shoreline concerns and promote natural shorelines, Cornell Cooperative Extension Onondaga County is partnering with the Skaneateles Lake Association and Go Native! perennials to offer an educational series focused on shorelines.

The goals of this series are to:

1. Define and highlight the ecological importance of shorelines
2. Explain why homeowners opt for certain shoreline types over others, and offer ways to incentivize natural shorelines
3. Share techniques to naturalize a shoreline and native plants to use for shoreline restoration

### Series Details:

- Introducing Shore Zones – Their Ecology and Management held on April 6
- Keeping up with the Joneses – How Neighbors Influence Shoreline Type, June 21 from 7PM - 8:30PM on Zoom
- Naturalizing your Shoreline, July 13 from 7PM - 8:30PM in Skaneateles

Recordings for the virtual programs will be posted to the CCE Onondaga YouTube page at [www.youtube.com/@cceonondaga/videos](http://www.youtube.com/@cceonondaga/videos). For more information and to register, visit: [www.skanlakeinfo.org/events/shorelines-matter](http://www.skanlakeinfo.org/events/shorelines-matter).



*Skaneateles shoreline with native plants. Photo courtesy of Frank Moses*

The Skaneateles Watershed Education Program works to protect the water quality of Skaneateles Lake, a treasured resource that serves as the primary drinking water source for Skaneateles and the City of Syracuse. The City of Syracuse has funded this program since its inception in 1996.

**Cornell Cooperative Extension**  
Onondaga County





# Skaneateles Nine Element Plan Update

By: Aaron McKeon, Central New York Regional Planning and Development Board

The Skaneateles Lake Watershed Nine Element (9E) Plan continues to move forward. The 9E Plan is expected to be finalized by March 2024, and a lot of work has to be done between now and then. The Watershed Advisory Committee has continued to meet and discuss the Best Management Practice (BMP) scenario ideas that will be tested using the digital models of the lake and watershed.

The use of digital models is one of the features of the 9E process that make it distinct from a traditional watershed plan. The Skaneateles 9E Plan is fortunate to have some of the most talented modelers in the area onboard, including staff from Ramboll, Upstate Freshwater Institute, and LimnoTech. But a model is only as good as the data that it is built on, which is why special thanks go out to the Onondaga County, Cayuga County, and Cortland County Soil and Water Conservation Districts (SWCDs) and the members of the Skaneateles Lake Watershed Agricultural Program (SLWAP) for taking the time to provide data to the modeling team. The SLWAP's Board members met with the modeling team this spring to provide first-hand information on local agricultural practices. This information will help ensure that the watershed model is an accurate representation of what is going on in the Skaneateles Watershed.



Skaneateles Lake. Photo credit: Camille Marcotte

## City of Syracuse Aids SLA in Fight Against Invasive Species

By: Frank Moses, Skaneateles Lake Association

Through efforts to build upon a holistic approach to water quality protection, the Skaneateles Lake Association (SLA) recently received news from City of Syracuse Mayor Walsh and Water Department Commissioner Joe Awald announcing \$25,000 in support of aquatic invasive species (AIS) prevention programming.

SLA's commitment in addressing invasive species through the Boat Launch Steward Program, Hemlock Forest Protection, and Milfoil Control represents over a \$300,000 annual investment for Skaneateles Lake. The majority of funding for combatting invasives comes from the SLA Membership Fund with an increase in support from City of Syracuse for preventing any newly introduced harmful invasive species. Additionally, NYSDEC provides \$5,000 for coverage at the state boat launch. Onondaga County administers \$40,000 of Environmental Protection Funds in support of ~\$200,000 SLA Milfoil Control program.

From 2019 - 2022, SLA stewards have surveyed 30,739 watercrafts on Skaneateles Lake in efforts to prevent harmful exotic species like hydrilla entering our waters. Our neighbor, Cayuga Lake, has required millions of dollars to chemically control hydrilla. SLA's 2022 surveys noted that Cayuga Lake is the #1 source of visiting boaters.

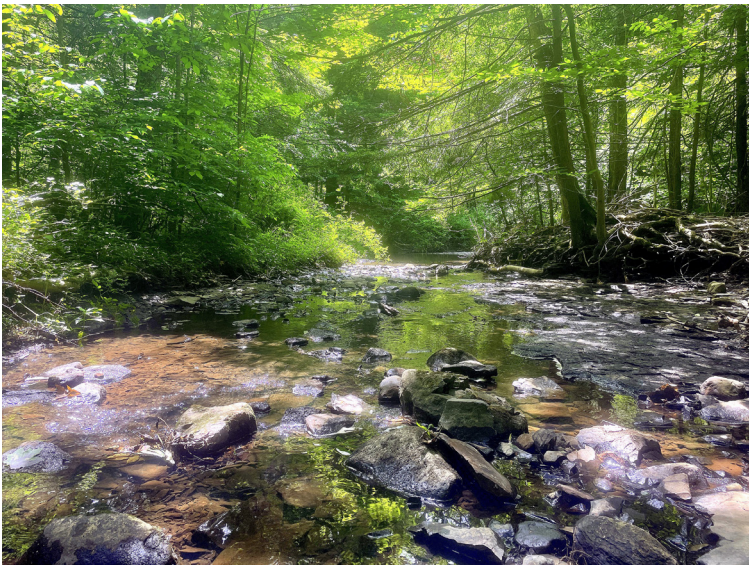
Additionally, with the DEC lifting limits to help reduce Walleye in the lake, SLA needed to mobilize staff earlier in the year to ensure better protection. Along with Hydrilla, SLA is most concerned about an increase in Round Goby populations. Recent studies at ESF have noted that 100% of Round Goby sampled in study carried Viral Hemorrhagic Septicemia (VHS), which can kill trout and many other fish. Round Goby are known to be used as illegal bait for Walleye.

SLA is fortunate to receive community wide support from the City of Syracuse, Onondaga County, Town of Skaneateles, NYSDEC, Finger Lakes Institute, CCE, and other partners in the fight against invasives. Thanks to all in doing their part to keep Skaneateles Lake Clear & Pure while ensuring boats are "Clean, Drained, and Dry"!

# DEC and Finger Lakes Land Trust Announce New 86-Acre Conservation Easement to Protect Skaneateles Lake Water Quality

*State's Water Quality Improvement Project Funding Helps Protect Drinking Water Sources*

*By: DEC and Finger Lakes Land Trust*



*Shotwell Brook. Photo credits: Matt Champlin (top) and Amy Olney (bottom)*

The New York State Department of Environmental Conservation (DEC) and Finger Lakes Land Trust (FLLT) announced the permanent protection of 86 acres in the Skaneateles Lake watershed through the use of a conservation easement. Protection of the property will safeguard the drinking water supply for the City of Syracuse and neighboring communities. DEC's Water Quality Improvement Project (WQIP) Program awarded FLLT \$1.69 million to support four source water protection projects, including the easement.

“Completion of this project is a significant win for Skaneateles Lake and the drinking water supply for the City of Syracuse,” said Finger Lakes Land Trust Executive Director Andrew Zepp. “The conservation easement will provide for enhanced buffers to the lake and we are grateful to the landowners and New York State for their support and partnership.”

Owned by Pat and Jessica Danial, Fox Run Farm contains 2,070 feet along Shotwell Brook, which drains to Skaneateles Lake, as well as 1,430 feet along an unnamed tributary. The easement includes an 18-acre environmental protection zone that will buffer the two streams and filter potential contaminants from entering nearby Skaneateles Lake.

“We're excited to announce our support for the Finger Lakes Land Trust's hard work in protecting the Skaneateles Lake watershed,” said landowner Pat Danial. “Through the placement of a conservation easement on our farm, we're taking another small step towards ensuring the long-term health and vibrancy of the area. As members of the local community, we

feel a deep responsibility to preserve the natural beauty of our lake and to safeguard its resources for future generations.”

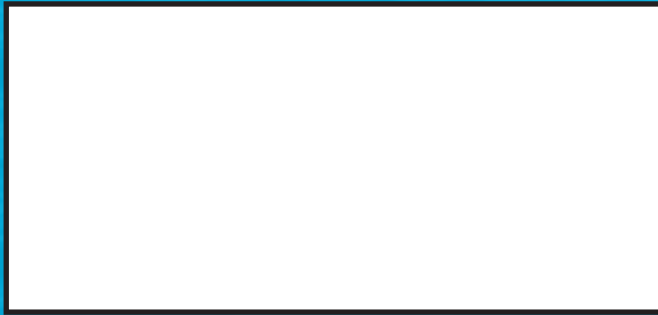
Conservation easements are voluntary legal agreements that permanently limit future land use in order to protect the land's conservation value. Lands subject to conservation easements remain in private ownership, on local tax rolls, and available for traditional uses such as farming and hunting.



# Skaneateles Lake Wave Reviews

CCE Onondaga  
6505 Collamer Road,  
East Syracuse, NY  
13057

NON-PROFIT ORG.  
US POSTAGE  
**PAID**  
PERMIT NO. 3381  
SYRACUSE, NY



## Stay connected!

Join our Water Quality List-serve to receive digital WAVE Reviews, event announcements, and more. Skaneateles Watershed Residents and those looking to protect water quality in their community are encouraged to join.

List serve accessible through this direct link <http://eepurl.com/bQ22XP> or by visiting our website at [www.cceonondaga.org](http://www.cceonondaga.org) and searching for our 'Skaneateles Lake' landing page.

Don't forget to check out the new Skaneateles Lake Watershed website at [www.skanelakeinfo.org](http://www.skanelakeinfo.org)

## Important Contacts for the Skaneateles Watershed

Cayuga County Health Department 315-253-1405  
Cayuga County Soil & Water Conservation District 315-252-4171  
Cornell Cooperative Extension of Onondaga County 315-424-9485  
Cortland County Health Department 607-753-5036  
Cortland County Soil & Water Conservation District 607-756-5991  
NYS DEC Region 7 Environmental Permits (Onondaga & Cayuga) 315-426-7438  
NYS DEC Region 7 Environmental Permits Sub-office (Cortland) 607-753-3095  
NYS DEC Spill Prevention and Response 800-457-7362  
NYS DEC Region 7 Water & Wastewater (Stormwater, Dam Safety, Flood Control) 315-426-7500  
Onondaga County Health Department 315-435-3252  
Onondaga County Soil & Water Conservation District 315-457-0325  
Skaneateles Lake Watershed Agricultural Program 315-457-0325  
Syracuse Water Department (Skaneateles) 315-448-8366

This newsletter was created by Camille Marcotte of Cornell Cooperative Extension Onondaga County and Rich Abbott, City of Syracuse Water Dept. Special thank you to our partnering contributors.

### Skaneateles Lake Watershed Education Program

Funding for Cornell Cooperative Extension programming in the Skaneateles Lake Watershed is provided by the City of Syracuse Department of Water.

*Cornell Cooperative Extension is an equal opportunity program and employment provider.  
If you need special assistance, please contact our office at 315-424-9485.*



# Skaneateles Lake Watershed Wave Reviews

Winter 2023 Edition

Visit the Skaneateles Lake website for resources and tips on how to protect the water quality of Skaneateles Lake  
[www.skanlakeinfo.org](http://www.skanlakeinfo.org)

## *In this Issue:*

Have you visited the Gatehouse Garden lately? (p.1) - Cornell Cooperative Extension Onondaga County

Steep Slope Erosion Control Project (p.2) - Central New York Land Trust

Cover Crop Drone Seeding Project (p.2) - Onondaga County Soil & Water Conservation District

Emergency Work in the Skaneateles Watershed (p.3) - Onondaga County Soil & Water Conservation District

Helpful Contacts and Resources for Watershed Residents (p.4)

*Brought to you by the City of  
Syracuse Department of Water  
Ben Walsh, Mayor*

## Have you visited the Gatehouse Garden lately?

By: Camille Marcotte, Cornell Cooperative Extension Onondaga County

This June, CCE Onondaga staff and Master Gardener volunteers, along with GoNative! perennials worked to restore the rain garden in front of the City of Syracuse Gatehouse building at 20 West Genesee Street in Skaneateles. The garden was originally installed in 2010 by Master Gardener volunteers and had suffered a lack of maintenance and care. The garden was restored with a diverse array of native plants and wildflowers, attracting pollinators (like Monarchs) and helping to soak up runoff from the building's roof.

Hopefully, this demonstration rain garden will provide guidance, support, and inspiration for all who stop by to experience its beauty! Plant identification tags were installed to offer examples of different native plants that do well in rain gardens. Additional outreach will be coming in 2024!

A huge thank you to Janice Wiles and the GoNative! team, and Master Gardeners Joy Pople, Judy Cowden, Emily Adams, Mike Fixler, and Carol Jerosse for their help and support with growing plants, providing mulch and supplies, weeding, planting, and watering the garden! Also, a big thank you to the City of Syracuse for financially supporting this project and providing a hose to keep our plants hydrated!



*Gatehouse Garden before (left) and after (right) restoration*

The Skaneateles Watershed Education Program works to protect the water quality of Skaneateles Lake, a treasured resource that serves as the primary drinking water source for Skaneateles and the City of Syracuse. The City of Syracuse has funded this program since its inception in 1996.

**Cornell Cooperative Extension**  
Onondaga County





# Steep Slope Erosion Control Project

By: Kendra Pearson, Central New York Land Trust

The Central New York Land Trust (CNYLT) continues its riparian restoration and steep slope erosion mitigation work in Spafford. This is the largest riparian zone restoration project ever undertaken in the Skaneateles Lake watershed by the CNYLT, encompassing 93.38 acres of previously logged and damaged land.

After the first round of native tree and shrub planting, the CNYLT is finalizing their own mix of native grass and wildflower seeds to help stabilize the steep slope and provide habitat and forage for wildlife. The mix includes Big Bluestem, Partridge Pea, Autumn Bentgrass, Purple Coneflower, and Canada Wildrye. “This combination of quick growing plants, trees and shrubs will give us the best chance to hold back the highly erodible soil,” says Paul Porter, Director of Stewardship.

Riparian zones are biodiverse areas adjacent to bodies of water, and serve as important lines of defense for lakes, rivers and streams. Tree and plant root masses form a complex filtration system that removes excess nutrients and contaminants before they can enter bodies of water. Riparian zones are also temperature regulators, keeping water cool and lake temperatures consistent. This is good news for the residents of Central New York reliant upon Skaneateles Lake for their drinking water.



Top: Spafford riparian zone before restoration  
Bottom: Spafford riparian zone one year after restoration work began

# Cover Crop Drone Seeding Project

By: Eric Jensen, Onondaga County Soil and Water Conservation District

Beginning August 21st, the Skaneateles Lake Watershed Ag Program (SLWAP) contracted with Auburn Ag Products to apply over 16,500 pounds of annual ryegrass cover crop seed on over 660 acres of standing corn silage fields in the Skaneateles Lake watershed. We used a large Hyllo AG-130 drone with a hopper/spreader capable of applying seed on 0.8 acres per flight. The cover crop seeding project is in the first year of a 3-year NYS Climate Resiliency Farming grant. Eight Skaneateles Lake watershed farms volunteered to test this technology for the project. Advancing drone technology has promising uses on the farm - the new models of drones will increase capacity and dramatically improve efficiency.

Annual ryegrass is shade tolerant, so it will germinate and establish under the canopy of corn leaves. It has a successful history of being applied by aircraft in the Midwest about 6 weeks before the crop is harvested. Rainy weather conditions can delay corn harvest or delay cover crop planting after the corn harvest. Without cover crop protection, the soil is vulnerable to erosion from storm and spring runoff events during the dormant season.

The agricultural fields selected for this project are in high priority watersheds of Skaneateles Lake that have a high impact on the drinking water quality of over 200,000 residents. Planting cover crops with drone technology will quickly establish a ‘green carpet’ of growing plants providing enhanced protection for this great resource. Cover crops also increase infiltration of water into the soil to reduce storm water runoff from fields, and improve overall soil health by increasing soil aggregates and organic matter. This is a win-win for farms and the environment!



# Emergency Work in the Skaneateles Watershed

By: Mark E. Burger, Onondaga County Soil and Water Conservation District

On April 5 and April 26, the northern portion of the watershed received a high-intensity, two-inch, two-year rainfall event. This occurred on already saturated soils, which caused substantial runoff events from farm fields, forests, and stream overflow in the watershed.



The Skaneateles Lake Watershed Ag Program (SLWAP) staff and Watershed Coordinator Rich Abbott immediately sprang into action. The team met with landowners and farmers in the affected areas. Emergency plans were developed and meetings were held with the City's Watershed Agricultural Program Review Committee (WAPRC) Board of Directors (BOD) to review the technical merits of the emergency work. Meetings were held with the Onondaga County Soil and Water Conservation District (SWCD) BOD to release funding to address the technical work approved by the WAPRC.

SLWAP staff put the work out to bid to contractors immediately with the caveat that all projects had to be done within one week of the site showing. Only contractors that could work within that tight timeline were considered.



Projects were implemented immediately followed by the SWCD critical area seeding crew. They immediately seeded and mulched the exposed soil with the goal of getting roots in the ground as quick as possible to help hold the soil together, knowing that summer storms would hit the area hard, as they always do from June through August.

Unfortunately, an extremely dry weather pattern hit the area and no appreciable rainfall occurred over a three week period. Therefore, the SLWAP staff and their summer crew sprang into action and hauled water in a 250 gallon cube to each job site and watered the site with portable pumps. The goal was to make sure that vegetation was growing and roots were substantially in the ground to help hold the newly exposed soil together.

*Top: Live stakes for Shotwell Brook pot hole wetlands planting  
Bottom: Watering new seedlings at wetland sites*

The plan worked great and all emergency work has been on schedule. Please see the before and after photos and captions that explain the work that has been done.

Many thanks to the City of Syracuse for having a dedicated staff to address matters like this in the watershed over the last 29 years! Please know that this work would not and could not have happened without direct funding from the City of Syracuse! Over \$20 million has been invested over the past 29 years to protect the City's drinking water supply for Syracuse at Skaneateles Lake!



CCE Onondaga  
6505 Collamer Road,  
East Syracuse, NY  
13057

# Skaneateles Lake Wave Reviews

NON-PROFIT ORG.  
US POSTAGE  
**PAID**  
PERMIT NO. 3381  
SYRACUSE, NY



### Stay connected!

Join our Water Quality List-serve to receive digital WAVE Reviews, event announcements, and more. Skaneateles Watershed Residents and those looking to protect water quality in their community are encouraged to join.

List serve accessible through this direct link <http://eepurl.com/bQ22XP> or by visiting our website at [www.cceonondaga.org](http://www.cceonondaga.org) and searching for our 'Skaneateles Lake' landing page.

Don't forget to check out the new Skaneateles Lake Watershed website at [www.skanelakeinfo.org](http://www.skanelakeinfo.org)

### Important Contacts for the Skaneateles Watershed

Cayuga County Health Department 315-253-1405  
Cayuga County Soil & Water Conservation District 315-252-4171  
Cornell Cooperative Extension of Onondaga County 315-424-9485  
Cortland County Health Department 607-753-5036  
Cortland County Soil & Water Conservation District 607-756-5991  
NYS DEC Region 7 Environmental Permits (Onondaga & Cayuga) 315-426-7438  
NYS DEC Region 7 Environmental Permits Sub-office (Cortland) 607-753-3095  
NYS DEC Spill Prevention and Response 800-457-7362  
NYS DEC Region 7 Water & Wastewater (Stormwater, Dam Safety, Flood Control) 315-426-7500  
Onondaga County Health Department 315-435-3252  
Onondaga County Soil & Water Conservation District 315-457-0325  
Skaneateles Lake Watershed Agricultural Program 315-457-0325  
Syracuse Water Department (Skaneateles) 315-448-8366

This newsletter was created by Camille Marcotte of Cornell Cooperative Extension Onondaga County and Rich Abbott, City of Syracuse Water Dept. Special thank you to our partnering contributors.

### Skaneateles Lake Watershed Education Program

Funding for Cornell Cooperative Extension programming in the Skaneateles Lake Watershed is provided by the City of Syracuse Department of Water.

*Cornell Cooperative Extension is an equal opportunity program and employment provider.  
If you need special assistance, please contact our office at 315-424-9485.*



This document is and shall remain the property of City of Syracuse Department of Water. Unauthorized use of this document in any form whatsoever is prohibited.

S:\\_REPORTS\\_2023\Watershed Program Annual\Watershed Program Annual 2023 - 2024.docx

