Skaneateles Lake Watershed Program Annual Report 2020-2021
City of Syracuse Department of Water
April 10, 2021

Cover: Courtesy of Skaneateles Historical Society

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Skaneateles Lake Watershed Program

Annual Report 2020-2021

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Division of Skaneateles Lake Watershed Programs

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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 2020-2021. This year 46 watershed farms meet the Agriculture and Markets' definition of a "farm." Thirty-nine (39) of these are enrolled in the program and seven (7) farms do not wish to participate. Three 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 85%.

The figures in this report represent the current number of Whole Farm Plans applied to active agricultural land in the watershed. Nineteen (19) 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 39 farms, equaling 79.92 farm equivalents (one farm equivalent being 400 acres), and implementation is complete on 31 farms, equaling 69.48 farm equivalents. Approximately ninety one percent (91%) of the farmland in the watershed is enrolled in the program.

Three barriers to pathogen movement, including exclusion from watercourses, are established on 18 of the 24 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 2021. 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 2020 Annual Report," City of Syracuse Department of Water – Water Quality Management, April 2021, 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 as a result 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 2020 the drill was utilized on a total of 537 acres of cropland between the watershed and Onondaga County. Since 2009, four farms have purchased conservation implements. Two farms have purchased the 30-foot AerWay manure incorporation tool, one farm purchased a 30-foot Great Plains drill and one 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 converts to one or two house lots to finance family needs or is sold outright for development. In 2020, of the 18 new housing starts in the watershed, four were on active farmland. Eleven permits were issued for major additions and renovations on the lake and another 16 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, 62 operations met the Agriculture & Markets definition of a farm in FY 1995-96. This year only 46 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 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 2020. 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 2021-22 has been received and contract renewal is expected on July 1, 2021. For additional program details, see the SLWAP Annual Progress Report—April 2020 - March 2021, 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 2020 and 2021 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 FY20-21).

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 2021.

In 2020, the CCE of Onondaga County concentrated its education efforts on the following activities:

- Skaneateles Lake Watershed Website
- Non-point source pollution
- Landscaping for water quality
- Storm water management
- Riparian buffers
- Invasive species management
- Conservation easements
- Shoreline and streamside erosion resistance
- Rain gardens

One hundred and eighty three people attended virtual workshops and speaking events sponsored or supported by CCE of Onondaga County over the year. CCE of Onondaga also co-sponsored a Hemlock Woolly Adelgid (HWA) and iMapInvasives Training and Hike on March 8 with the CNY HWA-Hunters Team. Nine people attended the event.

Watershed Inter-municipal Meetings

CCE of Onondaga County hosted one inter-municipal meeting in 2020. The guest speaker for the January meeting was a Forestry Specialist with CCE of Onondaga. The meeting featured a presentation and discussion on timber harvesting best practices for water quality, the pros and cons of local timber ordinances, and environmental benefits and drawbacks of timber harvesting. Watershed protection is the central focus of the meetings. All stakeholders in attendance were provided an opportunity to discuss concerns and make announcements related to events within their organization or community.

Press Articles

Educators worked with various local media to promote the Skaneateles Lake Watershed Water Quality Education Program. CCE of Onondaga County contributed to eight articles and videos that appeared in local publications in 2020.

Annual Watershed Resident Newsletter

In 2020 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 *New Skaneateles Lake Watershed Website*, *SUNY ESF Restoration Science Center* and the *Shotwell Brook Stormwater Attenuation Project*. (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.skanlakeinfo.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. From July 1, 2020 – December 31, 2020, the website was viewed by a total of 2,995 visitors.

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 a panel discussion on buffer strips, and presentations on Drainage by Cornell Local Roads program and the Year In Review by the SLWAP Program Manager. The meeting included over 41 participants, including numerous farm operators, government

agencies, not-for-profit organizations and past and present SLWAP and City of Syracuse Water Department employees.

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

Skaneateles Lake Data and Research Summit – January 22, 2020

The Summit was attended by the City's Watershed Quality Coordinator. Presentations included summaries of data collection and research by Syracuse University and Upstate Freshwater Institute. Several agencies and organizations provided an overview and update on modelling efforts for the Skaneateles Lake Watershed Nine Element Plan.

Skaneateles Lake Watershed Municipal Stakeholders Meeting – January 29, 2020

The guest speaker for the bi-annual meeting was a Forestry Specialist with Cornell Cooperative Extension of Onondaga County. The presentation focused on local timber ordinances, including the challenges to establishing effective municipal ordinances. Environmental benefits of timber management using best practices and consequences of poor timber harvesting were discussed.

Streams 101 – July 23, 2020

The Watershed Quality Coordinator attended the webinar training sponsored by the Hudson River Estuary Program. The training was part of a Conservation and Land Use 101 webinar series. Topics discussed included; stream classification, stream corridors and floodplains and disrupting/disconnecting watercourses.

Restoration, Engineering and Storm water Management – August 19, 2020

The Watershed Quality Coordinator attended the webinar sponsored by the Tinker's Creek Watershed Partners. The training discussed effective storm water management practices.

Stream & Buffer Protection Webinar Series – September 9, September 16 & September 23, 2020

The Watershed Quality Coordinator attended the webinar series sponsored by the Hudson River Estuary Program. Individual webinars included; The Science of Stream Buffers (September 9), State Regulations and Resources (September 16) and Stream Buffer Protection in Action (September 23). The range of topics included; riparian buffers critical role in nutrient processing and improving water quality, protecting buffer zones and streams through land trusts and an overview of the NYS stream protection program.

Stewardship in Skaneateles Virtual Program – September 29, 2020

The Watershed Quality Coordinator attended the event presented by Cornell Cooperative Extension of Onondaga County. Featured presentations included conservation easements and updates on Finger Lakes Land Trust's Skaneateles Lake Watershed projects. CNY Land Trust provided an update of the organizations recent projects and the SUNY ESF Restoration Science Center discussed the Skaneateles lawn to meadow restoration program.

4. OTHER MECHANISMS OF WATER QUALITY PROTECTION

4.1 Cooperative Agreements

The City entered in to 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, 2001. 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 2020-21
- Monitoring reports created for the nine watershed conservation easements
- All Water Department jobs (work orders) 2004 to present
- Water distribution features (fire hydrants, valves, etc.) within the City of Syracuse, updated with GPS points
- Documented major water infrastructure improvements

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.
- Shared maps with other utilities to ensure that their work doesn't interfere with our underground infrastructure.
- Worked with consultants to begin the process of using GIS with CityWorks asset and work order management software.

In 2020, GIS was used throughout the Water Department. Field personnel in both the City and Watershed used tablets to view and collect data. Field apps were updated to improve the functionality for the end users. GIS mapping and data of the distribution system helped plan projects, define water valve maintenance routes, and provide general support for daily operations.

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 2020 Annual Report, Volume XLVI," 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. Seven of the approximately 45 farms eligible for SLWAP are considered CAFOs under the current standards. Of those, only one 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 some 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 Limnoligical 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's (CNYLT) continue to emphasize the Skaneateles Lake Watershed as a priority focus area for land conservation and water quality protection. In 2020 FLLT purchased seven tax parcels in the watershed totaling 144.5 acres.

The first acquisition was a 1.5-acre addition to its Bahar Nature Preserve in the town of Niles, Cayuga County. The wooded property includes approximately 200 feet of undeveloped shoreline on the south end of Skaneateles Lake and 150 feet of frontage on Bear Swamp Creek.

On June 30th the FLLT purchased 75 acres of woodlands just west of State Route 41. The acquisition included five tax parcels in Cortland and Onondaga counties. The properties link the organization's High Vista and Hinchcliff Family preserves, creating a 2.25 mile-long corridor of conservation land overlooking the eastern shore of the lake.

FLLT also acquired 68 wooded acres in the town of Niles. The property is located on a steep hillside overlooking the lake with 4,300 feet of frontage on Glen Haven Road, and contains more than two miles of streambank on nine tributaries.

CNYLT acquired a 93.17 acre property in the town of Spafford featuring 600 feet of shoreline. The property is predominantly woodland, including steep ravines and slopes.

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 on the southern portion of the lake. As of February 2020, HWA has been found as far north as Fire Lane 22A (Niles) on the western shore, and around Ten Mile Point (Spafford) on the eastern shore. (For the most up to date information, please visit the NY iMapInvasives map at nyimapinvasives.org/data-and-maps). To minimize the spread of HWA, the City has collaborated with the Onondaga County Soil and Water District, Cornell University, CCE of Onondaga County and several volunteers residing within the watershed. In 2020, the group received $50,000 from the Great Lakes Restoration Initiative for targeted treatment of high-priority hemlocks in the watershed. Treatments are planned starting in spring of 2021.

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. Once the trees are large and healthy enough to sustain low populations of HWA, predator insects will be introduced to feed on HWA, and rear a larger population of predator beetles for introduction throughout the Watershed.

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. HWA management options can be found at the NYS Hemlock Initiative (NYSHI) website, nyshemlockinitiative.info.

In 2020, CCE Onondaga provided a workshop on HWA and iMapInvasives training. iMapInvasives 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 watershed. The workshop also featured a field session where attendees practiced surveying hemlocks for the presence of HWA. Volunteers 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 our understanding of HWA's spread through the watershed. It is proving to be an efficient use of agency resources, and aids our partners at state Partnerships for Regional Invasive Species Management (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
Watershed Inspectors	2.00
Assistant Corporation Counsel	0.02
Total FTE	3.19

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	0.35
Secretary	0.50
Total FTE	1.10

CCE of Onondaga Water Quality/Agriculture Education Program Staff

Team Coordinator (Water Quality)	0.29
Resource Educator (Water Quality)	0.01
Subject Educator (Water Quality)	1.04
Subject Educator (Ag. Ed./Water Quality)	0.06
Social Media Platform & IT	0.07
Administrative Assistant (Water Quality)	0.10
Total FTE	1.57

6.2 Watershed Program Funding

Expenditures	Actual FY 19-20	Estimated 20-21	Proposed 21-22
Onondaga Co, SWCD Contract Services:	$477,504	$515,000	$535,000
Watershed Education Program:			
CCE of Onondaga Co, Contract Services	$84,361	$84,605	$89,000
GIS Expenses	$11,000	$11,000	$12,000
Miscellaneous Expenses	$0	--0---------	---0--------
Subtotal Contractual Expenses	$543,479	$614,605	$644,000
City of Syracuse Staff (Direct Salary Expenses):			
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	$172,293	$153,000	$132,766
Other Expenditures:			
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	$796,824	$840,887	$906,766
Funding Sources:			
City of Syracuse			
Operating Budget	$746,122	$741,542	$765,823
Subtotal City Funding	$600,467	$746,122	$767,169
Other Funding	$83,252	$75,882	$125,000
Total Funds Available	$683,719	$822,004	$892,169

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
FLLOWPA	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

City of Syracuse
Public Jetty A

Bryant, Patricia A.
69.4 Acres

Tucker, John
161.3 Acres

Yaus, Gail P.
136.1 Acres

Snow Creek Ravine
(Save the County, Inc.)

Prestemon, David L.
12.1 Acres

Boukair, Ronald
65.4 Acres

Withey, Edward R.
188.5 Acres

Tidd, Joseph A.
45.0 Acres

Brock, William
143.81 Acres

Fagan Revocable Trust
38.0 Acres

Weatherly Conservation Easement
(Finger Lakes Land Trust)

High Hickory Wildlife Sanctuary
(Save the County, Inc.) A

Michele & Margherita Albanese Preserve
(CNY Land Trust)

DeWitt, Robert
21.565 Acres

Bahar Preserve
(Finger Lakes Land Trust) A

Staghorn Cliffs
(Finger Lakes Land Trust)

Carpenter's Falls
(NYS DEC) A

Cora Kampfe Dickinson Conservation Area

Hinchcliff Family Preserve

Anne MacKenzie & Frank Girardi
(Finger Lakes Land Trust)

High Vista
(Finger Lakes Land Trust) A

Pringle Conservation Easement

Dugan Preserve
(Finger Lakes Land Trust)

Scott Family
Town Park

Birdsall Conservation Easement
(Finger Lakes Land Trust)

Bear Swamp
State Forest A

Birdsall Conservation Easement
(Fingerlakes Land Trust)

Grout Brook
Public Fishing Rights Areas A

Hewitt State Forest A

Birdsall Conservation Easement
(Fingerlakes Land Trust)

EAST GENESEE STREET
EAST LAKE ROAD
PORK STREET
COON HILL ROAD
KANE AVENUE
WEST LAKE ROAD
WILE POINT
BENSON ROAD
BENTLEY
KINGSTON BROOK
SNOW CREEK
BIGGS ROAD
SHAMROCK ROAD
COLLARD ROAD
HEN COOP ROAD
THORNTON BROOK
HAROLD BROOK
DISMAL BROOK
WEEKS ROAD
FISHER BROOK
FIVE MILE BROOK
RYAN BROOK
EIBERT ROAD
LACY ROAD
HEIFER ROAD
BACKES ROAD
NUNNERY ROAD
RICHARD ROAD
WOODWORTH ROAD
DEWITT ROAD
GILSON
MACK ROAD
FIRE LN 16
482
CARVER ROAD
GLEN COVE ROAD
MANNING
GLEN HAVEN ROAD
BEAR SWAMP
STATE HIGHWAY 41
FAIR HAVEN ROAD
RIDGE ROAD
CURTIN ROAD
HARTNETT ROAD
HILL ROAD
BRAKE HILL ROAD
HEWITT ROAD
IOWA ROAD
SWEENEY HILL RD
GROUT BROOK ROAD
OLD STATE ROAD
LONG ROAD
PATTEN BROOK
CHURCH BROOK
WITHY (WITHEY) BROOK
FIVE MILE BROOK
DISMAL BROOK

CITY OF SYRACUSE DEPARTMENT OF WATER
N W E S

March 2021

Legend

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

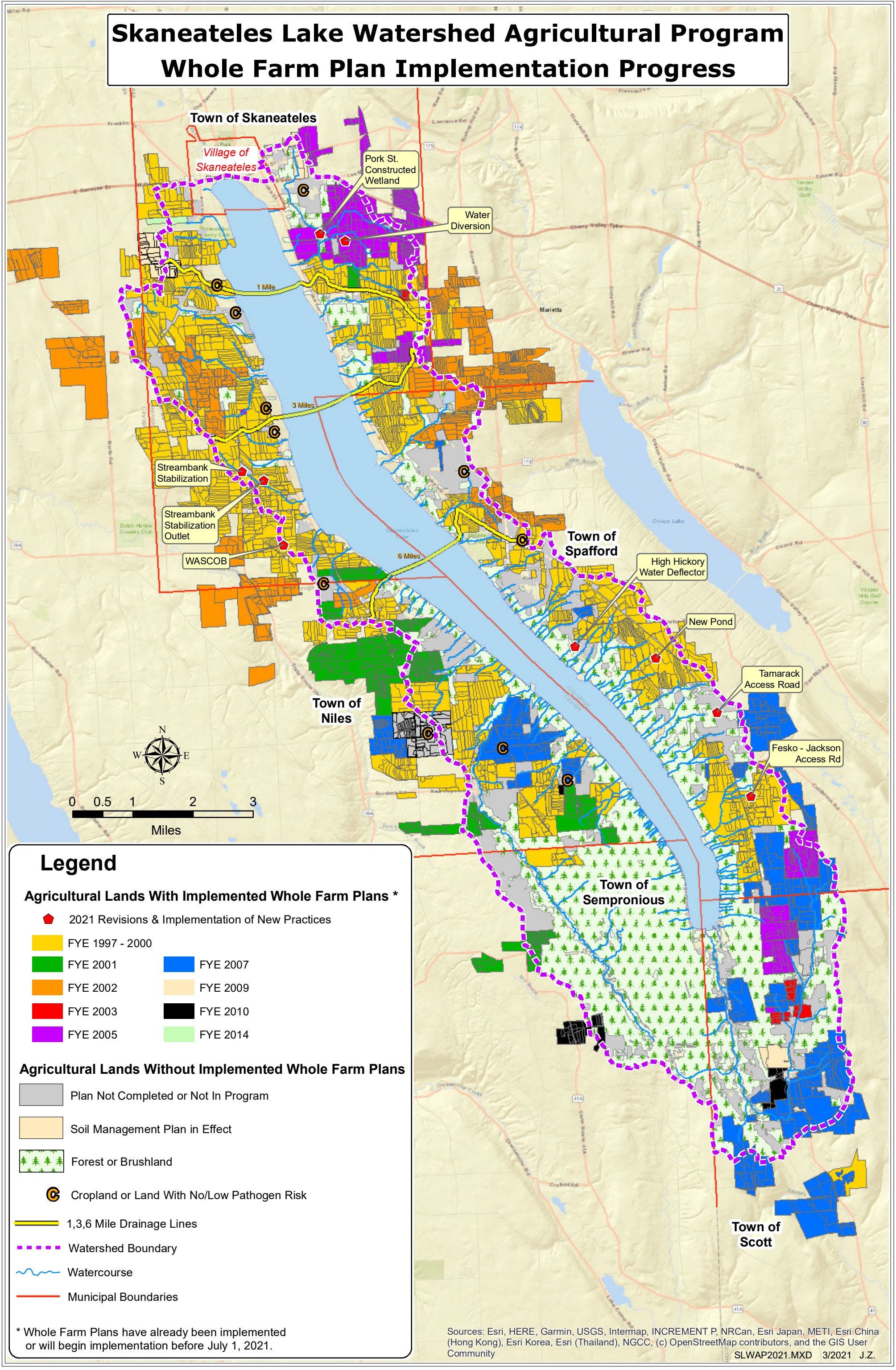
0 0.5 1 2 3 4 5
Miles

A Denotes Area Open For Public Access

No Public Access On Non-Profit Conservation Easements or
City Of Syracuse Conservation Easements

protected_parcels_3_2021.mxd

Skaneateles Lake Watershed Agricultural Program
Whole Farm Plan Implementation Progress



Legend

Agricultural Lands With Implemented Whole Farm Plans *

- 2021 Revisions & Implementation of New Practices
- FYE 1997 - 2000
- FYE 2001
- FYE 2002
- FYE 2003
- FYE 2005
- FYE 2007
- FYE 2009
- FYE 2010
- FYE 2014

Agricultural Lands Without Implemented Whole Farm Plans

- Plan Not Completed or Not In Program
- Soil Management Plan in Effect
- Forest or Brushland
- Cropland or Land With No/Low Pathogen Risk
- 1,3,6 Mile Drainage Lines
- Watershed Boundary
- Watercourse
- Municipal Boundaries

* Whole Farm Plans have already been implemented or will begin implementation before July 1, 2021.

SLWAP2021.MXD 3/2021 J.Z.

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
Fax: (315)-457-0410 Web: www.ocswcd.org

Progress Report –

Skaneateles Lake Watershed Agricultural Program

March 2020 – February 2021

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 39 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 85% participation rate in the SLWAP. Seven (7) 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. Four of these non-participating farms have whole farm plans developed, and three farms have chosen to self-implement Best Management Practices identified in the plan. One (1) farm remains out of compliance with their Whole Farm Plan. Accordingly, SLWAP and the City of Syracuse, Department of Water continue to monitor the status of this farm. Water samples taken from a tributary near this farm did not identify a contravention of water quality. The farm has been advised to follow the City's watershed rules and regulations in lieu of participating in the whole farm plan process. Nineteen (19) 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 91% 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 2020:

- 39 farms have completed Tier I (farm inventory and identification of potential water quality concerns).
- 39 of these farms have completed Tier II (verification of water quality concerns).

- 39 farms have completed whole farm plans (Tier III) for their operations (79.92 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).

- 31 farms have completed Tier IV plan implementation (69.48 Farm Equivalents). Three (3) 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
TOTAL		68	14	28,851	4,753	139.74

* 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 18 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 2021, SLWAP has fully implemented whole farm plans for 31 farms (70.48 farm equivalents). During the past year revisions were planned and implemented to existing BMPs on four farms (18.97 farm equivalents). No BMP implementation (survey/design/build) occurred on zero new farm's. SLWAP is now primarily in a maintenance phase. Throughout the 2021 construction season, we anticipate BMP implementation to occur on at least one new farm and revisions to BMPs on four existing farms.

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

BMP	Quantity Implemented
Pathogen Management Systems	27
Barnyard Runoff Management Systems	30
Temporary Manure Storage/Composting Systems	22
Nutrient Management Systems (~ AEM Tier 4)	36
Alternative Water Supply	42
Buffer Strips	39.69 acres
Access Road Improvement Sites	71
Diversions	28,973 feet
Fencing	127,819 feet
Milking Center Waste Water Treatment & Disposal Systems	15
Short Duration Grazing Systems	12
Strip-cropping on Contour	1,375 acres
Water & Sediment Control Systems (WASCOBs)	68
Waterways – grass, stone lined	46,491 feet
Critical Area Protection – vegetation control	394 acres
Critical Area Protection – streambank stabilization	7,554 feet
Nutrient Management Reviews (annually)	26
Mortality Composting Systems	10
Cover Crops (cumulative acres - 2020)	813
Conservation Cover in Wheat (cumulative acres – 2020)	747
Roof Water Dripline (ft) -2019	23

Road Ditch Stabilization Projects w/ Heavy Armoring (#)	1
Hydroseeded Road Ditches Cleaned by Municipalities (Miles)	6.3

Measurable results from the implementation of these BMPs include:

- 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 39 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 22 "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 have been 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 2020. In 2020 the SLWAP staff worked with USDA FSA staff. One farmer's contract expired when their father, the patriarch of the family, passed. Accordingly, the farm did not ask to re-enroll their land quick enough, the time was beyond the USDA grace period. Now, the farm must sign up for a new enrollment and add additional acres to qualify for the program. The SLWAP Whole Farm Planner is attempting to work with USDA on an amicable resolution to this matter to keep that critical land in conservation cover through CREP.

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 or Onondaga County.

Year	# of CREP Farms Planned	Acres of CREP Planned	Farms Implemented	Acres Implemented	# Farms / Acres – *Enhanced*
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	
TOTAL	**16**	**148.4**	**16**	**146.5**	**1 / 1.4 ac**

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.

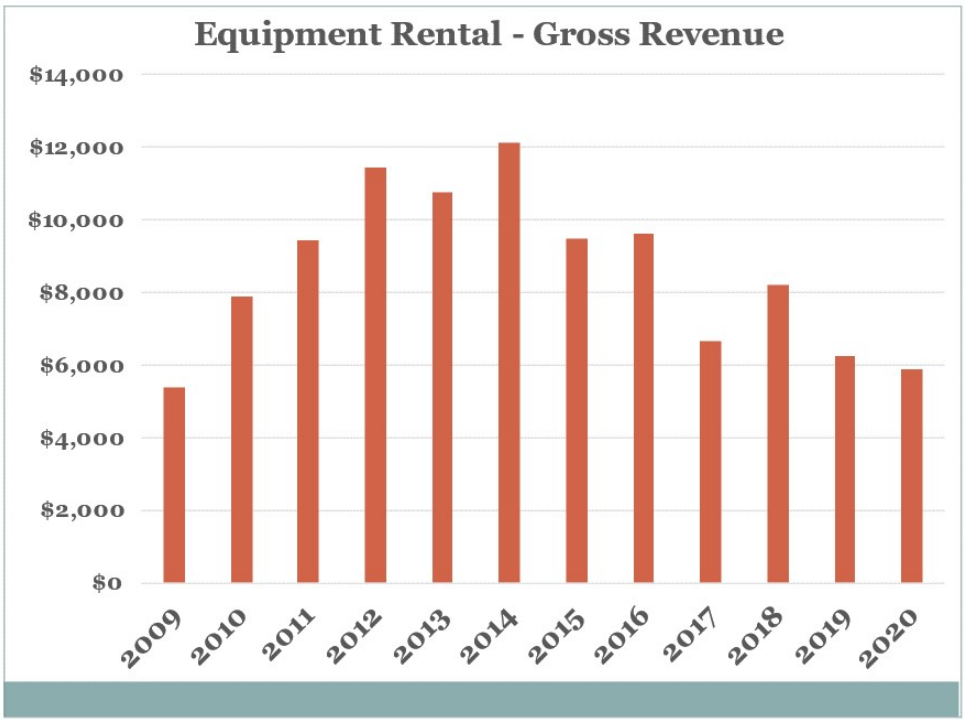
The drill can plant small grains, cover crops, small seeds, soybeans, and buffer strips. It has 5.5-inch row spacing, two seed boxes, and requires a 100-horse power tractor to operate.

Implement Usage Summary

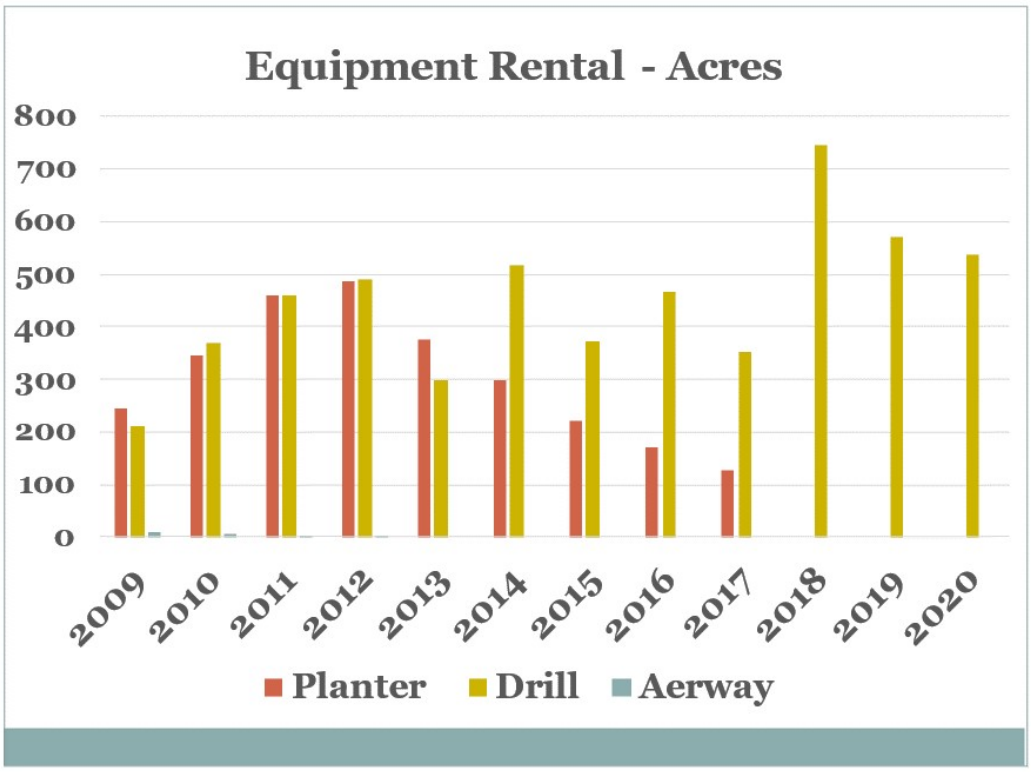
In 2020, the Esch was utilized on 537 acres of cropland between the watershed and Onondaga County. There was a spectacular fall for planting cover crops! SLWAP staff advertised these implements to SLWAP producers utilizing the following means: printer flyers, website, and by posting a video of the equipment 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 2020 rental rate stayed the same at $11/acre with a $100 delivery fee.

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.

Four outside funding sources were applied for in 2020 for a total of $606,836 to supplement City funds. They are as follows.

-$357,188	NYS EPF Round 26 – Elmer Richards Manure Nutrient Storage
-$138,018	NYS EPF Round 26 – Snow Brook
-$61,630	NYS EPF Round 26 – Ag NPS Reduction
-$50,000	Great Lakes Restoration Initiative – Hemlock Wooly Adelgid

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 $5,892,635.80.

IX. 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.

Past award winners are listed below.

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

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.

- 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.

- The Skaneateles Lake Watershed Agricultural Program Watershed Agricultural Program Review Committee had five meetings in 2020. (Jan. 20, Apr. 20, Jun. 22, Aug. 24, Sept. 21, Dec. 3). There were also two special meetings to address lake association requests (Apr. 27, Aug. 16).

- Attended many regularly scheduled and special meetings of the Skaneateles Lake Association Nutrient Management Committee.

- Program Manager Burger attended Syracuse-Onondaga County Planning Association meeting for enhancement of County Hazard Mitigation Plan. January 14, 2019.

- Program Manager Burger attended the semi-annual meeting of the Skaneateles Lake Municipal Officials. January 29, 2020.

- Program Manager Burger attended the State of the City address. February 10, 2020.

- 7 annual reports sent to NYS Department of Agricultural and Markets for 2019 activity. February 15, 2019.

- Program Manager Burger attended a meeting of the Skaneateles Lake Municipal website committee. February 24, May 26, 2020.

- SLWAP Program Manager Burger and SWCD Hydroseeding Specialist attended Legislative meetings in Albany (March 2-3).

- Staff members attended four days of annual training at Water Quality Symposium, East Syracuse, NY, to enhance staff skills and to study new approaches (and BMPs) to address environmental concerns on farms in the watershed. March 10-13, 2020.

- Program Manager Mark Burger and Accountant I Gwyn Olenych participated in virtual presentation of the U.S. Dairy Outstanding Diary Farm Sustainability Award to Dirk Young's Twin Birch Dairy Farm. April 22, 2020.
https://www.usdairy.com/news-articles/dairy-community-celebrates-2020-sustainability-awards-winners

- Program Manager Burger participated in Spectrum News interview at Twin Birch Dairy Farm regarding the U.S. Dairy Outstanding Dairy Farm Sustainability Award. June 18, 2020.

https://spectrumlocalnews.com/nys/central-ny/news/2020/06/18/skaneateles-farm-earns-recognition-for-green-effort

- Program Manager Burger participated in the Soil & Water Conservation Society Annual Meeting (originally scheduled for Iowa). Presentations were made on legacy nutrients and impacts of our land management decisions 100 years ago are impacting our environment today (Harmful Algal Blooms). July 27-29, 2020.

- Program Manager Burger did a walk-through of CNY Land Trust Nature Preserve at High Hickory to recommend BMPs. July 30, 2020.

- 2020 Water Chestnut Hand Pulling Crew participated in a tour of Twin Birch Dairy Farm and their water quality BMPs. August 10, 2020.

- Program Manager Burger participated in American Dairy Association BMP discussion at Twin Birch Dairy Farm. September 17, 2020.

https://dairyspot.box.com/s/znt243qul1r4uhtxnc4b4glu5rtsa2xt

- SLWAP Annual Meeting (virtual). December 3, 2020. Topics included: A panel discussion on buffers by farmers & USDA Farm Service Agency, a presentation on Drainage by David Orr from Cornell Local Roads program, the Year In Review by Program Manager Mark Burger, and presentation of the Distinguished Service Award to Steve Nemec of Grand View Farms. 41 people attended the meeting.

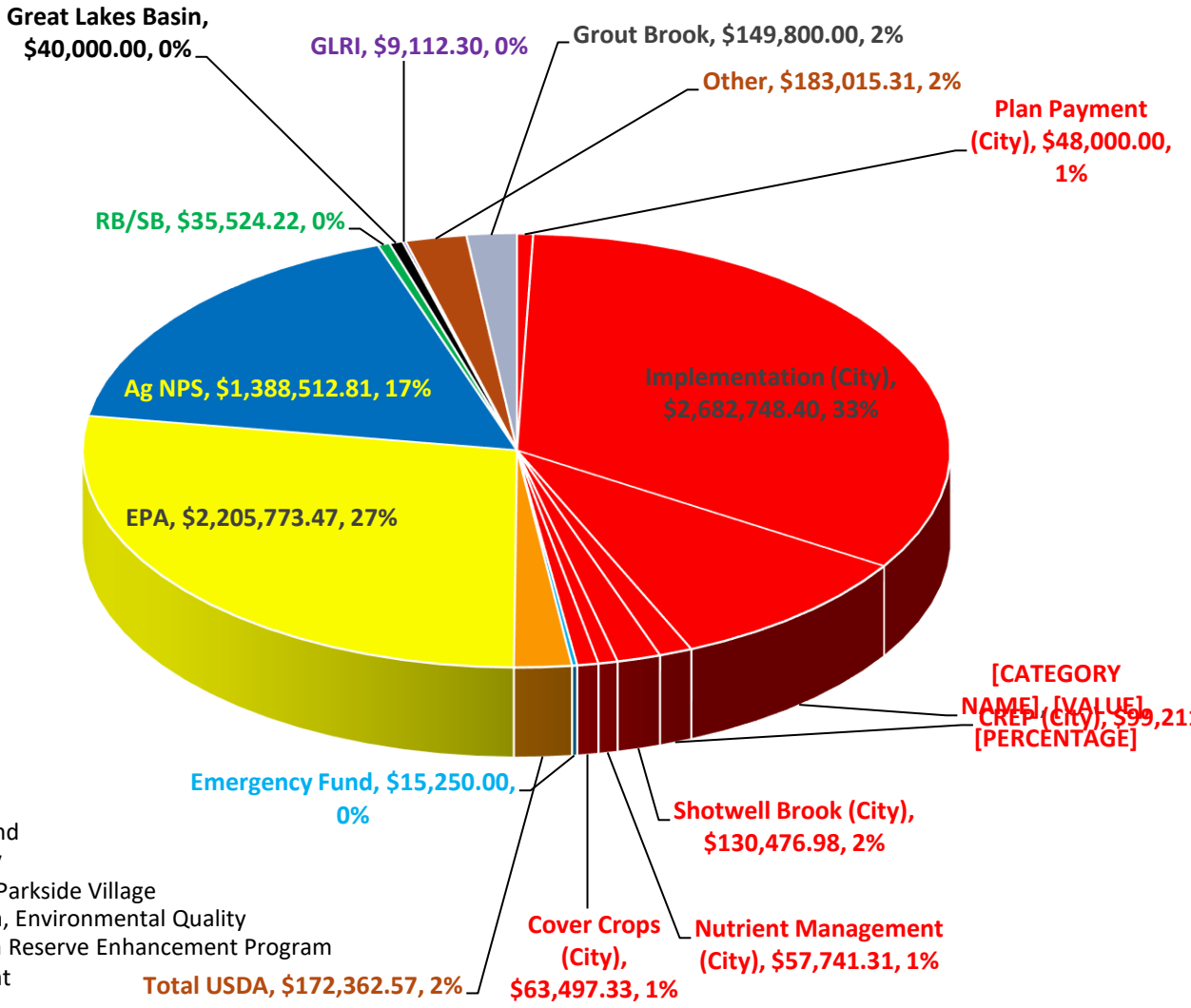
https://cornell.box.com/v/SLWAP2020Annual

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 2/28/2020

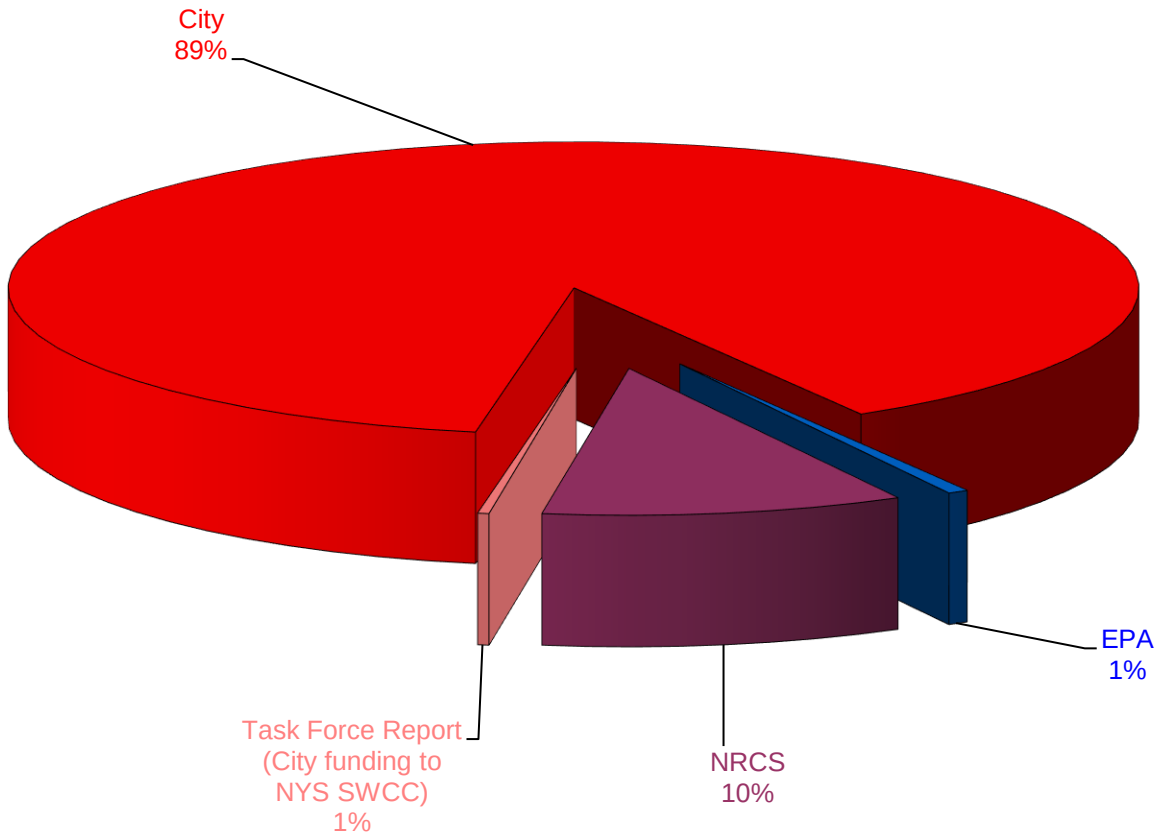
Note: 0% is equivalent to less than 1%. Please use available financial data for calculations.



Key:
AgNPS-NYS Environmental Protection Fund
EPA-US Environmental Protection Agency
Other-Graze NY, Cayuga Cty SWCD, TAg, Parkside Village
USDA - Emergency Conservation Program, Environmental Quality Incentives Program, Conservation Reserve Enhancement Program
RB/SB-USDA Roadbank/Streambank Grant
Grout Brook-NYS Department of State
GLRI-Great Lakes Restoration Initiative
Nut. Mgnt. Revisions - Nutrient Management updates w/ soil & manure samples
Emergency Fund - Proceeds from equipment rental program dedicated to storm damage repairs (2017)

Total Implementation Costs = $8,095,619.65
City Share = $3,911,518.97
Grant Share = $4,184,100.68

SLWAP Operating Costs 1/1994 Through 2/28/2021



Total Operating Costs = $10,815,034.49
City Share = $9,606,750.54
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

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

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

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 2020 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 the CCE Onondaga Natural Resources and Agricultural Team Educators. In 2020, Educators covered topics including timber harvesting, rain gardens and meadows, landscaping for water quality, stormwater management, riparian buffers, non-point source pollution, invasive species (including Hemlock Woolly Adelgid and Zebra and Quagga Mussels), conservation easements, land stewardship, lake and streamside erosion resistance, and overall water quality protection efforts. These topics were developed and delivered by educators in the following ways:

Workshops and Events

- **Rain Gardens Webinar** (May 21st, Zoom): This webinar was a collaboration with the CCE Onondaga Master Gardener Volunteer program. CCE Onondaga Master Gardener Doreen Todorov presented on the purpose and use of rain gardens, how they can help with water quality, how to design a rain garden, and plant selection. 38 attendees
- **Invasive Mussels Webinar** (June 10th, Zoom): SUNY ESF Professor and Limnologist, Dr. Kim Schulz spoke about her research on invasive mussels in the Finger Lakes, including their potential impacts on water quality and HABs. 83 attendees
- **Stewardship in Skaneateles Webinar** (September 29th, Zoom): This event was a collaboration with Finger Lakes Land Trust, Central New York Land Trust, and SUNY ESF Restoration Science Center. Max Heitner, Director of Conservation with Finger Lakes Land Trust, presented on conservation easements and shared updates on Finger Lakes Land Trust's work in Skaneateles. Albert Joerger, Executive Director of Central New York Land Trust, presented on projects and newly acquired lands around Skaneateles including the Watershed Education Center. Sam Quinn, Researcher and Instructor with SUNY ESF, presented on transforming lawn to meadow for restoration and water quality protection. 40 attendees
- **Landscaping for Shorelines Webinar** (October 14th, Zoom): This webinar was a collaboration with the CCE Onondaga Master Gardener Volunteer program, and covered tips for landscaping shorelines to prevent erosion and protect water quality. This webinar

also provided examples of native species that are low maintenance, resilient, and ecologically valuable. 22 attendees

Trainings and Stewardship Opportunities

- **Hemlock Woolly Adelgid (HWA) and iMapInvasives Training and Hike** (March 8th, Central New York Land Trust office and High Hickory Preserve, Skaneateles): This event helped train citizen scientists in the watershed to assist with efforts to protect watershed hemlocks. The training covered: iMapInvasives; how to identify HWA and listed some of its negative effects; shared the CNY HWA-Hunters Team efforts to survey/monitor HWA and how to get involved; and an outdoor field session identifying hemlocks and examining them for HWA. CCE Onondaga Water and Ecology Educator provided the iMapInvasives training and Steve Kinne with the CNY HWA-Hunters Team shared information on HWA and hemlock identification, as well as how to get involved in HWA tracking efforts. 9 attendees

Municipal and Organizational Support

Municipal Stakeholders Meetings are meant to encourage communication and collaboration between the municipalities within the Skaneateles Lake Watershed towards protecting and maintaining water quality.

- **Municipal Stakeholders Meeting January** (January 29th, Borodino Hall Community Center, Skaneateles): CCE educators coordinated facilitation amongst elected officials, organizational leaders, and other watershed stakeholders with the goal of establishing a comprehensive and holistic approach to watershed management to protect the water quality of Skaneateles Lake. The meeting featured a presentation and discussion on timber harvesting best practices for water quality, the pros and cons of local timber ordinances, and the environmental benefits and drawbacks of timber harvesting by Kristina Ferrare, CCE Onondaga Forestry Specialist. 16 municipal leaders and decision makers attended.

Additional support:

- **Skaneateles Lake Association (SLA) Lake Ecology Team Meetings** (January 8th – St. James Episcopal Church in Skaneateles, March 4th – St. James Episcopal Church in Skaneateles, April 8th, May 6th, June 3rd, July 8th, August 5th, September 2nd, October 7th, November 4th, and December 2nd) CCE Water Quality Educator attended 11 out of 12 monthly 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. Meetings were held via Zoom unless otherwise indicated. About 30 attendees on average
- **Skaneateles Lake Association Data and Research Summit** (January 22nd, Center of Excellence, Syracuse). This event hosted by the Skaneateles Lake Association featured updates on data collection and research efforts within the Skaneateles Lake watershed. About 50 attendees
- **Skaneateles Municipal Stakeholders Website Meetings:** CCE Water Quality Educator shared drafts and final versions of the new Skaneateles Lake Watershed website, and received feedback and input from municipal stakeholders. Efforts to promote, publicize, and update the website were also discussed. Additionally, new initiatives the group could undertake were discussed at later meetings. A list of meetings by date is included below:

    - February 24th, Skaneateles Town Hall, 9 municipal leaders and decision makers attended
    - May 26th, Zoom, 9 municipal leaders and decision makers attended
    - June 10th, Zoom, 2 municipal leaders and decision makers attended
    - June 23rd, Zoom, 12 municipal leaders and decision makers attended
    - September 14th, Zoom, 12 municipal leaders and decision makers attended
    - November 9th, Zoom, 9 municipal leaders and decision makers attended
- **SUNY ESF Restoration Science Center (RSC) Meeting** (August 10th, Zoom). Staff from CCE Onondaga and SUNY ESF RSC shared information about their programs and discussed ways to collaborate. 2 attendees
- **CCE Onondaga Annual Meeting** (October 29th, Zoom): 30 attendees
- **SLWAP Annual Meeting** (December 3rd, Zoom): Annual meeting for the Skaneateles Lake Watershed Agriculture Program

Community Presentations

To engage watershed residents, Skaneateles Lake water supply consumers, and other watershed stakeholders who might not be able to attend public workshops, CCE educators gave the following presentations to organizations and community groups upon request in 2020:

- **Shorescaping: Landscaping for Water Quality and Erosion Control** (February 12th, The Lodge at Welch Allyn, Skaneateles): Cornell Cooperative Extension Water Quality and Natural Resources Educators presented on shoreline and water course erosion resistance at the PlantCNY Trade Show and Education Day. The presentation included a variety of methods for stabilizing shorelines, with emphasis on the use of native vegetation as structure for stabilizing soil and improving water quality. 12 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 related 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. **In-person community outreach and tabling events that CCE Onondaga typically attends were cancelled due to the pandemic.**

- SUNY ESF Job Shadow (December 17, 2020, Zoom): Connected with students and shared information on current job duties and water quality work. Answered questions about water quality field and current position. 2 students

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 2020, CCE Onondaga published two editions of the Skaneateles WAVE Review newsletter on July 16, 2020 (summer) and December 15, 2020 (winter). The winter newsletter was printed through Avalon and mailed directly to 2,730 watershed properties.

Summer Skaneateles Lake WAVE Review Newsletter: Topics for the summer edition included:

- New Skaneateles Watershed website by CCE Onondaga and partners

- Watershed Planning, Surveillance and Monitoring by the NYS DEC
- Our Lakes, Our Future – Working Together in the Finger Lakes by the Nature Conservancy
- The 'Lake Friendly Land Care' pledge by the Skaneateles Lake Association
- Water quality contacts for residents

Winter Skaneateles Lake WAVE Review Newsletter: Topics for the winter newsletter included:

- Stewardship in Skaneateles Event by CCE Onondaga
- SUNY ESF Restoration Science Center by the SUNY ESF Restoration Science Center
- Winter Threats to Water Quality by the Skaneateles Lake Association
- Ag Tire Recycling Project Summary by the Skaneateles Lake Watershed Agricultural Program, Onondaga County Soil and Water Conservation District
- Shotwell Brook Stormwater Attenuation Project by the Skaneateles Lake Watershed Agricultural Program, Onondaga County Soil and Water Conservation District
- Water quality contacts for residents

FEATURED in local media (print/video)

To promote programming, in 2020, Educators worked with various news outlets and tracked that the Skaneateles Lake Watershed Water Quality Education Program and its programs were highlighted/featured in 8 articles and videos created, published, and/or broadcasted by outside publications and news platforms:

- *"Skaneateles Lake Watershed Partnership Launches Website"* (July 1st, Bridge Street on News Channel 9): Television interview
- *"City of Syracuse Joins with Skaneateles Lake Watershed Municipalities to Launch SkanLakeInfo.org Website"* (July 13th, OurCity)
- *"CCE Onondaga County helps launch SkanLakeInfo.org"* (July 15th, Extension Insider): Article
- *"Watershed website launches"* (July 15th, Skaneateles Press): Article
- *"Partner Profile: Meet Cornell Cooperative Extension of Onondaga County"* (July 30th, Gardens and Gutters Newsletter): Article
- *"CCE to host stewardship webinar"* (September 14th, Skaneateles Press): Article
- *"CCE hosts virtual stewardship program"* (October 7th, Skaneateles Press): Article
- *"New Skaneateles Lake website launched"* (November 19th, Auburn Citizen): Article

Electronic Communications

Throughout 2020, 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, new 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 February Updates (February 18th). This newsletter shared the HWA training and snowshoe hike in March, as well as information on the NYSDEC Seedling Sale and Buffer in a Bag programs, and was sent to 748 recipients, with 297 opens and 18 clicks on links for more information.
- HWA Training and Snowshoe Hike Reminder (February 24th). This included a reminder for the HWA training in March and shared information on the Soil and Water Conservation District tree sales in each county within the watershed, and was sent to 484 recipients, with 156 opens and 4 clicks on links for more information.
- Get outdoors this weekend! (March 3rd). Reminder for the March HWA training and snowshoe hike, and was sent to 482 recipients, with 142 opens and 1 click on links for more information.
- COVID Update from Cornell Cooperative Extension (April 1st). This email shared information on CCE Onondaga's operations during the beginning of COVID, CCE Onondaga's new address, and resources for each county in the watershed related to COVID. A survey was also shared to better understand interest and comfort level with virtual programming, as well as specific topics for programs. Information was also shared on the Finger Lakes Invasive Plant Detectors Program, and was sent to 482 recipients, with 225 opens and 53 clicks on links for more information.
- Skaneateles Education Program May Updates (May 6th & 7th). Shared information for rain gardens and invasive mussels webinars, and other Master Gardener virtual programming, as well as a Zoom test session for Skaneateles stakeholders, and was sent to 730 recipients, with 275 opens and 21 clicks on links for more information.
- Rain Gardens Webinar (May 18th). Provided reminders for the rain garden and invasive mussels presentations, information on the Baltimore Woods plant sale, and the Skaneateles Lake Association 'Lake Friendly Land Care' pledge, and was sent to 478 recipients, with 171 opens and 30 clicks on links for more information.
- Invasive Mussels Program (May 26th). Shared a reminder for the invasive mussels webinar and information on the SLA's 'Lake Friendly Land Care' pledge, and was sent to 476 recipients, with 176 opens and 30 clicks on links for more information.
- Invasive Mussels Program Reminder Email (June 8th). Shared information for the June invasive mussels webinar, as well as CCE Seneca County's invasive mussels program. Informed stakeholders that the NYHABs website was live and shared info again about the SLA's 'Lake Friendly Land Care' pledge, and was sent to 475 recipients, with 168 opens and 22 clicks on links for more information.
- New Skaneateles Lake Website! (July 2nd). This newsletter shared the launch of the Skaneateles Lake website, as well as press about the website, and was sent to 475 recipients, with 208 opens and 81 clicks on links for more information.
- Summer 2020 Skaneateles WAVE Newsletter (July 16th). Shared link to the digital version of the summer Skaneateles WAVE newsletter, and was sent to 473 recipients, with 197 opens and 69 clicks on links for more information.

- Skaneateles Education Program August Updates (August 24th). Shared the save the date for the Stewardship in Skaneateles program, provided information on the NYHABs website, and shared CCE Onondaga's new work with the Smart Energy Choices program, and was sent to 476 recipients, with 126 opens and 17 clicks on links for more information.
- Skaneateles Education Program September Updates (September 15th). Provided information on the Stewardship in Skaneateles event and NYHABs website, and was sent to 475 recipients, with 141 opens and 19 clicks on links for more information.
- Stewardship in Skaneateles Event Next Week! (September 24th). Shared reminder/information on Stewardship in Skaneateles event, and was sent to 473 recipients, with 152 opens and 24 clicks on links for more information.
- Skaneateles Education Program October Updates! (October 5th). Provided information on Landscaping for Shorelines event and how to access recordings of the Stewardship in Skaneateles event, and was sent to 473 recipients, with 153 opens and 20 clicks on links for more information.
- Timber Sale and Logging Ordinance Training (October 19th). Shared information on a landowner forestry education program hosted by the Danby Conservation Advisory Council and how to access recordings from the Landscaping for Shorelines webinar, and was sent to 472 recipients, with 135 opens and 7 clicks on links for more information.
- Winter 2020 Skaneateles WAVE Newsletter (December 15th). This newsletter shared the link to the digital version of the winter Skaneateles WAVE newsletter, and included a brief snapshot of CCE Onondaga Skaneateles Education Program highlights from 2020, and was sent to 471 recipients, with 179 opens and 69 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: www.skanlakeinfo.org.

Information on website visits and pageviews for July 1, 2020 – December 31, 2020 are included below:

- Total visits: 2,955 (average visits per month: 493)
- Unique visitors: 2,585 (average number of unique visitors per month: 431)
- Total pageviews: 7,131 (average pageviews per month: 1,219)
- Top 5 most viewed pages:
    - Home (2,593 views)
    - Lake Data (334 views)
    - Boat Launch Locations (328 views)
    - HABs and Blue-Green Algae (272 views)
    - FAQ (218 views)

Skaneateles Lake Watershed Website Promotional Materials

To support the launch of the Skaneateles Lake Watershed website, CCE Onondaga educators created promotional materials to share with watershed residents, partners, and stakeholders. The following materials were created and distributed by CCE Onondaga and partners:

- Skaneateles Lake Watershed Website Posters (50 copies distributed)
- Skaneateles Lake Watershed Website Signs (12 signs distributed)
- Skaneateles Lake Watershed Website Post Cards (2,730 post cards mailed)

Facebook, Twitter and Instagram

CCE educators posted a total of 35 Facebook posts, 5 Twitter posts, and 17 Instagram posts in 2020 regarding water quality issues of interest for the Skaneateles watershed. The average reach per Facebook post was 166 views, and the average amount of engagements (clicks, reactions, comments and shares) per Facebook post was 10. The average reach per Twitter post was 203 views and the average amount of engagements (clicks, retweets, replies, follows and likes) per Twitter post was 4. On Instagram, the average number of likes per post was 6, with an overall total of 108 likes for the year. Total CCE Onondaga social media followers (potential reach for posts): 906 Facebook followers, 536 Twitter followers and 389 Instagram followers (as of February 18, 2021).

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 a response within 2-weeks. In 2020, the average number of consumer calls answered related to water quality and/or the Skaneateles watershed was 3 inquiries per month; with 33 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. Paper surveys are distributed to all participants at the event and collected that same day. Due to the COVID pandemic, surveys were distributed electronically to correspond with digital programs starting in mid-March.

- *Municipal Meeting Evaluation: January 2020.* This survey was distributed after the 1/29/20 Municipal Stakeholders Meeting to record and evaluate feedback from the meeting. There were 16 attendees and 2 responses, for a response rate of 13%.
- *Program Evaluation: Hemlock Woolly Adelgid and iMapInvasives Training and Hike.* This evaluation was distributed after the 3/8/20 HWA and iMapInvasives training to record and evaluate feedback from the program. There were 9 attendees and 4 evaluation responses, for a response rate of 44%.
- *General Survey: Skaneateles Programming Survey.* This survey was distributed at the beginning of the COVID-19 pandemic to better understand programmatic interests and

comfort level with digital programming. The survey was sent to 482 people and 45 responses were received, for a response rate of 9%.

- *Program Evaluation: Rain Gardens Webinar.* This survey was distributed after the 5/21/20 Rain Gardens webinar to record and evaluate feedback from the webinar. There were 38 attendees and 12 evaluation responses, for a response rate of 32%.
- *Program Evaluation: Invasive Mussels Webinar.* This survey was distributed after the 6/10/20 Invasive Mussels webinar to record and evaluate feedback from the webinar. There were 83 attendees and 22 evaluation responses, for a response rate of 27%.
- *Program Evaluation: Stewardship in Skaneateles Webinar.* This survey was distributed after the 9/29/20 Stewardship in Skaneateles webinar to record and evaluate feedback from the webinar. There were 40 attendees and 19 evaluation responses, for a response rate of 48%.
- *Program Evaluation: Landscaping for Shorelines Webinar.* This survey was distributed after the 10/14/20 Landscaping for Shorelines webinar to record and evaluate feedback from the webinar. There were 22 attendees and 5 evaluation responses, for a response rate of 23%.

Salary Full-Time Equivalents used to deliver the program 2020

Team Coordinator (Water Quality)	.29
Resource Educator (WQ/Forestry)	.01
Subject Educator (Water Quality)	1.04
Subject Educator (Ag. Ed./WQ)	.06
Social Media Platform & IT	.07
Administrative Assistant (WQ)	.10
	1.57

Report compiled and submitted by Camille Marcotte, CCE Onondaga, on 3/2/2021.

Cornell Cooperative Extension
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e. onondaga@cornell.edu
www.cceonondaga.org

CORNELL COOPERATIVE EXTENSION ONONDAGA COUNTY JOINS WITH SKANEATELES LAKE WATERSHED MUNICIPALITIES TO LAUNCH SKANLAKEINFO.ORG WEBSITE

Skaneateles, N.Y – People who live, work, or play around Skaneateles Lake now have a website, SkanLakeInfo.org, for comprehensive information about Skaneateles Lake and the watershed. Cornell Cooperative Extension (CCE) of Onondaga County worked with the other municipalities and organizations in the Skaneateles Lake watershed to create the site.

SkanLakeInfo.org has 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, critical environmental issues facing the lake.

The municipalities and organizations working in the watershed created the SkanLakeInfo.org website in response to frequent requests from constituents, businesses, and visitors for information about the lake. The goal is to bring together in a single source the wide range of information frequently sought by people who live or work in the watershed, as well as those who boat on, recreate in or care about Skaneateles Lake and promoting a healthy future for the lake and watershed.

Participating municipalities are the towns of Niles, Scott, Sempronius, Spafford, the Village and Town of Skaneateles, and City of Syracuse. The City of Syracuse funded creation of the website through the Skaneateles Lake Watershed Education Program and its work with CCE of Onondaga County.

CCE of Onondaga County will update and maintain the site in coordination with the participating municipalities; Cayuga, Cortland and Onondaga counties; New York State Department of Environmental Conservation; Cayuga, Cortland and Onondaga County Soil and Water Conservation Districts; Skaneateles Lake Watershed Agricultural Program (SLWAP); Central New York Land Trust; Finger Lakes Land Trust; and the Skaneateles Lake Association.

SKANEATELES WATERSHED MUNICIPAL PARTNERSHIP

Syracuse New York

#

Cornell Cooperative Extension
Onondaga County

Skaneateles Lake Watershed Municipal Officials' and Organizational Stakeholders' Meeting

With a special presentation on Timber Harvesting Considerations for Municipalities

Wednesday, January 29, 2020
5:30 p.m. - 8:00 p.m.
Borodino Hall Community Center
East Lake Rd., Skaneateles, NY

AGENDA

5:30 PM	Registration and Dinner
6:00 PM	Welcome and Introductions
6:15 PM	Municipal & Organizational Stakeholder Updates
7:15 PM	Guest Speaker: Kristina Ferrare, Forestry Specialist at CCE Onondaga, will discuss timber management best practices for water quality, the pros and cons of local timber ordinances, and the environmental benefits and drawbacks of timber harvesting.

As a friendly reminder, the goal of this meeting is to provide a comfortable and collaborative space to discuss issues and initiatives in our watershed while learning about important updates and best practices related to land use and water quality in the Skaneateles Lake Watershed. As always, your thoughts and ideas are welcome and encouraged at this meeting.

SKANEATELES WATERSHED **MUNICIPAL PARTNERSHIP**

Scan here with your phone camera!

WWW.SKANLAKEINFO.ORG

SKANEATELES LAKE WATERSHED WEBSITE

Check out the new watershed website with real time lake data, information on harmful algal blooms, how you can help protect water quality, and much more!

This website is an effort of the Skaneateles Municipal Watershed Partnership, which includes: The City of Syracuse, The Town of Niles, The Town of Scott, The Town of Sempronius, The Town of Spafford, The Town of Skaneateles, The Village of Skaneateles, Cornell Cooperative Extension Onondaga County and Onondaga County Soil & Water Conservation District.

Image by Skaneateles Drone

Skaneateles Lake Watershed Wave Reviews

Summer 2020 Edition

Visit the new Skaneateles Lake website for resources and tips on how to protect the water quality of Skaneateles Lake
www.skanlakeinfo.org

In this Issue:

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

New Skaneateles Lake Watershed Website!
www.skanlakeinfo.org

Camille Marcotte - Cornell Cooperative Extension Onondaga County

People who live, work, or play around Skaneateles Lake now have a website, SkanLakeInfo.org, for comprehensive information about Skaneateles Lake and the watershed!

SkanLakeInfo.org has sections on: boating; agriculture; landscaping; frequently asked questions; lake temperature and elevation; and City of Syracuse watershed programs. The site also provides information on Harmful Algae Blooms (HABs) and invasive species, critical environmental issues facing the lake. The website brings together a wide range of information about Skaneateles Lake and promotes a healthy future for the lake and watershed.

Press about the website:

- Watch CCE Onondaga Water and Ecology Educator, Camille Marcotte, talk about the new website on Bridge Street on News Channel 9 - July 1, 2020
- Read more about the website in this news release - July 10, 2020

This website is an effort of the Skaneateles Municipal Watershed Partnership, which includes: The City of Syracuse, The Town of Niles, The Town of Scott, The Town of Sempronius, The Town of Spafford, The Town of Skaneateles, The Village of Skaneateles, Cornell Cooperative Extension Onondaga County and Onondaga County Soil & Water Conservation District.

Recent educational programming by CCE Onondaga includes:

- ***Hemlock Woolly Adelgid Hike and iMapInvasives Training - 3/8/20***
- ***Rain Gardens Webinar - 5/21/20***
- ***Invasive Mussels Webinar - 6/10/20***

Stay tuned for additional programming to be announced!

Resources from workshops are posted to the CCE Onondaga website at: www.cceonondaga.org. If you're not on our mailing list, be sure to sign up for notices about upcoming programs: http://eepurl.com/bQ22XP

The Skaneateles Watershed Education Program works to protect the water quality of Skaneateles Lake, a treasured resource that serves as the primary drinking water for 200,000 homes from Skaneateles to the City of Syracuse. The City of Syracuse has funded this program since its inception in 1996.

Keep reading for more information on water quality happenings in the Skaneateles Lake Watershed!

Cornell Cooperative Extension
Onondaga County

Syracuse New York

SKANEATELES WATERSHED MUNICIPAL PARTNERSHIP

Watershed Planning, Surveillance, and Monitoring

Aimee Clinkhammer - NYS Department of Environmental Conservation

The NYS Department of Environmental Conservation's (DEC) Finger Lakes Water Hub is continuing to work with residents, citizen scientists, the Skaneateles Lake Association, and the Skaneateles Lake community at large. There are a variety of efforts underway to protect and further study Skaneateles Lake water quality.

- ***Watershed Planning*** - Recently we've been involved with Skaneateles Lake stakeholders on developing a clean water plan called a Nine Element Plan for the Skaneateles Watershed. More info about Clean Water Plans: www.dec.ny.gov/chemical/103264.html

- ***HABs Surveillance*** - We are continuing to support the Skaneateles Lake Association on their harmful algal bloom (HAB) Surveillance Program which started in 2018 by training new and return volunteers next month. In 2019, DEC debuted a new HABs reporting system, NYHABS, a GIS based platform available to the public which shows active and archived blooms statewide (on.ny.gov/nyhabs).

- ***Summer Water Quality Monitoring*** - As part of the Governor's HABs Initiative, water quality sensors will again be installed in the lake for the third summer in a row. Real-time and historic water quality data can be accessed at: ny.water.usgs.gov/maps/habs. DEC and USGS are working together to analyze the large amount of data collected under this program to learn more about factors that lead to HABs.

- ***Citizen Science*** - We are also excited to continue DEC's Citizen Statewide Lake Assessment Program (CSLAP) on Skaneateles Lake. CSLAP is a partnership between NYSDEC, NYS Federation of Lake Associations and lake associations/residents who help monitor and collect critical lake data. Citizen scientists on Skaneateles Lake collect surface and deep samples at two locations on the lake 8 times between June and October. Results from CSLAP efforts in 2017 and 2018 have been published in a Finger Lakes Regional Water Quality Report and is available on NYSDEC's website at: www.dec.ny.gov/docs/water_pdf/2018flwqreport.pdf

- ***Winter Water Quality Monitoring*** - On a calm and cloudy April day, the Hub finished the last round of a three-year pilot Finger Lakes Winter Sampling Program. On Skaneateles Lake we took water clarity measurements with a Secchi disk which is lowered into the water until it's no longer visible. Skaneateles has very clear water, but this day was especially clear. We took the deepest Secchi disk that we've ever seen in the Finger Lakes at 24 meters. At almost 80 feet, that's roughly equivalent to an 8-story building!

We look forward to continuing to work with the Skaneateles Lake community on monitoring and protecting Skaneateles Lake and we hope you and your loved ones are staying safe and healthy.

USGS water quality monitoring sensor located on the pier in the Village of Skaneateles, photo credit: USGS

Our Lakes, Our Future, Working Together in the Finger Lakes

Olivia Green, Finger Lakes Water Quality Specialist - The Nature Conservancy

The Nature Conservancy is a global conservation organization. Our mission is to protect the land and water on which all life depends.

The Finger Lakes are the lifeblood of our region. They provide us with drinking water, support our economy, and provide habitat for fish and wildlife. Today, the Finger Lakes face a growing threat: harmful algal blooms. Too much algae is a big problem: it prevents us from swimming, fishing, and boating and can cause shorelines to shut down, hurting our economy.

Thankfully, many in our community have come together to protect the lakes we love and depend upon. Working with diverse partners, The Nature Conservancy has helped improve water quality in the western lakes. We have protected nearly 15,000 acres in the Finger Lakes region and led a restoration project at Honeoye Lake that is removing up to 30 percent of the problematic nutrients and sediments that enter the lake each year.

In 2018, The Nature Conservancy began working in the eastern Finger Lakes region. Focused on the Owasco and Skaneateles watersheds, our priority is to ensure our lakes are healthy by:

- Identifying and preserving the lands most critical to healthy lakes
- Partnering with farmers and soil and water conservation districts to improve soil health
- Collaborating with partners to improve how we collectively manage our watersheds
- Reducing pollution and runoff into our lakes by restoring tributaries

Want to learn more? Visit our website at www.nature.org/newyork or call Olivia Green in Auburn at (315)370-5818.

Take the 'Lake Friendly Land Care Pledge' Today!

Frank Moses, Executive Director - Skaneateles Lake Association

The Skaneateles Lake Association (SLA) invites you to help protect Skaneateles Lake by signing the Lake Friendly Land Care pledge. Do what you can to help keep the lake healthy and beautiful. Your actions matter!

Take the pledge today and volunteer to display a "We Practice Lake Friendly Land Care" sign. Signs are free for current SLA members who take the pledge. Find out more by visiting skaneateleslake.org/lake-friendly/

TAKE THE
LAKE FRIENDLY
LAND CARE
PLEDGE TODAY!

Visit: SkaneatelesLake.org

CCE Onondaga
6505 Collamer Road,
East Syracuse, NY
13057

Skaneateles Lake Wave Reviews

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Stay connected!

Join our Water Quality List-serve to recieve 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 and searching for our 'Skaneateles Lake' landing page.

Don't forget to check out the new Skaneateles Lake Watershed website at www.skanlakeinfo.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.

CNY Stormwater Coalition

Gardens and Gutters

A Central New Yorker's Guide to Managing Stormwater Runoff

Volume 8 Issue 2 **July 2020**

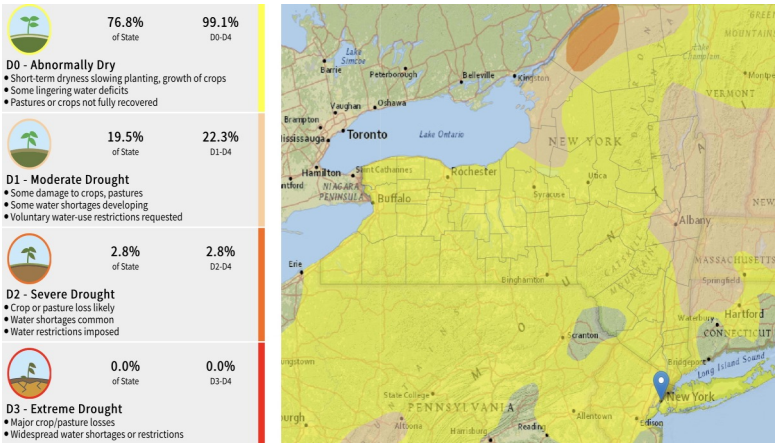
Lawn Care Tips for Hot, Dry Conditions

Inside This Issue

June 2020 was warmer and drier than normal. Syracuse had its 10th driest and 14th warmest June on record, with less than half the normal rainfall. Soil moisture loss due to evaporation and evapotranspiration exceeded rainfall, resulting in a soil moisture deficit.

Scattered storms in the first part of July offered some relief to dry soil conditions, but through the first 22 days of the month Syracuse experienced nine 90-degree days. The average temperature in Syracuse was more than six degrees above normal - a full degree higher than the all time warmest months on record for Syracuse. As of July 14, the US Drought Monitor reported abnormally dry conditions across 77% of NYS, including CNY. While a lot can change over the coming weeks, the pattern headed our way favors warmer than average air that may lead to continued soil moisture deficits, stunted growth and additional plant stress.

This edition of ***Gardens and Gutters*** will help you maintain a healthy and attractive lawn and garden while preventing erosion and protecting water quality during these conditions



Forget the Fertilizer. Think twice before fertilizing in extreme heat. Fertilizer combined with excess sun exposure requires extra energy from the plants and can create stress for the lawn. This can lead to scorched spots in your yard.

Minimize Traffic. A well used path across your lawn may show signs of excessive wear during hot, dry periods. Blades of grass have a tough time springing back from foot traffic. For dry, brittle lawns, consider laying stepping stones or temporarily posting a "Keep off the Grass!" sign.

Adjust the Watering. Even when temperatures are in the 90s, it is possible to overwater your lawn. If the soil in your yard is constantly wet, the grass roots will be unable to take in a sufficient oxygen, leaving them susceptible to disease. Water the lawn deeply and infrequently. You do not need to put out the sprinkler every day, even in high heat.

Helpful Tips for Maintaining a Lake Friendly Lawn and Garden

Check the weather forecast and never apply fertilizer before a rainstorm. Heavy rainfall can cause fertilizer to wash into nearby lakes and streams. Sweep up any spillage from your patio or driveway to prevent it from washing offsite and avoid fertilizing lawns located near waterways, drainage swales, and storm drains. If excess fertilizer ends up in lakes and streams it will promote algae and rooted aquatic plant growth.

Choose your fertilizer carefully. Test your soil before applying fertilizer and don't use fertilizers containing phosphorus. Fertilizer labels have three bold numbers on the bag (such as 22-0-15). The number in the middle is the percentage of phosphorus in the product.

Phosphorus is an essential nutrient for plant growth but too much can be harmful to lakes and streams because it promotes the growth of algae and aquatic plants. Excessive aquatic plant growth impacts boating and fishing and when the plants die, the decomposition process reduces the amount of oxygen available to fish and other aquatic life. Most CNY soils have naturally high levels of phosphorus. You can save time and money by purchasing no-phosphorus fertilizer for your lawn and by carefully following the application rates found on the bag.

Always test your soil before applying fertilizer. Soil testing should be done at a laboratory that routinely performs nutrient analysis and that can interpret the test results. A good place to locate a qualified lab is through your County Cornell Cooperative Extension office. A home test kit may also be used but they tend to be less accurate and most do not come with interpretations or recommendations. If soil nitrogen levels are low, apply a slow release fertilizer to allow time for gradual soil infiltration. Fall fertilization can help the turf develop a vigorous root system, survive cold temperatures and winter stress, and will help it to bounce back quickly in the spring.

Mow at regular intervals to maximize lawn benefits. Proper mowing is the most effective way to maintain a healthy lawn. The root system binds the soil to reduce the flow of water during heavy rainstorms. This minimizes soil erosion and nutrient loss while protecting water quality and relieving the strain on local storm sewers. A healthy lawn also contains bacteria and other microscopic organisms that filter pollutants as the water moves through the soil.

continued on page 3

Whether your lawn is composed of trees, woody shrubs, natural grasses or mowed lawn, proper maintenance is key to realizing the benefits you value and protecting water quality.

Helpful Tips for Maintaining a Lake Friendly Lawn and Garden *con't*

Keep grass clippings on the lawn. Grass clippings return organic matter and nutrients to your lawn. Leave the clippings on the lawn to recycle the nutrients back into the soil, or place them in a compost pile. Never put the clippings in nearby ditches, streets, storm drains or streams.

Cover piles of soil, sand, and mulch to prevent erosion. Wind and rain can transport this material to lakes and streams where it Promotes weed and algae growth and reduces aquatic habitat.

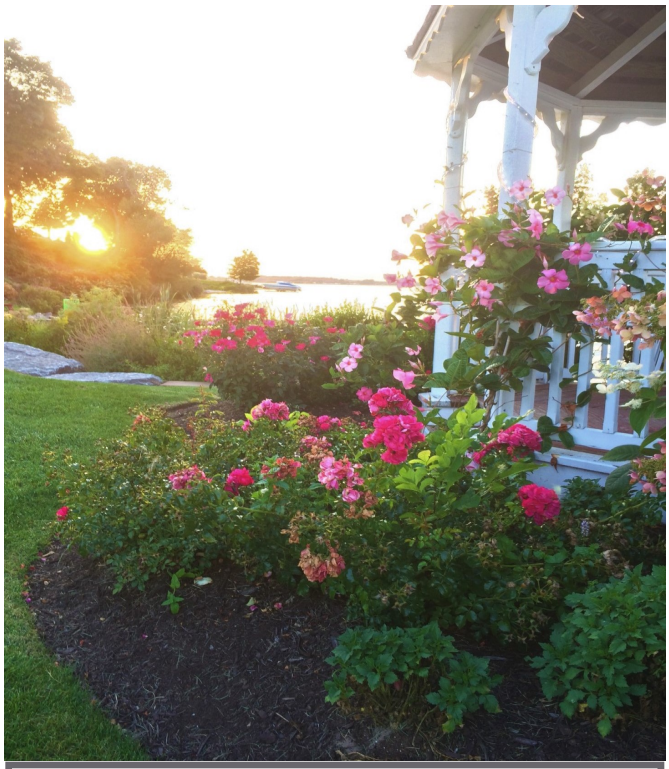
Plant buffer strips along lake and stream shorelines. Trees and bushes will slow the rate and volume of stormwater runoff, while absorbing excess nutrients and reducing soil erosion.

Create a compost pile for your garden waste. Place the compost near garden plants to recycle nutrients and organic matter, minimize soil erosion, and reduce the need for watering and commercial fertilizer.

Limit your use of pesticides to protect humans, pets, and water resources. Inappropriate use of pesticides can harm people, wildlife, pets, and the environment. Use alternatives (biological controls) whenever possible to tackle problems with weeds and insects. If pesticides are used, carefully follow the recommended timing, frequency, and application rates found on the container.

Carefully dispose of yard and household waste. Keep all gardening products, grass clippings, leaves, pet waste, pesticides, oil, and gasoline out of the storm drains.

Plant a rain garden to slow the rate of stormwater runoff and provide time for surface water to soak slowly into the ground. Rain gardens help to minimize pollution runoff, reduce flooding and drainage problems, and will enhance the beauty of your yard.



Shoreline buffers and vegetated slopes can be attractive and reduce the flow of nutrients and sediment into our surface waters.

Use native plants in your landscaping plan. Native plants require less maintenance, are well adapted for this region and rarely require pesticides and fertilizers.

Conserve water. Water your garden in the early morning or late afternoon to minimize evaporation, and sweep your sidewalks and driveways rather than using a hose. Divert roof water to vegetated areas or rain barrels and use mulch around the base of your plants to retain water.

See Something? Say Something!

The discharge of anything other than stormwater to a storm drain is called an illicit discharge. If you suspect that someone has discharged contaminants such as chemicals, trash, paint, motor oil or lawn waste into a storm sewer contact the **Onondaga County Stormwater Pollution Hotline** at 315-435-3157. The hotline is staffed 24 hours a day, seven days a week by the Onondaga County Office of Water Environment.

Partner Profile: Meet Cornell Cooperative Extension of Onondaga County

Since April 15th, 1913, Cornell Cooperative Extension of Onondaga County has responded to the needs of local residents with unbiased, research-based information, tools and education that people have come to depend on and trust. Programs are developed in direct response to community input, and are based on the most current information available from Cornell and other Land Grant universities from across the nation.

The mission of Cooperative Extension is to enable people to improve their lives and communities through partnerships that put experience and research knowledge to work. Extension staff and trained volunteers deliver education programs, conduct applied research, and encourage community collaborations. CCE's educators connect people with the information they need on topics such as commercial and consumer agriculture; nutrition and health; youth and families; finances; energy efficiency; economic and community development; and sustainable natural resources.

In the garden, Cornell Cooperative Extension of Onondaga County is your resource for information on soils, site improvement, plant selection, proper plant care, eco-friendly practices, integrated pest management, composting and so much more, including Landscaping for Water Quality!

Landscaping for Water Quality is a means of planting vegetation and using design practices to ensure that when water enters our landscapes it is replenishing the soil, and helping desired vegetation, and returning to our waterways clean so that the quality of our water resources stays high. We can use landscaping to control the flow of water, retain it during heavy storm events, slow its speed as it crosses the land, and control the materials it carries with it. Landscaping for Water Quality focuses on using a plant palette appropriate for the particular site and climate, using low-maintenance techniques and sustainable design.

Interested in learning more? Cornell Cooperative Extension of Onondaga County is happy to help! Even during these days of social distancing, Cornell Cooperative Extension of Onondaga County provides online access to a wide range of informative and helpful education resources that will help you improve the sustainability, function and appearance of your garden. Check out the following sample of available landscaping resources and plant databases available on the Onondaga County CCE's website, then click around to get a feel for the full range of amazing programs, resources and services they provide.

- Landscaping for Water Quality in the Finger Lakes provides information on different landscaping best practices and native plant selections for your property
- What Plants Do I Choose? offers suggestions for native plants for shorescaping/landscaping
- Native Plants for NY Streamsides offers more examples of native shrubs and trees
- NYSDEC Native Flowers for Landscaping and Gardening factsheet offers more suggestions on native plants.
- Habitat Gardening in Central NY: Regularly offered gardening programs specific to the central NY area.
- Lady Bird Johnson Wildflower Center: Find native plants based on different characteristics. You can also find native plant suppliers by using this link.
- Cornell's Woody Shrubs for Stormwater Retention Practices is a great resource for helping to design rain gardens or other vegetated stormwater filter strips.

Woody Shrubs for Stormwater Retention

Woody plants can be a wonderful and functional addition to your yard by providing low maintenance, attractive cover for stormwater retention and infiltration practices. Plants used for stormwater retention and infiltration practices are important for reducing runoff and maximizing green space in urban and suburban areas. While a wide variety of herbaceous plants are often used in these spaces, many kinds can present annual maintenance issues because of the need to cut back dead foliage and stems. Utilizing woody plants, however, decreases the need for excessive maintenance while successfully adding aesthetic and functional vegetation to stormwater retention practices.

Increased volumes of stormwater runoff caused by impervious surface area and compacted soils can result in a variety of issues including:

- Sedimentation of water sources which reduces light penetration of the water column and warms water by absorbing solar radiation. Sedimentation homogenizes stream bottom habitat and destroys important spawning grounds.
- Streambank erosion
- Excess nutrient and organic carbon loading resulting in anoxic (low-oxygen) water conditions which is detrimental to aquatic life
- Bacterial contamination of water sources especially in areas where sanitary sewers are combined with stormwater sewers
- Pesticide poisoning of aquatic habitats when excess pesticides are washed into water systems
- Chloride contamination of freshwater systems from deicing salts used during the winter
- Thermal impacts when warmer stormwater mixes and heats the aquatic habitat of cool water species
- Terrestrial trash and debris collecting in aquatic systems

Photo source: http://saratogawoodswaters.blogspot.com

Some or all of these problems can be found in urban and suburban neighborhood lakes, streams and ponds. The resulting contaminants contribute to poor water quality for human use, degradation of freshwater habitats and harm to aquatic species.

(Adapted from Cornell University Department of Horticulture, Ethan M. Dropkin and Nina Bassuk)

KNOW BEFORE YOU GROW: NOT ALL WOODY PLANTS ARE THE SAME

A woody invasive species is a species of shrub, tree or woody vine that is not native to the place being considered. Woody invasive species cause or are likely to cause harm to the environment, the economy and/or to human health.

NYS regulations prohibit or regulate the possession, transport, importation, sale, purchase and introduction of select invasive species. The purpose of this regulation is to help control invasive species, a form of biological pollution, by reducing new infestations and spread of existing populations. Click below for:

Printable list of prohibited and regulated invasive species along with some frequently asked questions (PDF)

Prohibited and regulated animals - booklet with photos (PDF, 5 MB)

CNY Stormwater Coalition

The CNY Stormwater Coalition was formalized in 2011 in order to establish a regional approach for stormwater management and water resource protection. The Coalition is made up of 29 local governments and the NYS Fairgrounds. Each member operates a Municipal Separate Storm Sewer Systems (MS4). Through the Coalition, members are working together to meet regulatory requirements while improving water quality.

CNY STORMWATER COALITION MEMBERS

Camillus Town
Cicero Town
Clay Town
DeWitt Town
Geddes Town
Hastings Town
LaFayette Town
Lysander Town
Manlius Town
Marcellus Town
Onondaga Town
Pompey Town
Salina Town
Sullivan Town
Van Buren Town

Baldwinsville Village
Camillus Village
Central Square Village
East Syracuse Village
Fayetteville Village
Liverpool Village
Manlius Village
Marcellus Village
Minoa Village
North Syracuse Village
Phoenix Village
Solvay Village
Syracuse City
Onondaga County
NYS Fairgrounds

Stay Up To Date with the CNY Stormwater Coalition Website

The CNY Stormwater Coalition normally meets quarterly throughout the year. Meetings are held on Tuesday afternoons at various municipal buildings around the region. All meetings are open to the public, and your attendance and participation are always welcomed! Currently, Coalition meetings are on hold due to COVID-19. Until it is safe to return to a normal meeting schedule, we invite you to stay updated on municipal stormwater management efforts by visiting the CNY Stormwater Coalition website.

The CNY Stormwater Coalition is staffed and coordinated by the Central New York Regional Planning & Development Board. For more information, visit the CNY Stormwater website at www.cnyrpdb.org/stormwater

Central New York Regional Planning & Development Board

Lawns to Lakes: The Connection is Real

Harmful Algae Blooms (HABs) are occurring across CNY. Exposure to water during a HAB outbreak can cause health problems for people, pets and wildlife. HABs generally occur during periods of warm weather in lakes with high nutrient levels, especially phosphorus. You can help to reduce the threat of HABs by reducing nutrient runoff from your home, lawn and garden. Limit the use of phosphorus fertilizers. Maintain your septic tank. Plant rain gardens and vegetative buffers, and maintain vegetation that will control soil erosion.

Did you know that in NYS, it's illegal to use phosphorus fertilizer on lawns that don't need it. The fertilizer provisions of the NYS Dishwasher Detergent and Nutrient Runoff Law are designed to improve water quality by reducing the amount of phosphorus entering the state's waters. The law sets restrictions on the use of phosphorus fertilizer on lawns and non-agricultural turf. Only lawn fertilizer with less than 0.67 percent by weight phosphate content is permitted. Application of any fertilizer on lawns or non-agricultural turf within 20 feet of a water body or on paved surfaces is restricted.

The law applies to homeowners, landscapers and lawn care professionals, pesticide applicators, retailers, distributors and manufacturers of lawn fertilizers. It also applies to fertilizer/pesticide combination products when these products contain over 0.67% phosphorus, and organic phosphorus fertilizer such as bone meal. The law does not apply to products with 0.67 or lower concentrations of phosphorus, agricultural fertilizer, fertilizer for trees, shrubs, gardens, or compost.

WE NEED YOUR HELP!

The CNY Stormwater Coalition believes that everyone has a role in keeping our surface waters clean and healthy and is committed to providing information that supports water protection through informed personal choices. To be effective, we need to hear from you.

Please take a few minutes to complete our online survey. Your responses will help us deliver useful and interesting information in a format that meets needs and interests. The survey takes about 5 minutes to complete but will help shape our education program for years to come. Thank you

To participate, go to CNYRPDB.ORG/Stormwater and click on SURVEY in the blue box, or scan this QR code.

The survey will close on August 31, 2020

FOLLOW US ON facebook
CNY Stormwater Coalition

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Skaneateles Lake Watershed Wave Reviews

Winter 2020 Edition

Visit the new Skaneateles Lake website for resources and tips on how to protect the water quality of Skaneateles Lake
www.skanlakeinfo.org

In this Issue:

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

Stewardship in Skaneateles

Camille Marcotte - Cornell Cooperative Extension Onondaga County

Land conservation and stewardship can help protect water quality, ensuring clean drinking water is available for future generations. Cornell Cooperative Extension Onondaga County held an event for people who live and work around Skaneateles Lake to learn more about ways to steward their land to protect water quality, as well as to share updates about some of the work being done in the watershed to conserve land. The Stewardship in Skaneateles event was held virtually on Tuesday, September 29th, 2020. The virtual event featured presentations from Finger Lakes Land Trust (FLLT), CNY Land Trust and SUNY ESF related to conservation and stewardship in the Skaneateles Lake watershed.

Specific session topics included:

- Conservation easements and updates on Finger Lakes Land Trust's Skaneateles projects. Max Heitner, FLLT
- CNY Land Trust's work in Skaneateles, including the new Watershed Education Center. Albert Joerger, CNY Land Trust
- Skaneateles lawn to meadow restoration program. Sam Quinn, SUNY ESF

The recording for this webinar is posted on the CCE Onondaga YouTube page at the following link: bit.ly/38FzTcC

In the news! Read an article in the Skaneateles Press about the event! Visit bit.ly/32E0Ppq for a pdf of the article.

Recent educational programming by CCE Onondaga includes:

- ***Stewardship in Skaneateles Webinar - 9/29/20***
- ***Landscaping for Shorelines Webinar - 10/14/20***

Stay tuned for additional programming to be announced!

Resources from workshops are posted to the Skaneateles Lake website: www.skanlakeinfo.org and the CCE Onondaga website: www.cceonondaga.org. If you're not on our mailing list, be sure to sign up for notices about upcoming programs: http://eepurl.com/bQ22XP

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

Keep reading for more information on water quality happenings in the Skaneateles Lake Watershed!

Cornell Cooperative Extension
Onondaga County

SUNY ESF Restoration Science Center

Anna Harrison and Brandy Neveldine - SUNY ESF Restoration Science Center

The Restoration Science Center (RSC) at SUNY College of Environmental Science and Forestry (SUNY ESF) is a university-wide effort to restore degraded ecosystems, endangered species, and human relationships with the land. We have a three-pronged approach to restoration, centered around teaching, research, and community outreach. Our primary mission is for students and RSC faculty at ESF to work side-by-side on restoration projects with research partners, governmental agencies, non-profit organizations, industry and private landowners. These collaborations will help to prepare ESF students for future careers as restoration practitioners and managers, by providing hands-on, skills-based experiences for students.

The RSC is working to address restoration goals locally, regionally and globally, by focusing on four primary areas of restoration:

1. **Ecosystem Restoration** - restoring ecosystems and landscapes to support diverse and productive habitats for people, plants, and animals
2. **Species Restoration** - restoring rare, threatened, and endangered species
3. **Biocultural Restoration** - engaging multiple ways of knowing, to restore ecosystems and rebuild our cultural connections to place
4. **Agroecological Restoration** - increasing sustainable and novel food systems through restoration

In the Skaneateles Lake watershed, we hope to engage in restoration activities that protect lake water quality, enhance biodiversity, and preserve habitat for local plants and animals. Potential partners are encouraged to reach out to explore ways we can work together to help protect and restore our natural resources in Central New York.

Sam Quinn at a potential restoration site (erosion) in a Skaneateles Lake subwatershed forest, photo credit: ESF RSC

Southern end of Skaneateles Lake looking north, photo credit: ESF RSC

Winter Threats to Water Quality

Rachael DeWitt - Skaneateles Lake Association

Central New York (CNY) is no stranger to ice and snow. But do we know what impact our winter de-icing actions are having on our environment?

We use a lot of salt in CNY to keep our roads and walkways safe, but all that salt ends up somewhere. The salt can seep into the ground or runoff into streams and lakes, impacting our drinking water. Salt can also be harmful to aquatic life and plants. Here is a breakdown of salt products and things you should know about them:

- **Rock salt (sodium chloride)** is the most commonly used salt but it can contain cyanide as an anti-caking agent that can be lethal to aquatic life, and is the most detrimental for plants.
- **Calcium chloride** is considered a superior choice compared to rock salt, because it does not contain cyanide, but it can also damage plants. Calcium chloride costs approximately three times more than rock salt, but only one-third as much is needed. Calcium chloride is also effective at temperatures down to -25°F.
- **Magnesium chloride** is considered the least toxic de-icing salt because it contains less chloride than either rock salt or calcium chloride, making it safer for plants and animals.
- **Calcium magnesium acetate (CMA)** is considered the best overall choice for safely melting ice. It is less toxic than de-icers containing chloride, but can cost substantially more than rock salt.

There are many ways to keep walkways safe while also minimizing pollution to our waterways, including salt alternatives that can be less damaging to properties and landscaping. Sugar Beet Juice is one of the most environmentally friendly ways to de-ice slippery surfaces. The juice from the sugar beets lowers the freezing point of ice and snow. It is completely safe for roads, plants, pets, concrete, and cars. The one downside is that the sugar beet juice, if it enters streams and lakes, can attract bacteria which can use up oxygen in water. Sand and coffee grounds applied on top of snow or ice can help absorb sunlight to melt snow and ice. They also provide traction. However, sand can eventually blow or wash into streams or lakes where it can damage aquatic habitat and create unwanted substrate for plant growth. If you use sand, remember to sweep and collect it as soon as weather conditions permit. Kitty litter will also provide traction on slippery surfaces but will not melt snow. As a consumer, please consider alternative products to use when you plan for an upcoming snow storm.

Other tips for snow and ice removal include:

- Look for "pet safe" de-icing products. If a product is pet friendly, it is likely to be eco-friendly.
- Apply de-icing products before a winter storm. Be sparing with salt application.
- Disperse ice melt properly and continue to disperse during a storm.
- Clear as much snow and ice as possible before applying de-icing products. Don't use salt as a substitute for shoveling.
- A mechanical spreader can help achieve proper coverage. The proper coverage rate is about one cup per square yard.

Skaneateles Lake Association Executive Director Frank Moses' son Harrison working hard at melting ice, photo credit: Frank Moses, SLA

Some properties may be unable to avoid salt that is applied to municipal roads, which can accumulate alongside the road. In the spring, it is important to wash salt spray off plants that are near the road, sidewalk, or driveway and to flush the soil with fresh water. Call your local highway department to find out what type of de-icer they use near your landscape. You can also advocate for your municipality to switch from using salt to more lake friendly de-icing alternatives, like sugar beet juice. If we act together, we can collectively be the solution to winter pollution!

To learn more, check out the road salt page on the new Skaneateles Lake website: www.skanlakeinfo.org/road-salt.
For more on the Skaneateles Lake Association, visit www.skaneateleslake.org.

Ag Tire Recycling Project Summary

Eric Jensen - SLWAP, Onondaga County Soil and Water Conservation District

Waste ag tires piled outside provide an environment for mosquitoes to breed in the stagnant water that collects inside. These mosquitos pose a health concern since they can carry West Nile Virus, Eastern Equine Encephalitis (EEE), and other diseases. By removing the tires, the risk of disease is reduced. In addition, large tire piles are a risk if they catch fire and release thick black smoke and water pollutants from runoff due to fire suppression activities. Farms are required to comply with new NYS DEC waste tire regulations but they have a difficult time finding safe options to dispose of worn out ag tires. This is because local landfills and tire recyclers do not accept them due to the size and thickness of the tires. The Skaneateles Lake Watershed Ag Program (SLWAP) was able to identify a facility in Niagara Falls, New York that processes large ag tires.

In 2019, the Onondaga County Soil & Water Conservation District was able to collect 32 large dumpster loads of waste tires from farms around the county. These loads totaled over 187 tons or over 12,000 tires! These whole waste auto tires had previously been used to weight down feed storage bunk covers on dairy farms. Now farms are transitioning to cut tire sidewalls for bunk cover weights which have the benefit on not collecting stagnant water. Farms also find themselves to be sites of illegal tire dumping, and our program also helped to alleviate this burden.

This year, a pilot program was initiated when seven trailer loads of waste ag tires were collected and sent to be processed. These trailers required extra high lifts to load the tires over the 13.5 feet sidewalls. Smaller ag tires were added to fill in the void spaces to complete the trailer loads. The tires will be shredded into chips of various sizes and used for energy or other uses. We believe the extra effort to remove these large ag tires and comply with NYS DEC regulations will provide lasting environmental benefits to the watershed and community.

For more information on large ag tire recycling, contact the SLWAP at the Onondaga County Soil & Water Conservation District office location at 6680 Onondaga Lake Parkway, Liverpool at (315) 457-0325.

Photos of the ag tire recycling process

Photo credits: Onondaga Soil and Water Conservation District

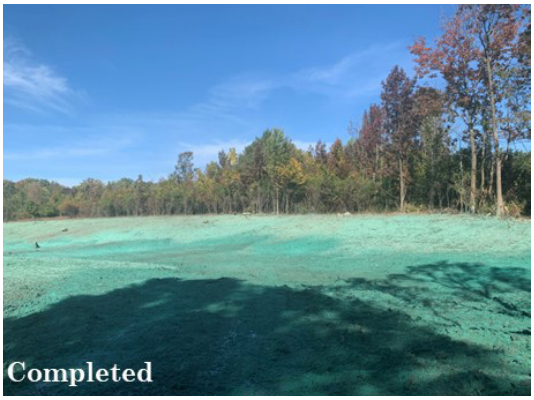
Shotwell Brook Stormwater Attenuation Project

Kim Clark - SLWAP, Onondaga County Soil and Water Conservation District

The Shotwell Brook stormwater attenuation project has been completed in Skaneateles, NY! The project involved the creation of a 1.05 acre constructed wetland on abandoned agricultural land with an extensive floodplain allowing for 1,920,000 gallons of storage during high flow stream discharge events. The project also included cross vane and rock grade control structures installed at the upstream end of the floodplain swale. These features direct discharges above bankfull flow into the wetland allowing for temporary storage and attenuation of peak flows. Creating an expansive floodplain provides many enhanced benefits for the watershed such as carbon sequestration, downstream flood mitigation, and water quality improvements, including: sediment trapping, nutrient removal and chemical detoxification.

The primary goal of this conservation practice is to significantly reduce sediment transport to Skaneateles Lake. High intensity storm events have historically resulted in high volume turbid discharges at the tributary outlet resulting in significant sediment plumes in Skaneateles Lake. Improving water quality within the Shotwell Brook Watershed is of high priority due to its close proximity to one of the City of Syracuse's drinking water intakes. The City and surrounding communities comprise of over 220,000 households that are dependent on Skaneateles Lake as their unfiltered drinking water supply.

The project was a collaboration between Fish & Wildlife Service, Skaneateles Lake Watershed Agricultural Program and Onondaga County Soil & Water Conservation District. A huge thank you to Gian Dodici at the Fish & Wildlife Service for the design and input to see this project come to fruition, to the contractor Kurt Warren who completed the project before the deadline and under budget, the City of Syracuse and NYS Climate Resilient Farming Grant for funding and to the landowner Barry Maturevitz for allowing this project to be constructed on his property. This project is a demonstration of several agencies working together to improve water quality and help keep Skaneateles Lake clean!



Images of the Shotwell Brook stormwater attenuation project's construction, photo credits: Onondaga Soil and Water Conservation District

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Skaneateles Lake Wave Reviews

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Stay connected!

Join our Water Quality List-serve to recieve 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 and searching for our 'Skaneateles Lake' landing page.

Don't forget to check out the new Skaneateles Lake Watershed website at www.skanlakeinfo.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
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Skaneateles Lake Watershed Education Program

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Syracuse
New York