

SKANEATELES LAKE WATERSHED PROGRAM 2019 – 2020 ANNUAL REPORT



Prepared By:
Richard Abbott
Public Health Sanitarian
Department of Water
Division of Skaneateles Lake Watershed Programs
City of Syracuse, New York
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Skaneateles Lake Watershed Program
Annual Report 2019-2020

Prepared by
Rich Abbott
Public Health Sanitarian

City of Syracuse Department of Water
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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 2019-2020. This year 47 watershed farms meet the Agriculture and Markets' definition of a "farm." Forty (40) of these are enrolled in the program and seven (7) farms do not wish to participate. Four 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. Sixteen (16) 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 40 farms, equaling 80.92 farm equivalents (one farm equivalent being 400 acres), and implementation is complete on 32 farms, equaling 70.48 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 20 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 2020. 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 2019 Annual Report," City of Syracuse Department of Water – Water Quality Management, April 2020, 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 2019 the drill was utilized on a total of 569 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 2019, of the 11 new housing starts in the watershed, three were on active farmland. Thirteen permits were issued for major additions and renovations on the lake and another eight 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 47 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 2019. 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 2020-21 has been received and contract renewal is expected on July 1, 2020. For additional program details, see the SLWAP Annual Progress Report—April 2019 - March 2020, 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 2019 and 2020 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 FY19-20).

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 2020.

In 2019, 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
- Aquatic invasive species management
- Septic systems and wells
- Shoreline and streamside erosion resistance
- Road salt impacts

Three hundred and fifty eight people participated in workshops and attended speaking engagements or other events sponsored or supported by CCE of Onondaga County over the year.

Watershed Inter-municipal Meetings

CCE of Onondaga County hosted one inter-municipal meeting in 2019. The guest speaker for the June meeting was a Professor of Water Resources Engineering at SUNY ESF. The presentation focused on the benefits of riparian buffers using i-Tree Tools to find the best places for vegetated buffers. Annual / biannual meetings continue to be an excellent way to foster a mutual understanding of each community's unique circumstances and issues. The lake, as a common resource, binds the group. Watershed protection is the central focus.

Press Articles

CCE of Onondaga County contributed to three articles that appeared in local publications in 2019. Educators also worked with various local media to promote the Skaneateles Lake Watershed Water Quality Education Program. Twelve articles were created, published or broadcast by various news outlets.

Annual Watershed Resident Newsletter

The 21st edition of the Skaneateles Wave Review was mailed to 2,813 watershed residents in December of 2019. The newsletter included information about the programs sponsored by the City of Syracuse in the Skaneateles Lake Watershed. Featured articles included information on the Snow and Ice Control Workshop, invasive species monitoring and removal and the expansion of the Boat Stewards program. (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.

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."

The CCE of Onondaga County released one publication in 2019 titled; *Road Salts in our Watersheds: Best Management Practices for Homeowners, Commercial/Private Property Owners, and Private Contractors*. The publication was received by 2,000 email recipients and 250 print copies were distributed.

Skaneateles Lake Watershed Website

The CCE of Onondaga developed a draft website design for the Skaneateles Lake watershed in 2019. When the website goes online in 2020 it will feature water quality data, information on harmful algal blooms, and links to agencies involved in the Skaneateles Lake watershed. All municipalities within the watershed have been encouraged to assist in constructing the website content.

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 annual meeting was scheduled for December 11. The morning session featured a presentation from an Associate Professor from the SUNY College of Environmental Science and Forestry titled; *HABs in the Eastern Finger Lakes – Multiple Causes Including Invasive Mussels?* The presentation focused on quagga and zebra mussel research and their possible impact on harmful algal blooms. The afternoon session included a *25th Anniversary Presentation* slide show and narrative by the Onondaga County Soil & Water Conservation District Executive Director. The Annual Meeting included over 80 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

Northeast Aquatic Plant Management Society 20th Anniversary Meeting - January 8 -10, 2019

The Annual Meeting was attended by the City's Public Health Sanitarian. Tuesday's sessions included two algae workshops and an aquatic plant workshop. On Wednesday, several presenters from the NYSDEC discussed the New York State HABs program. The afternoon sessions discussed new technologies, including Environmental DNA, Field GIS Data Collection Tools and an Autonomous Aquatic Application System.

New York Association of Conservation Districts (NYACD) Legislative Days - March 4 -5, 2019

Representatives from the Onondaga County Soil and Water Conservation District and the City of Syracuse Water Department met with NYS Senators and Assemblymen at the Capitol Building in Albany, NY on March 5. The two day event included briefings by NYACD staff regarding pending bills affecting conservation districts and scheduled appointments with legislators to thank them for their continued support of funding sources to allow local Districts to implement Agricultural Best Management Practices (BMP's).

Water Quality Symposium/NYS CDEA Annual Training Session – March 12-16, 2019

The Public Health Sanitarian attended presentations at the DoubleTree Hotel on March 10 titled *Stormwater Management Practices* and *Source Water Buffer Program, Protecting Drinking Water Sources with Conservation Easements*. The storm water workshop reviewed inspection protocol, trouble shooting and remediation measures outlined in the NYSDEC 2016 Maintenance Guideline for Stormwater Management Practices. The *Source Water Buffer Program* presentation included a detailed review of key elements of the application process. The course also provided an overview of conservation easements, including eligibility, the process for acquiring an easement and responsibilities and importance of easement stewardship.

Timber Harvesting Training for Municipalities – May 10, 2019

The Watershed Inspectors attended the training sponsored by the Stormwater Coalition of Tompkins County. Topics discussed included best management practices, effective municipal ordinances and timber harvesting perspectives from a private forester and timber industry forester. The event also included a site visit to a recent timber harvest.

Skaneateles Lake Watershed Municipal Stakeholders Meeting – June 12, 2019

The guest speaker for the bi-annual meeting was a Professor of Water Resources Engineering at the SUNY College of Environmental Science and Forestry. The presentation focused on the benefits of riparian buffers and the implementation of i-Tree Tools to locate vegetated buffers to improve water quality.

2019 Finger Lakes Harmful Algae Bloom Symposium – July 31, 2019

The 6th Annual Symposium was hosted by the Finger Lakes Institute, Corning Incorporated, NYSDEC, and SUNY Fredonia. Presentations included a keynote address from the author of the *Green Amendment, Securing our Right to a Healthy Environment* and updates from Finger Lakes lake associations.

Interactions in the Watershed – 1st NYSFOLA CNY Regional Conference – August 16, 2019

The conference was hosted by NYSFOLA, the Cortland-Onondaga Federation of Kettle Lake Associations (C-OFOKLA) and the Madison County Federation of Lake Associations (MCFOLA). Presentation included *Cyanobacteria and HABs, Aquatic Plants and Invasive Species, Our Fisheries, Intersecting Concerns (the role of local government in managing land use and infrastructure)* and *Funding*.

Quagga Mussels: What You Need To Know – August 8, 2019

The event was sponsored by the Partnership for Healthy Watersheds and the Owasco Watershed Lake Association (OWLA). A Professor of Limnology from the SUNY College of Environmental Science and Forestry discussed the impact of Quagga Mussels on Owasco Lake.

Onondaga County Council on Environmental Health Meeting – September 17, 2019

The Public Health Sanitarian provided a presentation to the Council titled; *Skaneateles Lake – Copper Sulfate: Historical Perspective/Management Option*. The presentation included a discussion on the application of copper sulfate in Skaneateles Lake by the City of Syracuse from the 1930's to the 1970's to control taste and odor algae. The discussion transitioned to the current public health concern of microcystin toxins detected in Skaneateles Lake and a proposal to treat shoreline areas with a chelated copper product.

39th International Symposium of the North American Lake Management Society (NALMS) – November 11 – 15, 2019

The Symposium, hosted by the New England Chapter of NALMS in Burlington Vermont, was attended by the Public Health Sanitarian. Presentations included a full-day workshop on November 11, titled; *Advanced Phytoplankton Ecology*. Concurrent sessions were organized into ½ day blocks, with several twenty-minute presentations focusing on topics ranging from; *Lake Restoration, Watershed Plan Development, Paleolimnology, Phosphorous Inactivation, Source Water Protection & Oxygenation*.

SLWAP Annual Meeting – December 11, 2019

The Annual Meeting was attended by the City's Watershed Inspectors and the Public Health Sanitarian. The morning session featured a presentation titled *HABs in the Eastern Finger Lakes – Multiple Causes Including Invasive Mussels?* The presentation focused studies of plankton and plant surveys in Skaneateles and Otisco Lakes as well as dive studies and NYSDEC camera measurements of mussel activity in Owasco, Oneida and the Great Lakes ecosystems. The afternoon sessions included a *SLWAP 25th Anniversary Presentation* by the SLWAP Program Manager.

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 2019-20
- 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.

In 2019, 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 2019 Annual Report, Volume XLV," 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) up and down the entire length of the lake from April through October 2007 and 2008. These two 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 even, the committee proposed a 3-year cycle for repeat monitoring. Monitoring was carried out in the summer of 2017. The report is available at the Skaneateles Town Hall.

Land Trusts

The Finger Lakes Land Trust (FLLT) continues to emphasize the Skaneateles Lake Watershed as one of its priority focus areas for land conservation and water quality protection. In January 2019 the FLLT acquired 900 feet of Skaneateles Lake shoreline along with 90 acres of hillside forest in the town of Spafford. The property is adjacent to the Cora Kampfe Dickinson Preserve, bringing the total amount of protected Skaneateles Lake shoreline owned by the FLLT in this area to 2,200 feet.

The lake-front area referred to as Staghorn Cliffs, contains some of the most pristine shoreline remaining in the Finger Lakes region. The steep cliffs are widely regarded for their fossilized coral reef and wild scenic beauty. The land area above cliffs is comprised of densely forested hillsides. The

property was identified as a priority for protection as part of the FLLT's effort to create a greenbelt around the south end of Skaneateles Lake. Other nearby conservation lands includes the High Vista and Hinchcliff Family preserves. The greenbelt is recognized as a priority project within New York State's Open Space Plan. Due to its significant value for migratory birds, it is also recognized by National Audubon as one of the state's Important Bird Areas. The project is partially funded by a grant from the New York State Department of Environmental Conservation's Water Quality Improvement Project program (WQIP).

In August of 2019, the FLLT purchased two conservation easements from a beef cattle operation located in both Cortland and Onondaga counties. The easement includes a total of 628 acres of pastures, crop fields, and woodland located along steep hills and deep valleys above southern Skaneateles Lake's eastern shore. The headwaters of Grout Brook, a principle tributary to the lake, flows through the property.

The FLLT also manages a network of nature preserves in the watershed. In October 2019, the FLLT completed a new hiking trail connecting the organization's Hinchcliff Family Preserve with the Central New York Land Trust's (CNYLT) Ripley Hill Nature Preserve. The trail extends $\frac{3}{4}$ of a mile through the Hinchcliff Preserve to the Ripley Hill Preserve in the town of Spafford.

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, the northernmost points where HWA has been found are in the area of Fire Lane 22A on the western shore, and around Ten Mile Point on the eastern shore. (For the most up to date information, please visit the NY iMapInvasives map at nyimapinvasives.org/data-and-maps) In an effort to minimize the spread of HWA, the City of Syracuse Water Department has collaborated with the Onondaga County Soil and Water District, Cornell University, CCE of Onondaga County and several volunteers residing with the watershed. In May 2015, 100 Eastern Hemlock trees were planted within this region of the watershed in an effort 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.

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

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

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

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

6. STAFFING AND FUNDING

6.1 Current Staffing Levels

City of Syracuse

Geographic Information System Specialist	0.17
Watershed Quality Coordinator	1.00
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
Total FTE	2.25

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)	.35
Resource Educator (Water Quality)	0.03
Subject Educator (Water Quality)	0.81
Subject Educator (Water Quality/Forestry)	0.05
Social Media Platform & IT	0.04
Administrative Assistant (Water Quality)	0.11
Total FTE	1.39

6.2 Watershed Program Funding

Expenditures	Actual FY 18-19	Estimated 19-20	Proposed 20-21
<u>Onondaga Co, SWCD Contract Services:</u>	\$477,504	\$515,000	\$540,000
<u>Watershed Education Program:</u>			
CCE of Onondaga Co, Contract Services	\$50,324	\$84,605	\$89,000
GIS Expenses	\$15,000	\$15,000	\$15,000
Miscellaneous Expenses	\$651	-----	-----
Subtotal Contractual Expenses	\$543,479	\$614,605	\$644,000
<u>City of Syracuse Staff (Direct Salary Expenses):</u>			
Water Department Staff	\$169,915	\$150,000	\$129,766
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
<u>Other Expenditures:</u>			
Onon. SWCD Grant Program Activities- Fund Secured	\$81,052	\$73,282	\$130,000
CCE of Onondaga County Grant Supported Activities	-----	-----	-----
Subtotal Other Expenditures	\$81,052	\$73,282	\$130,000
Total Program Expenditures	\$796,824	\$840,887	\$906,766
<u>Funding Sources:</u>			
City of Syracuse			
Operating Budget	\$600,467	\$746,122	\$767,169
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

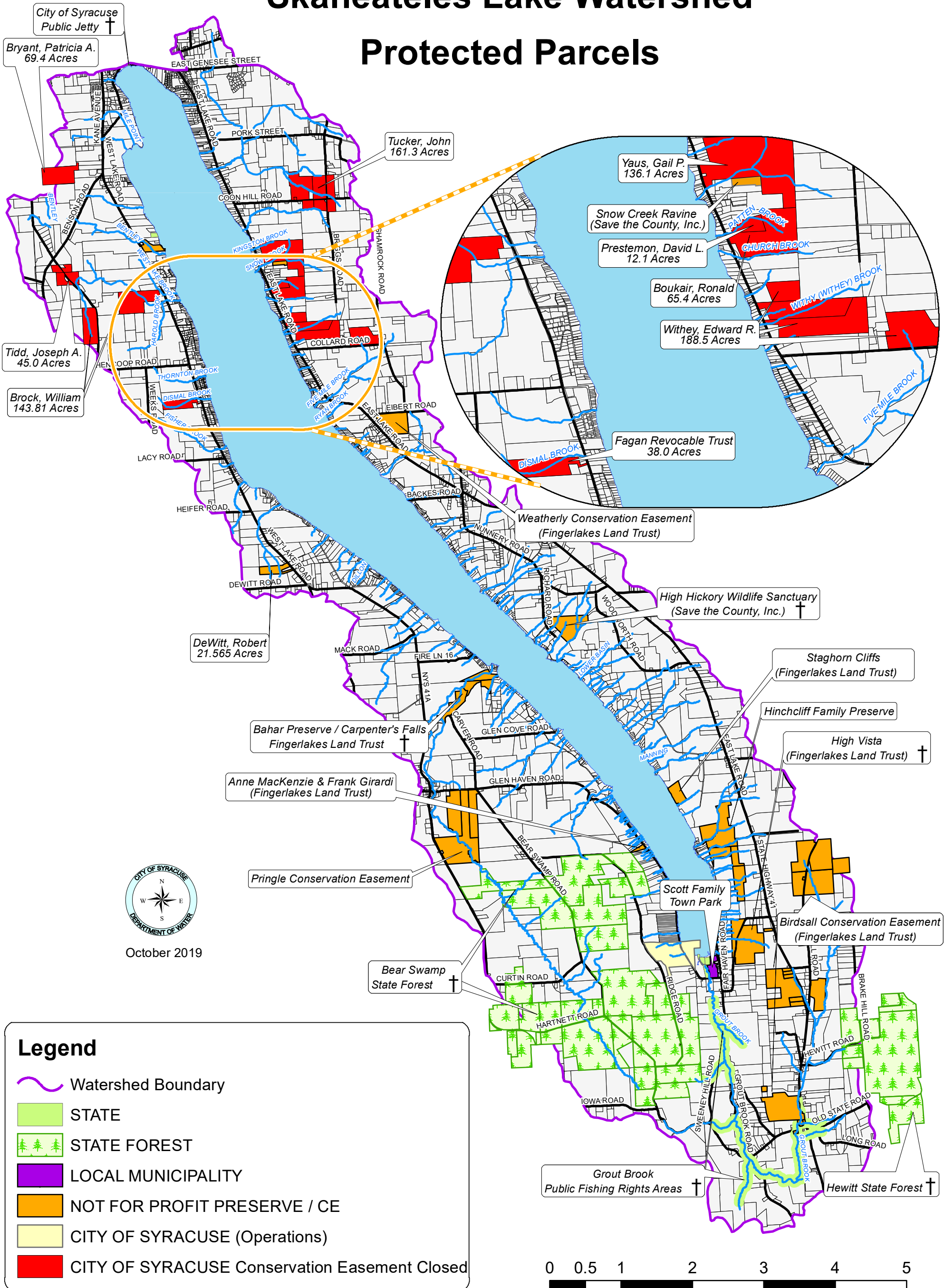
BMP	Best Management Practice
CAFO	Confined Animal Feeding Operation
CCE	Cornell Cooperative Extension
CEH	Council on Environmental Health (Onondaga County)
CNY	Central New York
CNYLT	Central New York Land Trust
CNY RPDB	Central New York Regional Planning & Development Board
CREP	Conservation Reserve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

Appendices

Appendix A – Maps

Skaneateles Lake Watershed

Protected Parcels



City of Syracuse
Public Jetty †

Bryant, Patricia A.
69.4 Acres

Tidd, Joseph A.
45.0 Acres

Brock, William
143.81 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

Fagan Revocable Trust
38.0 Acres

DeWitt, Robert
21.565 Acres

Bahar Preserve / Carpenter's Falls
Fingerlakes Land Trust †

Anne MacKenzie & Frank Girardi
(Fingerlakes Land Trust)

Pringle Conservation Easement

Bear Swamp
State Forest †

Weatherly Conservation Easement
(Fingerlakes Land Trust)

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

Staghorn Cliffs
(Fingerlakes Land Trust)

Hinchcliff Family Preserve

High Vista
(Fingerlakes Land Trust) †

Scott Family
Town Park

Birdsall Conservation Easement
(Fingerlakes Land Trust)

Grout Brook
Public Fishing Rights Areas †

Hewitt State Forest †

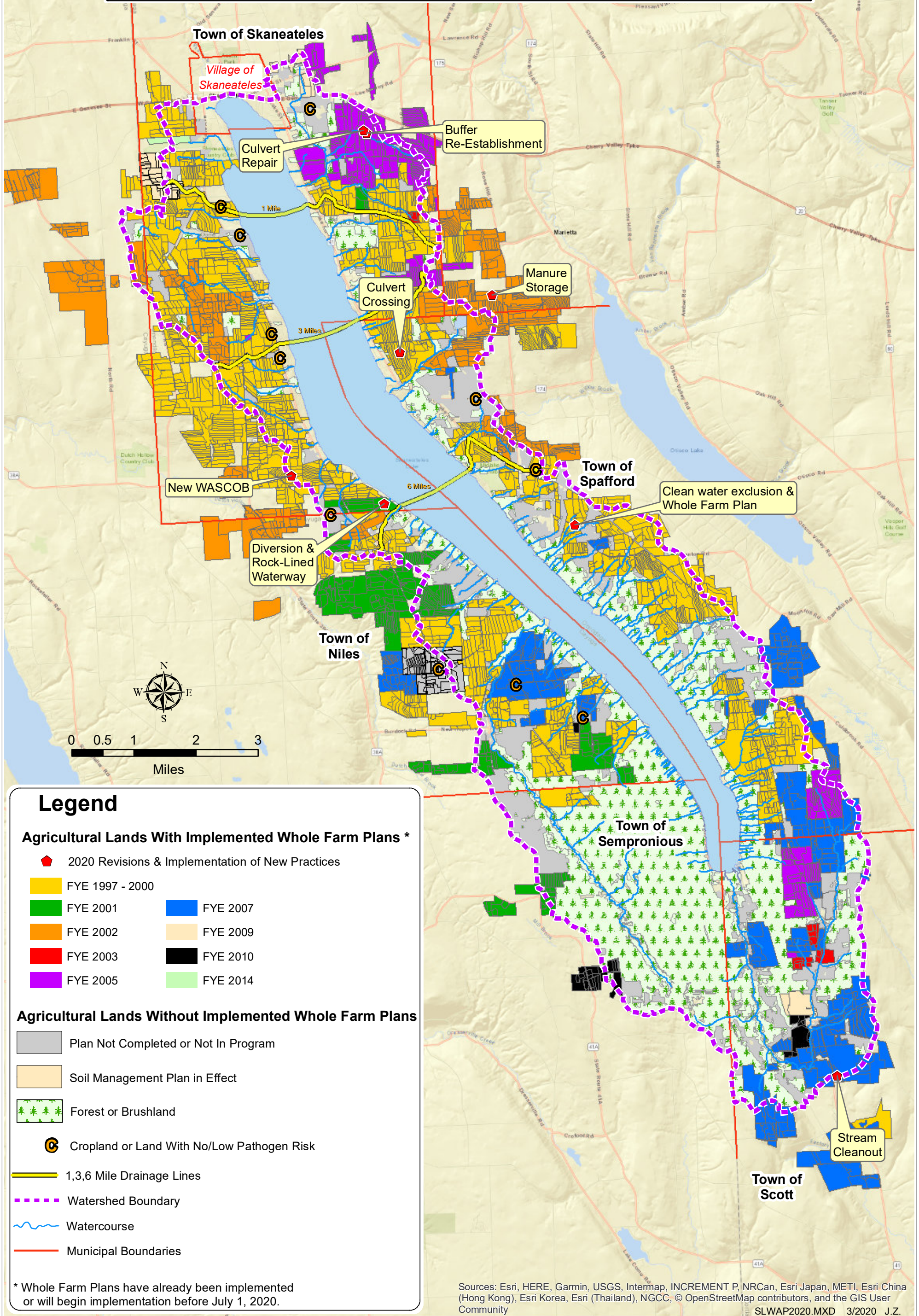
Legend

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

† Denotes Area Open For Public Access
No Public Access On City Of Syracuse Conservation Easements



Skaneateles Lake Watershed Agricultural Program Whole Farm Plan Implementation Progress



Appendix B - Skaneateles Lake Watershed Agricultural Program Progress Report



Onondaga County Soil and Water Conservation District

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

Phone: (315)-457-0325
Fax: (315)-457-0410

E-mail: info@ocswcd.org
Web: www.ocswcd.org

Progress Report –

Skaneateles Lake Watershed Agricultural Program

March 2019 – February 2020

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 40 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. Sixteen (16) 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 2019:

- 40 farms have completed Tier I (farm inventory and identification of potential water quality concerns).

- 40 of these farms have completed Tier II (verification of water quality concerns).
- 40 farms have completed whole farm plans (Tier III) for their operations (80.92 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).
- 32 farms have completed Tier IV plan implementation (70.48 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
TOTAL		68	13	28,851	4,729	137.74

* 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 2020, SLWAP has fully implemented whole farm plans for 32 farms (70.48 farm equivalents). During the past year revisions were planned and implemented to existing BMPs on six farms (24.19 farm equivalents). One BMP implementation (survey/design/build) occurred on one new farm, even though the SLWAP is now primarily in a maintenance phase. Throughout the 2020 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	28,013 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)	67
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 - 2019)	972

Conservation Cover in Wheat (cumulative acres – 2019)	562
Critical Area Revegetation, municipal road ditches (miles)-2019	4
Roof Water Dripline (ft) -2019	23
Road Ditch Stabilization Projects w/ Heavy Armoring (#)	1
Hydroseeded Road Ditches Cleaned by Municipalities (Miles)	5

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 20 out of 24 “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 2019. In 2019 the SLWAP staff worked with USDA FSA staff. One farmer has been contacted about voluntarily participating to have their 3 acre CREP buffer enhanced in 2020. This enhancement work included:

Karlik Dairy Farm (1.4 acres enhancement)

-1 Black Tupelo (*Nyssa sylvatica*) – 3 gal. pot

-1 Sweet bay Magnolia (*Magnolia virginiana*) – 3 gal. pot

-4 Swamp White Oak (*Quercus bicolor*) – 3 gal. pot

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
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.

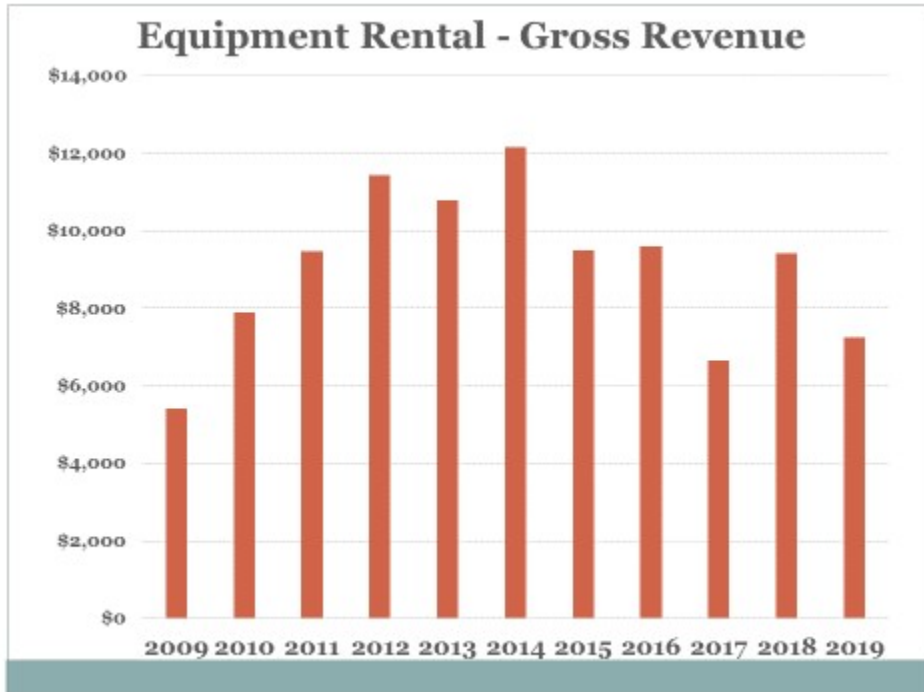


Implement Usage Summary

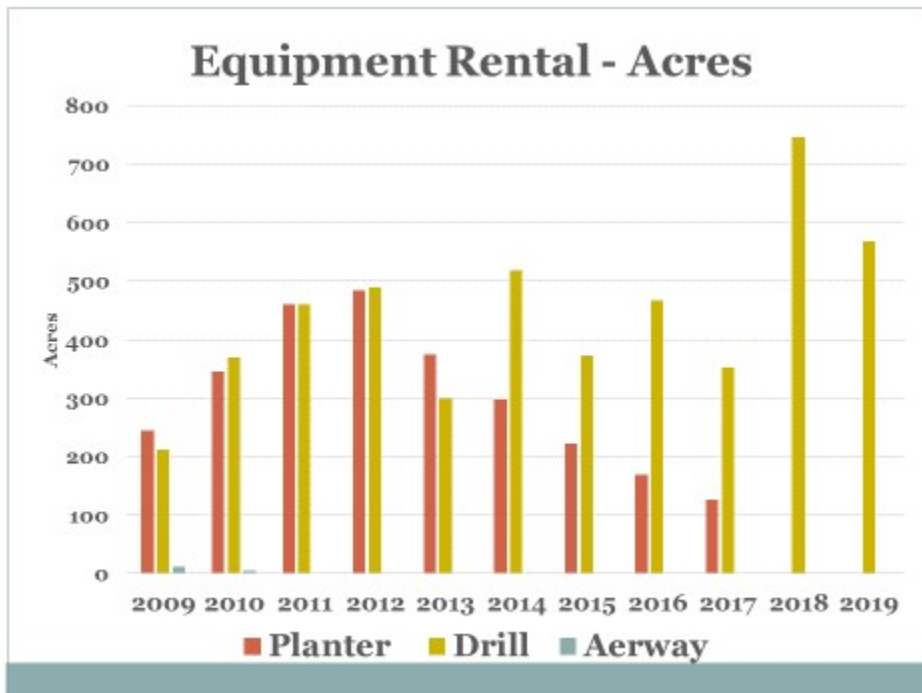
In 2019, the Esch was utilized on 569 acres of cropland between the watershed and Onondaga County. Acreage was down due to the wet spring and fall growing seasons. SLWAP staff advertised these implements to SLWAP producers utilizing the following means: printer flyers, website, and by posting a video 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 2019 rental rate is \$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 secured for a total of \$81,454.13 to supplement City funds in 2019. They are as follows.

- \$28,920.31 NYS EPF Round 25 – Secondary Containment for On-Farm Fuel (Edmonds) and Mulching in Vineyards (Nocek’s Anyela’s Vineyard)
- \$10,000 NYS Erosion & Sediment Control – Fesko Access Road
- \$10,000 NYS Erosion & Sediment Control – Tucker Stream Crossing
- \$10,000 NYS Erosion & Sediment Control – Greenfield WASCOB
- \$10,000 NYS Erosion & Sediment Control – Jackson/Fesko Access Road
- \$12,534 NYS Finger Lakes Cover Crop - Greenfield Crop Farm

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 \$5,285,799.84.

IX. Environmental Steward of the Year

The Environmental Steward of the Year award was presented in 2019 to the City of Syracuse, Department of Water! The City has provided all base funding necessary to conduct a successful watershed agricultural program to provide an indefinite filtration avoidance waiver. The City of Syracuse has provided \$13,097,742.86, which was used to leverage another \$5,285,799.84 to operate the program. Every time an additional resource is needed for the program, the City has willingly provided the necessary resource. There is also a tremendous amount of trust and respect over the past 25 years between the farmers, who voluntarily participate in the program, and the City officials. It is the best testament of a strong, cooperative working relationship!

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	N/A
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 2019. (Jan. 31, Apr. 23, Jun. 20, Aug. 15, Dec. 5)
- Attended all meetings of Onondaga County Agricultural Council in 2019.
- Attended most 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 Mark Burger attended a meeting with new County Legislator Julie Abbott-Kenan who represents Onondaga County portion of Skaneateles Lake Watershed. Meeting was hosted by Town of Skaneateles Supervisor Janet Aaron. Representatives from Cornell Cooperative Extension-Onondaga County and City Department of Water were also in attendance. January 16, 2019.
- Program Manager Burger attended State of City address. January 17, 2019.
- Program Manager Burger attended Finger Lakes – Lake Ontario Watershed Protection Alliance legislative meetings in Albany to

promote continued funding for conservation Best Management Practices in the watershed. February 12, 2019.

- 7 annual reports sent to NYS Department of Agricultural and Markets for 2019 activity. February 15, 2019.
- Program Manager Burger attended meetings of the Skaneateles Lake Association Nutrient Management Committee. Feb. 20,
- Program Manager Burger spoke of the SLWAP at a meeting of the Chinese Agricultural Delegation in Cortland, NY, along with Cortland and Ontario County SWCD Manager's. The event was hosted by NY Association of Conservation Districts and attended by the President and Executive Director of the association.



- WAPRC Chairman Michael McMahon, Commissioner of Water-City of Syracuse Joe Awald, Rich Abbott (Watershed Quality Coordinator, City of Syracuse Dept. Water-Skaneateles) OCSWCD implementer Ron May, and Program Manager Burger attended Legislative meetings in Albany (March 4-5).



- SLWAP supported the annual Manure Applicator Safety Day Training with Dairy Support Services Company at the Cortland County Grange, Cortland, NY. Four SLWAP farms sent 10 employees. March 8, 2019.



- 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 12-15, 2019.
- Program Manager Mark Burger addressed 15 attendees at the Onondaga County Council on Environmental Health monthly meeting. He presented SLWAP's "Year in Review 2018". March 19, 2019.
- Program Manager Burger participated in Onondaga County Emergency Operations Center simulated activation. The District/SLWAP represent the "Public Sector Liaison". April 4, 2019.
- The City of Syracuse Department of Water hosted a 4-hour NYS DEC Erosion & Sediment Control workshop for contractors and forest operators in the watershed. 13 people attended the event. The event was supported by Cornell Cooperative Extension of Onondaga County. April 25, 2019.
- Onondaga County Department of Emergency Management provided a drone flight and aerial photography of a critical portion of the Shotwell Brook subwatershed. May 17, 2019.
- Maggie Connelly had SLWAP display at Waterfest in Cortland, NY. June 1, 2020.
- Program Manager Burger met with NYS Senator, 50th District, Robert Antonacci to discuss the water quality improvement initiatives on farms using the NYS Agricultural Environmental Management program, as related to the Harmful Algal Bloom events on Skaneateles Lake since 2017. We also discussed the state of the agricultural economy. July 9, 2019.
- Program Manager Burger had a lunch meeting with David Botar, Executive Director of the CNY Regional Planning and Development Board. Initiatives were discussed about which Best Management Practices the farmers have been doing in the Skaneateles Lake Watershed for the past 25 years of the Watershed Agricultural Program. Also discussed was the 100% cost-share that the City of Syracuse has invested in the watershed and how those funds have leveraged millions of dollars of additional grant funding. July 10, 2019.
- Abbott & Burger attend municipal officials meeting in New Hope. Topic was forest management in the watershed. June 12, 2019.
- Accountant Olenych and Program Manager Burger had a meeting with Beth Smith from City of Syracuse, Department of Water to review program financing. August 1, 2019.

- SLWAP held a tour of two watershed farms. The intent of the tour was to educated Skaneateles Lake Association leadership on the Best Management Practices used by crop and dairy farms. September 21, 2019.



- SLWAP was notified of a dry fertilizer spill on Route 41-A at 8:37 AM on Thursday, September 26, 2019. The SLWAP/District Agricultural Spill Response team and spill trailer was mobilized immediately. SLWAP requested assistance from the NYS DOT-Camillus barracks. NYS DOT arrived at 9:37 AM and vacuumed up the spill before heavy rains approached the area. SLWAP returned all units back into service at 10:10 AM, less than 2 hours after the spill was reported.



- SLWAP and SWCD staff participated in a manure spill equipment refresher training to be prepared in the event there were any agricultural spills. October 1, 2019.



- Burger presented on “Agricultural Emergency Preparedness in Onondaga County and the Skaneateles Lake Watershed” to attendees of the NYS Association of Conservation Districts annual meeting, Cazenovia, NY. October 24, 2019.
- The SLWAP and the District worked with the CNY Regional Planning and Development Board, Cornell Cooperative Extension of Onondaga County, NYS DOT (Syracuse), and the NYS Fairgrounds to put on a salt spreader calibration clinic to help reduce salt impacts in area waterways. October 29, 2019.



- Program Manager Burger attended a meeting with at the Town of Skaneateles Town Hall to discuss agricultural watershed efforts to help prevent Harmful Algal Blooms. November 19, 2019.
- The City of Syracuse’s Skaneateles Lake Watershed Agricultural Program held its 25th Annual Meeting on December 11, 2019. Watershed Agricultural

Program Review Committee Chairman Michael McMahon presented City of Syracuse Mayor Ben Walsh with the 2019 Environmental Steward of the Year award. Dr. Kim Shulz from SUNY ESF fascinated the audience with information about what the Quagga and Zebra mussels may be doing at the bottom and sides of the lake to contribute to HAB events in Skaneateles Lake. The afternoon session was a pictorial review of the past 25 years of activity by farmers, staff, and partners in the watershed. The meeting drew 78 attendees of which 7 farms representing 1/3 of the tillable acres in the watershed.



- All past employees, WAPRC Board members, and partners were assembled at the meeting for a group photograph.



- A 25 year summary of the SLWAP was also presented at the annual meeting.



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.

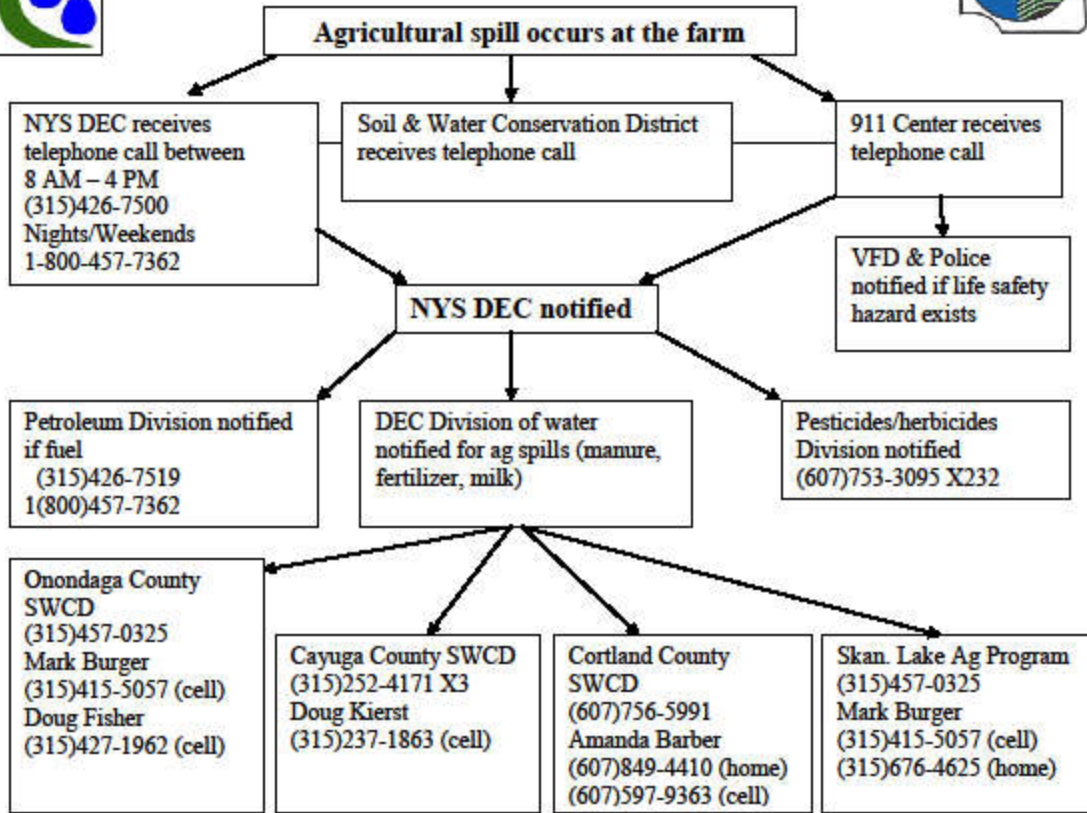


Onondaga County Soil & Water Conservation District

6680 Onondaga Lake Parkway, Liverpool, New York 13088
 phone: 315-457-0325 · fax: 315-457-0410 · e-mail: info@ocswcd.org
 website: www.ocswcd.org



FLOW CHART FOR RESPONSE TO AGRICULTURAL SPILLS IN ONONDAGA COUNTY AND SKANETELES LAKE WATERSHED

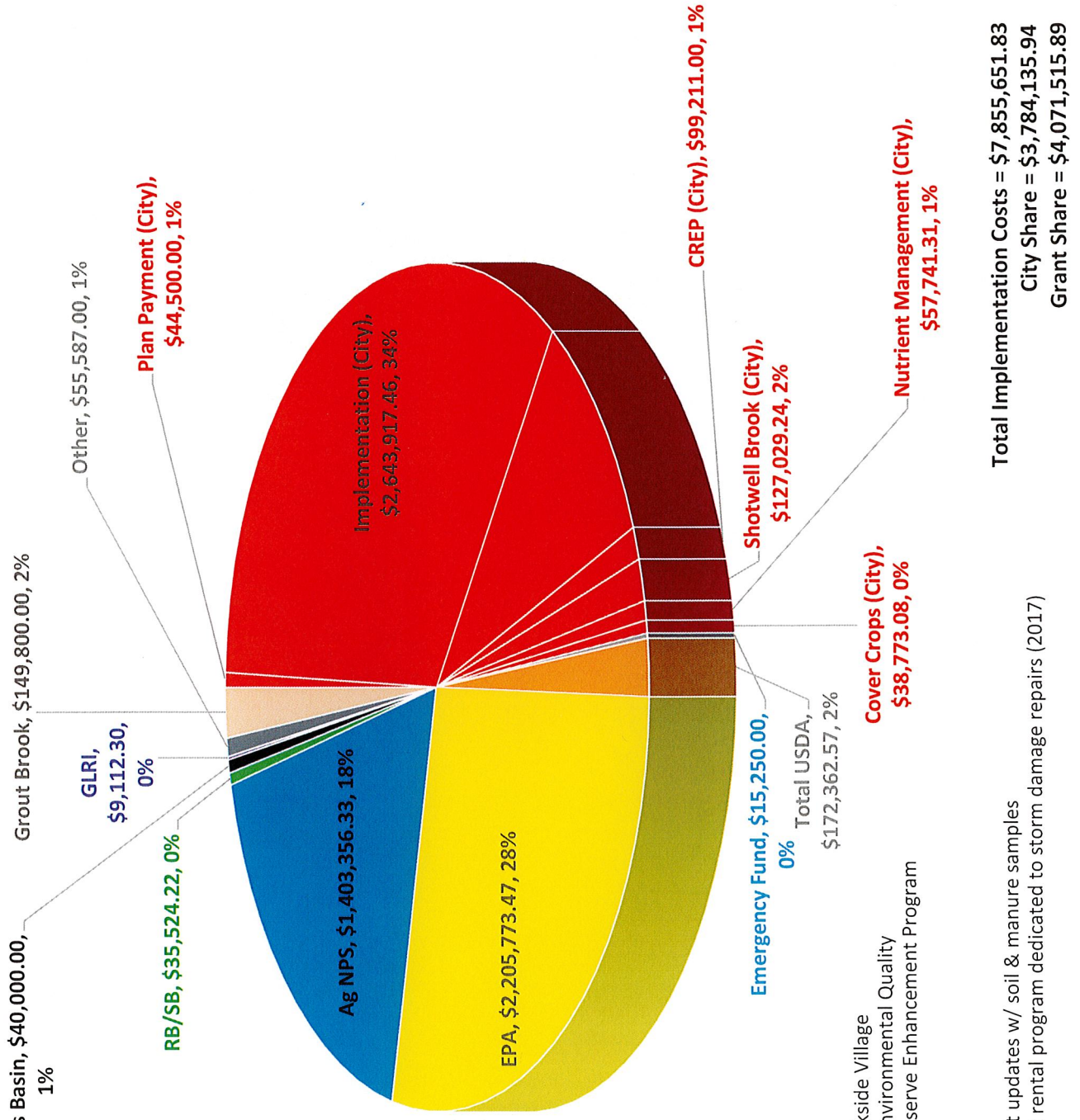


ADDITIONAL RESOURCES (if Necessary)

City of Syracuse, Dept. of Water 8 AM – 4 PM (315)685-6486 Rich Abbott (315)263-9254 (cell) Nights/weekends/holidays (315)473-2860 (operator)	NYS DOT Traffic Mgmt. Center Syracuse, NY (315)426-2131	Emergency Contractors from SWCD Contractor list (see spreadsheet) <i>NOTE: farmer responsible for costs. Contractor & farmer should discuss cost prior to work starting.</i>
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Town Dept. Public Works Niles: Pat Steger (315)246-7198 Scott: Ward Grinnel (607)423-0824 (cell) Skaneateles: Allan Wellington (315)685-6718 (315)952-2643 (cell) Sempronius: Bruce Nodine Jr. (315)496-2010 (office) (315)496-2388 (home) Spafford: Mike Catherman (315)289-5194 (cell)	Onondaga County Dept. of Health (315)435-6600 (office) Dir. Jeff Till cell: 315-380-8080 Twin Birch Farm –Portable hydraulic manure pump Dirk Young: (315)246-6788 (cell) Todd 315-406-0401 Dairy Support Services, Inc. Scott Potter: (315)729-1874 (cell) Dan Potter: (607)426-1343 (cell) (607)842-6433 (shop)
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“Promoting excellence in the wise use of our rural/urban natural resources”

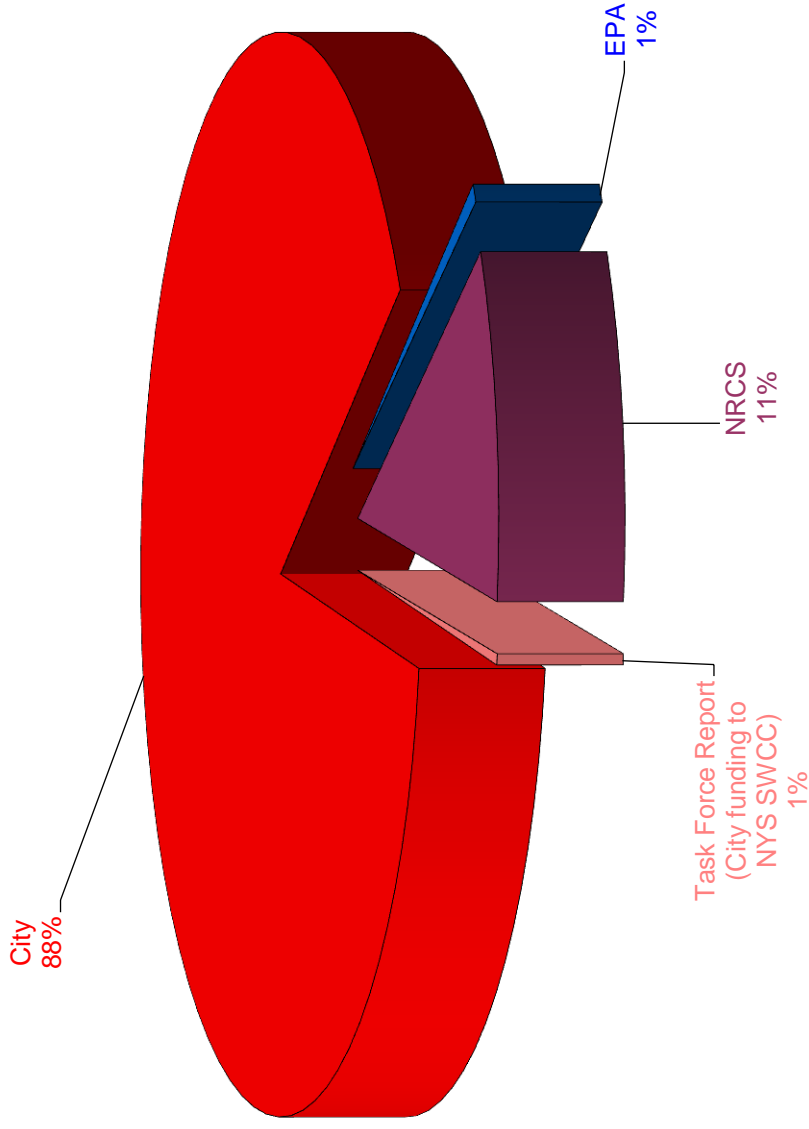


Total Implementation Costs = \$7,855,651.83
City Share = \$3,784,135.94
Grant Share = \$4,071,515.89

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. Mgmt. Revisions - Nutrient Management updates w/ soil & manure samples
- Emergency Fund - Proceeds from equipment rental program dedicated to storm damage repairs (2017)

SLWAP Operating Costs 1/1994 Through 2/28/2020



Total Operating Costs = \$10,527,890.87
City Share = \$9,313,606.92
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

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

Water Quality Education Program for the Skaneateles Lake Watershed - 2019 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 is provided by the CCE Onondaga Natural Resources and Agricultural Team Educators. In 2019, Educators covered topics including non-point source pollution, landscaping for water quality, stormwater management, riparian buffers, septic systems and wells, road salt, 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

- **Winter Threats, Water Quality and Your Wallet** (February 28th, The Creamery, Skaneateles): CCE Water Quality Educator talked about how to adopt simple steps to protect water quality, human health, and financial resources from winter threats. Tips were shared for how to deal with applying road salt and deicing agents, frozen and burst pipes, and winter water conservation to reduce/address negative impacts. Attendees also learned how to test chloride levels in streams/water sources and received personal testing kits to use on their own. 9 attendees
- **Septic and Well Water Workshop** (September 26th, Skaneateles United Methodist Church): This workshop covered different aspects of septic systems: components, maintenance, and signs of failure. Jeff Till, Onondaga County Director for the Division of Environmental Health, also presented on the Onondaga County Septic System Replacement Funding Program. CCE Water Quality Educator spoke about wells, including well water testing, contamination, and protection measures residents can take to make sure their water is safe to drink. 34 attendees
- **Shorescaping Workshop** (November 5th, 2019, Skaneateles Library): At this workshop, attendees learned tips for landscaping shorelines to prevent erosion and protect water quality. CCE Water Quality Educator also presented examples of native species that are low maintenance, resilient, and ecologically valuable. Frank Moses, Executive Director of the Skaneateles Lake Association, spoke about current shorescaping and riparian

planting efforts happening in the watershed. Mary Menapace, Skaneateles resident, spoke about local resources for acquiring and learning about native plants. 36 attendees

Trainings and Stewardship Opportunities

- **SLA Boat Steward Training** (May 22nd, Skaneateles) CCE Educator trained 20 SLA Boat Stewards (5 adults and 15 youth) on identification of aquatic invasive species. Educators taught outreach techniques to help stewards engage the public on ways to reduce threats and impacts of aquatic invasive species in Skaneateles Lake.

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** (June 12th, Midlakes United Methodist Church, Moravia) CCE educators coordinated facilitation amongst elected officials, organizational leaders, and other watershed stakeholders with the goal of establishing comprehensive and holistic approach to watershed management to protect the water quality of Skaneateles Lake. The meeting featured a presentation and discussion of the benefits of riparian buffers and how to use i-Tree Tools to find the best places for vegetated buffers that improve water quality, and was facilitated by Dr. Ted Endreny, Professor of Water Resources Engineering at SUNY ESF. 32 municipal leaders and decision makers attended.

Additional support:

- **Project Watershed Board Meeting** (February 4th, 2019, Fayetteville-Manlius Rod and Gun Club): Monthly meeting for the Central NY Chapter of the Izaak Walton League. 6 attendees present.
- **Sediment and Erosion Control Course** (April 25th, First Presbyterian Church of Skaneateles): This course provided required training for compliance with SPDES permits. The training was offered in collaboration with the City of Syracuse and Onondaga County Soil and Water Conservation District. 13 municipal stakeholders were trained.
- **Skaneateles Lake Association (SLA) Board Meetings** [August 20th (Niles Town Hall), September 10th (Borodino Hall Community Center, Spafford) and October 8th (St. James Episcopal Church, Skaneateles)]: CCE Educators attended 3 SLA Board Meetings in 2019. CCE educators provided support and updates to watershed residents during these meetings.
- **Skaneateles Lake Association (SLA) Nutrient Management Committee Meetings** [September 4th, St. James Episcopal Church; December 4th (via phone)]: CCE Water Quality Educator attended 2 monthly meetings for the SLA Nutrient Management Committee focused on preventing nonpoint source pollution and harmful algal blooms in Skaneateles Lake.
- **Snow and Ice Control Workshop** (October 29th, NYS Fairgrounds): At this workshop, trucks were calibrated by the NYS Department of Transportation. Highway departments were also educated about how to properly calibrate their entire fleet. After calibrations, Tim Weir and Ron Pollock from the NYS DOT presented on Safety Considerations and Record Keeping, Snow and Ice Materials and Their Impacts on the Environment, and

Costs and Benefits of Proper Equipment Calibration. The training showed attendees how to use optimal amounts of salt to both keep drivers safe and be good stewards of the environment. CCE Educators helped coordinate the event and provided materials on road salt best practices. 77 attendees

- **Skaneateles Municipal Stakeholders Website Meeting** (November 19th, Skaneateles Town Hall): CCE Water Quality Educator shared a draft of the new Skaneateles Lake Watershed website, and received feedback and input from municipal stakeholders. 9 attendees
- **SLWAP Annual Meeting** (December 11th, Skaneateles United Methodist Church): Annual meeting for the Skaneateles Lake Watershed Agriculture Program. 100 attendees

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 2019:

- **Road Salts and Water Quality** (January 15th, Onondaga County Parks Office, Liverpool): Presentation provided to the Onondaga Council on Environmental Health. The presentation discussed environmental and health impacts of road salt applications and explored ways that municipalities, private companies, and homeowners can apply de-icing agents in a sustainable and efficient manner. 15 attendees
- **Reconnecting with our Roots** (April 23rd, The Creamery, Skaneateles): This presentation covered benefits of trees, shrubs, and other plants on local water quality, wildlife, and human health. The presentation also shared riparian planting efforts in the watershed, and resources and tools for how to landscape for water quality. 21 attendees
- **Water Quality in Onondaga County: Understanding Threats and Implementing Solutions** (May 9th, Barbagallo's Restaurant, Syracuse): Presentation to the National Active and Retired Federal Employees Association (NARFE) Central NY Chapter. CCE Water Quality Educator Shannon Fabiani spoke to the group about water quality issues and best practices in the Onondaga County Community. 20 attendees
- **Septic and Well Water Presentation:** (October 17th, Hill Top Restaurant, Skaneateles): This presentation was provided to the Skaneateles Sunrise Rotary Club. The presentation focused on different aspects of septic systems: components, maintenance, and signs of failure, as well as the Septic System Replacement Funding Programs in Cayuga and Onondaga Counties. This presentation also covered wells, including well water testing, contamination, and protection measures residents can take to make sure their water is safe to drink. 6 attendees
- **Landscaping for Water Quality and Stormwater Management** (November 19th, Onondaga County Parks Office, Liverpool): Presentation provided to the Onondaga County Environmental Health Council. This presentation discussed different types of green infrastructure/landscaping and their benefits, including protecting water quality and helping to manage stormwater runoff. 11 attendees

Community Outreach

To expand reach of program, increase water quality awareness, and promote stewardship in the watershed community and amongst water supply consumers, CCE educators provided education

and outreach, mostly through tabling, on water quality related topics at the following community events in 2019:

- **Inspiring Action: Landscaping for Water Quality in the Finger Lakes** (April 10, Webinar): CCE Educator shared case study of riparian buffer planting along shoreline of Skaneateles Lake, and talked about leveraging resources and partnerships to complete the project. This webinar was part of the CCE Systems Conference. 50 CCE staff and other Extension professionals participated.

Tabling on various water quality protection topics, stewardship opportunities, and general program outreach occurred at the following events. Topics covered in each tabling event (i.e. displays, materials provided) were coordinated by event type, event audience, and other relevant factors. Topics included, but were not limited to: watersheds, nonpoint source pollution, and water quality, HABs and other contaminants, and best practices for homeowners and landowners. Contacts for mailing lists and e-mail lists are collected during these tabling events.

- **Finger Lakes Research Conference** (January 23rd, Hobart and William Smith Colleges): 200 reached
- **CNY Boat Show** (February 17th, NYS Fairgrounds): 2,000 reached
- **Ithaca Native Landscape Symposium** (March 1st, Cinemapolis Theater, Ithaca): 400 reached
- **Baltimore Woods Earth Day Celebration** (April 27th, Baltimore Woods Nature Center): 50 reached
- **Conservation Field Days** (September 17th and 18th, Emerson Park, Auburn): 240 reached
- **Onondaga County OnFarm Fest** (September 21st, Hourigan's/Half Full Dairy, Elbridge): 70 reached
- **Environmental Field Days** (October 3rd and 4th, Green Lakes State Park): 254 reached
- **CCE Annual Meeting** (October 24th, Lakeside Fire Department Recreation Hall): 100 reached

Publications and Educational Material

The following publications were created in 2019 by CCE Onondaga educators and reviewed by experts in their respective fields for accuracy and feedback. All original publications are distributed at various workshops and other community events, mailed to residents, sent to our watershed e-mail lists, and posted to our website. All materials are available for free download as a PDF by searching 'Resources' at cceanondaga.org or by right clicking the hyperlinks below.

The following publications were printed either in-house or through Avalon Printing and were distributed by CCE Educators throughout the year.

- [*Road Salts in our Watersheds: Best Management Practices for Homeowners, Commercial/Private Property Owners, and Private Contractors*](#): This fact sheet shares information on the human health, economic, social justice, and environmental impacts of road salt. The fact sheet also provides recommendations and tips for road salt application and ice control for watershed stakeholders. The publication was received by 2,000 email recipients and 250 print copies were distributed.

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 2019, CCE Onondaga published the [Skaneateles WAVE Review](#) on December 2nd which was printed through Avalon and mailed directly to 2,813 watershed properties. Topics for this edition included a recap of 2019 water quality educational programming, information about the Snow and Ice Control Workshop, an update on invasive species monitoring and removal, the expansion of the Boat Stewards program, and updated water quality contacts for residents.

Original Articles

To expand reach and enhance impact of CCE educational materials and events, Educators also contributed pieces to local media sources. In 2019, Educators contributed 3 original articles to the following publications, all accessible by searching 'Articles' at cceonondaga.org:

- *"Letter: Vegetation helps protect watersheds"* (January 8, 2019, Auburn Citizen): This article talks about the 2018 riparian planting project and the benefits of riparian buffers for water quality management.
- *"Protecting our Local Water Supply: An Alumni/Student Connection"* (February, 2019, SUNY ESF Alumni News): This article shared the 2018 riparian planting project and the process of organizing and completing the project, including assistance from SUNY ESF.
- *"Skaneateles Lake: Protecting a Shared, Vital Resource"* (June 2019, NYSDEC Conservationist Magazine): This article talked about harmful algal blooms and the role residents play in affecting water quality. Recommendations and tips were also shared about how to protect water quality and reduce nonpoint source pollution in the watershed.

FEATURED in local media (print/video)

To promote programming, in 2019, Educators worked with various news outlets and tracked that the Skaneateles Lake Watershed Water Quality Education Program and its workshops were highlighted/featured in 12 articles created, published, and/or broadcasted by outside publications and news platforms:

- *"Vegetation helps protect watersheds"* (January 8th, Auburn Citizen): Article
- *"Environmental Education Networking"* (January 15th, SUNY ESF Alumni Newsletter): Article
- *"Winter Threats workshop to be held in Skaneateles"* (February 16th, Auburn Citizen): Article
- *"Stormwater Runoff and Soil Erosion: Do you know your permits?"* (February 26th, Town of Skaneateles Newsletter): Article
- *"Link begins work in Skaneateles Lake watershed"* (August 28th, Skaneateles Press): Article
- *"Septic System and Well Water Workshop"* (September 6th, Skaneateles Lake Association Newsletter): Article

- “*Septic System and Well Water Workshop*” (September 12th – 25th, Skaneateles Press): Article
- “*Septic System and Well Water Workshop*” (September 19th, Skaneateles Lake Association Newsletter): Article
- “*Cornell Cooperative Extension – Septic System and Well Water Workshop*” (September 19th, Skaneateles Town Newsletter): Article
- “*Septic, well workshop to take place in Skaneateles*” (September 20th, Auburn Citizen): Article
- “*Shorescaping Workshop*” (October 31st, Skaneateles Press): Article
- “*Shorescaping Workshop*” (November 4th, Skaneateles Lake Association Newsletter): Article

Electronic Communications

Throughout 2019, periodic newsletters and announcements were distributed through the Skaneateles Lake and CCE Onondaga mailing lists informing residents of ongoing educational programming and stewardship opportunities in the Skaneateles Lake Watershed. The Skaneateles Lake e-mail list continues to grow throughout the length of the program and now includes over 511 residents, 178 municipal leaders, and 275 local businesses sourced through the Skaneateles Chamber of Commerce listserv. Educators also shared information and upcoming events digitally via the CCE Onondaga website, and Facebook and Instagram accounts.

Skaneateles Lake Watershed Website

Starting in 2019, CCE Onondaga began putting together a website for the Skaneateles Lake watershed. The website contains lake data, resources and factsheets on water quality issues, information on harmful algal blooms, and links to important contacts and agencies for the Skaneateles Lake watershed. A draft of the website was completed in 2019 and shared with municipal stakeholders (see “Municipal Stakeholders Website Meeting” above under “Municipal Support”).

E-Newsletters and E-Communication

Summarized by e-mail subject, date sent, # of recipients/opens/and link clicks, and a brief description of content. E-mails are sent to three listserves: General Interest, Municipal Officials, and the Skaneateles Chamber of Commerce. E-mail archives can be accessed by right clicking hyperlinked e-mail subjects below.

- [*Road Salt Best Practices*](#) (January 18th). Shared CCE’s new resource “Best Practices for Road Salt,” and was sent to 768 recipients, with 255 opens and 69 clicks on links for more information.
- [*Workshop Announcement: Winter Threats, Water Quality, and Your Wallet*](#) (February 13th). Event announcement for workshop on how to protect water quality from winter pollutants, and was sent to 760 recipients, with 260 opens and 44 clicks on links for more information.
- [*Water Quality Program: Upcoming Events, Spring 2019*](#) (March 21st). Update on spring 2019 events, including sediment and erosion control training and landscaping and water

quality presentations, and was sent to 751 recipients, with 278 opens and 64 clicks on links for more information.

- [*Earth Week Events! Hosted by CCE Onondaga Water Quality Program*](#) (April 18th). Email shared information on Earth Day related events and tabling by CCE Onondaga, and was sent to 748 recipients, with 203 opens and 23 clicks on links for more information.
- [*Upcoming Event: Septic and Well Workshop*](#) (September 4th). Announced the septic and well workshop, and was sent to 481 recipients, with 184 opens and 11 clicks on links for more information.
- [*Septic and Well Workshop Reminder Email*](#) (September 12th). Reminder email for the septic and well water workshop, and was sent to 478 recipients, with 168 opens and 10 clicks on links for more information.
- [*Skaneateles Lake Education Program Updates*](#) (September 23rd). Shared information on harmful algal blooms after the first HAB was reported, including the NYSDEC's new HABs website, and provided a reminder about the septic and well water workshop, and was sent to 479 recipients, with 214 opens and 22 clicks on links for more information.
- [*RSVP! Shorescaping Workshop in November*](#) (October 17th). Announced the Shorescaping Workshop, and was sent to 486 recipients, with 189 opens and 45 clicks on links for more information.
- [*Shorescaping Workshop and Other CCE Onondaga Events*](#) (October 24th). Reminder for the Shorescaping Workshop and shared information about CCE Onondaga's tree planting events as part of Save the Rain, and was sent to 485 recipients, with 152 opens and 17 clicks on links for more information.
- [*Reminder: Shorescaping Workshop Email*](#) (October 31st). Another reminder email for the Shorescaping workshop, and was sent to 484 recipients, with 148 opens and 11 clicks on links for more information.
- [*Winter 2019 WAVE Review*](#) (December 4th). Shared the digital version of the Winter 2019 WAVE Review newsletter, as well as archived editions of the newsletter, and was sent to 486 recipients, with 192 opens and 61 clicks on links for more information.
- [*Hemlock Woolly Adelgid Training*](#) (December 17th). Shared information on the NYS Hemlock Initiative's January training on HWA, and was sent to 488 recipients, with 166 opens and 19 clicks on links for more information.

Facebook and Instagram

CCE educators posted a total of 24 Facebook posts and 7 Instagram posts in 2019 regarding water quality issues of interest for the Skaneateles watershed. The average reach per Facebook post was 213 views, and the average amount of engagements per Facebook post was 24. On Instagram, the average number of likes per post was 13.

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 2019, the average number of consumer

calls answered related to water quality and/or the Skaneateles watershed was 16 inquiries per month; with 193 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.

- *Workshop Survey: Septic System and Well Water Workshop.* This survey was distributed at the 9/26/19 Septic and Well Water Workshop to record and evaluate feedback from the workshop. There were 34 attendees and 20 responses, for a response rate of 59%.
- *Workshop Survey: Shorescaping Workshop.* This survey was distributed at the 11/05/19 Shorescaping Workshop to record and evaluate feedback from the workshop. There were 36 attendees and 28 responses, for a response rate of 78%.

Salary Full-Time Equivalents used to deliver the program 2019

Team Coordinator (Water Quality)	.35
Resource Educator (WQ/Forestry)	.03
Subject Educator (Water Quality)	.81
Subject Educator (Agriculture)	.05
Social Media Platform & IT	.04
Administrative Assistant (WQ)	.11
	1.39

Report compiled and submitted by Camille Marcotte, CCE Onondaga, on 2/6/2020.

Skaneateles Lake Watershed Water Quality Education Program Program Report for January - December 2019

Workshops and Events

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
2/28	Winter Threats, Water Quality and Your Wallet	9	The Creamery, Skaneateles
9/26	Septic and Well Water Workshop	34	Skaneateles United Methodist Church
11/5	Shorescaping Workshop	36	Skaneateles Library

Trainings and Stewardship Opportunities

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
5/22	SLA Boat Stewards Training	20	Skaneateles

Municipal/Organizational Support

<i>Date</i>	<i>Constituent/ Meeting</i>	<i># of Participants</i>	<i>Location(s)</i>
2/4	Project Watershed Board Meeting	6	Fayetteville-Manlius Rod and Gun Club
4/25	Sediment and Erosion Control Course	13	First Presbyterian Church of Skaneateles
6/12	Municipal Stakeholders Meeting	32	Midlakes United Methodist Church, Moravia
8/20, 9/10, 10/8	Skaneateles Lake Association Board Meetings	130	Niles Town Hall, Borodino Hall Community Center (Spafford), and St. James Episcopal Church (Skaneateles)
9/4, 12/4	Skaneateles Lake Association Nutrient Management Committee	30	St. James Episcopal Church, Skaneateles (9/4) and by phone (12/4)
10/29	Snow and Ice Control Workshop	77	NYS Fairgrounds
11/19	Skaneateles Municipal Stakeholders Website Meeting	9	Skaneateles Town Hall
12/11	Skaneateles Lake Watershed Agricultural Program Annual Meeting	100	Skaneateles United Methodist Church

Community Presentations

<i>Date</i>	<i>Presentation Title (Group)</i>	<i># of Participants</i>	<i>Location(s)</i>
1/15	Road Salts and Water Quality (Onondaga Council on Environmental Health)	15	Onondaga County Parks Office, Liverpool
4/23	Reconnecting with our Roots (Skaneateles Historical Society)	21	The Creamery, Skaneateles
5/9	Water Quality in Onondaga County: Understanding Threats and Implementing Solutions (National Active and Retired Federal Employees Association Central NY Chapter)	20	Barbagallo's Restaurant, Syracuse
10/17	Septic and Well Water Presentation (Skaneateles Sunrise Rotary Club)	6	Hill Top Restaurant, Skaneateles

11/19	Landscaping for Water Quality and Stormwater Management (Onondaga County Council on Environmental Health)	11	Onondaga County Parks Office, Liverpool
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Community Outreach

<i>Date(s)</i>	<i>Event Name</i>	<i># of Participants</i>	<i>Location(s)</i>
4/10	Inspiring Action: Landscaping for Water Quality in the Finger Lakes (CCE Systems Conference)	50	Webinar
1/23	Tabling at Finger Lakes Research Conference	200	Hobart and William Smith Colleges
2/17	Tabling at CNY Boat Show	2,000	NYS Fairgrounds
3/1	Tabling at Ithaca Native Landscape Symposium	400	Cinemapolis Theater, Ithaca
4/27	Tabling at Baltimore Woods Earth Day	50	Baltimore Woods Nature Center
9/17, 9/18	Activity at Conservation Field Days	240	Emerson Park, Auburn
9/21	Tabling at Onondaga County OnFarm Fest	70	Hourigan's/Half Full Dairy, Elbridge
10/3, 10/4	Activity at Environmental Field Days	254	Green Lakes State Park
10/24	Tabling at CCE Annual Meeting	100	Lakeside Fire Department Recreation Hall

Original Articles

<i>Date</i>	<i>Title</i>	<i>Published in:</i>
1/8	Letter: vegetation helps protect watersheds	Auburn Citizen
2/1	Protecting our local water supply: An alumni/student connection	SUNY ESF Alumni News
6/1	Skaneateles Lake: Protecting a Shared, Vital Resource	NYSDEC Conservationist Magazine

Original Publications*

<i>Date</i>	<i>Title</i>	<i>Format</i>	<i>Print Copies Distributed</i>	<i>E-mail Recipients</i>
1/17	Road Salts in our Watersheds: Best Management Practices for Homeowners, Commercial/Private Property Owners, and Private Contractors	Fact Sheet	250	2,000
12/2	Skaneateles Lake WAVE Review	Newsletter	2,813	192

*All original publications are also posted to our website. All are available for free download as PDF by visiting cceanondaga.org and clicking on the “resources” tab at the top. For WAVE Review newsletters, visit: cceanondaga.org/environment/skaneateles-lake/wave-reviews-newsletter.

FEATURED on Local News Sources: Video, Article, Print

<i>Date</i>	<i>Title</i>	<i>Newspaper/ Channel</i>	<i>Format</i>
1/8	Vegetation helps protect watersheds	Auburn Citizen	Article
1/15	Environmental Education Networking	SUNY ESF Alumni Newsletter	Article

2/16	Winter threats workshop to be held in Skaneateles	Auburn Citizen	Article
2/26	Stormwater Runoff and Soil Erosion: Do you know your permits?	Town of Skaneateles Newsletter	Article
8/28	Link begins work in Skaneateles Watershed	Skaneateles Press	Article
9/6, 9/19	Septic System and Well Water Workshop	Skaneateles Lake Association Newsletter	Article
9/12	Septic System and Well Water Workshop	Skaneateles Press	Article
9/19	Cornell Cooperative Extension – Septic System and Well Water Workshop	Skaneateles Town Newsletter	Article
9/20	Septic, well workshop to take place in Skaneateles	Auburn Citizen	Article
10/31	Shorescaping Workshop	Skaneateles Press	Article
11/4	Shorescaping Workshop	Skaneateles Lake Association Newsletter	Article

CCE Onondaga Water Quality E-newsletters: MailChimp

<i>Date</i>	<i>Topics (s)</i>	<i>Reach</i>
1/18	Road Salt Best Practices	255
2/13	Workshop Announcement: Winter Threats, Water Quality and Your Wallet	260
3/21	Water Quality Program: Upcoming Events, Spring 2019	278
4/18	Earth Week Events! Hosted by CCE Onondaga Water Quality Program	203
9/4	Upcoming Event: Septic and Well Workshop	184
9/12	Septic and Well Workshop Reminder Email	168
9/23	Skaneateles Lake Education Program Updates	214
10/17	RSVP! Shorescaping Workshop in November	189
10/24	Shorescaping Workshop and Other CCE Onondaga Events	152
10/31	Reminder: Shorescaping Workshop	148
12/4	Winter 2019 WAVE Review	192
12/17	Hemlock Woolly Adelgid Training	166

Water Quality Social Media Posts

<i>Month</i>	<i>Facebook Posts</i>	<i>Instagram Posts</i>
Jan.	4	0
Feb.	5	2
March	4	1
April	5	1
May	2	2
June	0	0
July	0	0
August	2	0
Sept.	1	1
Oct.	1	0
Nov.	0	0
Dec.	0	0

Consumer Calls and E-mail Inquiries

Month	# of calls/e-mails
Jan.	18
Feb.	14
March	20
April	25
May	25
June	15
July	25
August	25
Sept.	15
Oct.	5
Nov.	3
Dec.	3

Program Evaluations, Surveys, and Feedback *

<i>Date</i>	<i>Evaluation/Survey Title</i>	<i>Attendees</i>	<i>Responses</i>	<i>Response Rate (%)</i>
9/26	Workshop Survey: Septic System and Well Water Workshop	34	20	59%
11/5	Workshop Survey: Shorescaping Workshop	36	28	78%

* Paper surveys are distributed to all participants at the event and collected that same day. Copies of completed evaluations and evaluation results are included in this report as separate documents.

Report compiled and submitted by Camille Marcotte, CCE Onondaga, on 2/6/2020.

Road Salts in Our Watersheds

Best Management Practices for
*Homeowners, Commercial/ Private Property Owners, Private Contractors**

Read on to learn how to adopt a more *financially sustainable, ecological, healthier* and *equitable* approach to deicing surfaces and winter safety.

About 40% of salt use in some areas of NY are from private users. In addition to being used on public roads, salt is also used on ***parking lots and internal roads of commercial and industrial establishments, schools, churches, apartment complexes, camp roads, or private driveways and drives.***



Adding too much salt to an icy surface is an unnecessary cost and can increase damage to concrete, metal, drinking water, vegetation, fish and wildlife, as well as air and water quality -which can impact human health.

Private contractors, those who hire private contractors, and individuals who apply their own de-icing/ anti-icing products have an opportunity and responsibility to implement more sustainable practices that reduce the negative environmental, health, and financial impacts of over application or rock salt.

Human Health Threats

- Drinking water supply– wells and municipal supply. Direct threat to individuals with high blood sugar due to increased sodium. Indirect threat through increased nutrient and sediment loading to water bodies (HABs and turbidity)
- Air quality threat due to ‘salt clouds’
- Threats to pets: paws and ingesting

Financial Costs/ Resource Sustainability

- Conservative applications save money on materials and damage long-term
- Over application of salt and chloride ions accelerate corrosion impacting infrastructure, concrete, parking structures, brake lines, car bumpers, and can even cause issues with transmission lines in our vehicles

Ecological Degradation/ Wildlife

- *Water quality*– Cl toxic to aquatic life and wildlife. NaCl disrupts density and dissolved oxygen distribution, impacting macroinvertebrate and fish populations
- *Vegetation threats*– Roadside and aquatic plants. Leaf burn. Increased risk of invasive species
- *Threats to wildlife*– consumption of toxic chemicals, loss of habitat, reproduction issues
- *Soil*– soil depletion, loss of structural stability, erosion, increased runoff, nutrient, sediment loading

Environmental Justice

- Drinking water supplies threatened
- Prioritization and Cost efficiency
- Externalized costs of infrastructure impacts

Content above and guide on page 2 of this publication were created based on research-based best practices, protocol, and programs published the following agencies and partners.

Cornell Local roads Program, NYS DEC, NH DES, The Cary Institute of Ecosystem Studies, NYSDOT, ADK Action, Soil and Water Conservation Districts. *Thank you.*



Rock Salt Application and Ice Control Trips for *Homeowners, Commercial/ Private Property Owners, Private Contractors**

**recommended for the sites listed in bold on front of page.*

Tips to prevent over-applying deicer

(and save you money while reducing threats to human health and ecological systems)

- Do your research and decide application rate to match deicer:

- Rock salt:** use about *1 handful* per square yard
 - *Follow ASTM standards: product must not be less than *95% sodium chloride*.
- Calcium chloride:** use about *1 handful* for every *3 square yards*



- Shovel the snow early and often. If the temperature drops after a snowstorm, the snow can turn icy and be harder to remove.
- The more scraping and removal of ice that you can do, the less deicer you will need to use. Deicer works best on a thin layer of ice.
- After you remove all of the snow and ice, sprinkle deicer (salt) sparingly.
- When temperature rises, the deicer will make a slushy mixture of water and ice. Remove this layer before the temperature drops again. This practice should keep you with an ice-free surface until the next winter storm.
- If possible, use treated salt (pre-wet/ brine) which will accelerate melting, use less salt, as well as cutting cost, time, and decrease need for additional applications (*saving time, money, and energy*)

Tips to reduce negative impacts of salt products:

- Plant salt tolerant trees, plants, and shrubs in areas where there is salt application or higher rates of it
- Plant salt tolerate species to create natural buffer zones to reduce threat of contaminated runoff into waterways, wildlife habitat, and drinking water supplies

Be an informed consumer: chemical deicers and other marketed products

New products with progressive promises and appealing names are introduced every year. These products are usually either patented, proprietary mixtures of the same chemical deicers marked at a higher price. For more information regarding what chemicals to look for, search 'Road Salts' on cconondaga.org.

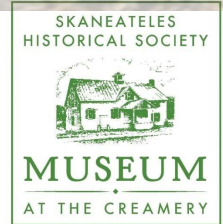
Many road salt alternatives have a relatively short history of use and/or research behind them, making it unclear what the potential long-term environmental and human health impacts they may have. Continuing research, scientific analysis, and encouraging consumer precaution are highly encouraged.

Cornell Cooperative Extension
Onondaga County



Funding for this fact sheet and programming in the Skaneateles Lake Watershed is provided by the City of Syracuse Department of Water. Fact sheet created by Shannon Fabiani, CCE Onondaga 2019.

Cornell Cooperative Extension
Onondaga County



Cornell Cooperative Extension of Onondaga County,
City of Syracuse, and the Skaneateles Historical Society present

Reconnecting with Our Roots

A Landscaping for Water Quality program



Tuesday, April 23rd, 2019

7:30-8:30pm

The Creamery, Skaneateles

28 Hannum Street, Skaneateles, NY 13152



Join us for a casual and fun evening of learning!

Program will feature presentation by CCE Onondaga educator that will discuss the many benefits of native plants on local water quality, wildlife, and our wellbeing.

Educators will share tips and instruction on how to take the next steps to 'landscape for water quality' and bring these benefits to your own lawn, property, community.

Talk will discuss existing and *future* creek-side plantings on the property, and how to get involved in future plantings at the site. The Creamery's Plant Sale details will be announced during event.

Event is *free* and open to the public. Please pre-register to ensure receiving take-home materials. Walk-ins are welcome too!

Register through hyperlink or enter into web browser: https://reg.cce.cornell.edu/roots_231

Contact Shannon Fabiani, CCE Onondaga, at s1f226@cornell.edu for more information.

CCE Onondaga programming in the Skaneateles Lake Watershed is funded by the City of Syracuse.



Sediment and Erosion Control Workshop

A NYSDEC– endorsed 4-hour GP-0-15-002 permit training course

Date: Thursday April 25, 2019

← Please pre-register by 4/17/2019

Time: 12:00pm– 4:00pm

Sign-in at 11:30am, photo ID required

Location: First Presbyterian Church of Skaneateles, 97 E Genesee St, Skaneateles, 13152

Cost: \$100.00 (includes lunch and a NYS DEC Stormwater Training Number wallet card)*

Instructors:

Mark Burger, CPESC, Executive Director, Onondaga County Soil and Water Conservation District (SWCD) and SLWAP Program Manager

Doug Fisher, CPESC, Program Manager, Onondaga County SWCD



There must be at least one trained, cardholding individual on site on a daily basis when soil disturbance activities over 1 acre are being performed– don't risk the negative environmental, financial, and public image impact of violating a SPDES Stormwater permit- Register now!

Who should attend:

- Timber Harvesters and Foresters
- Construction Site Contractors, Inspectors, and Operators
- Stormwater Pollution Prevention Plan (SWPPP) Preparers & Reviewers
- Municipal Engineers
- Highway Departments
- Code Enforcement Officers
- Planning / Zoning Board Appeals Members
- anyone doing construction disturbing soil on 1 acre of land or more.

Why attend:

This workshop will provide the required training to comply with the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). All individuals responsible for installing, constructing, repairing or maintaining erosion and sediment control measures or post-construction storm-water management practices at SPDES-permitted construction sites are required to attend a DEC-endorsed 4-hour training course every 3 years.

Registration. Please pre-register by 4/17. Option 1: visit https://reg.cce.cornell.edu/erosion_231
Option 2: Fill out form on back of this flyer and mail to CCE Onondaga (address on form). →

Those who pre-pay will receive wallet card at event, others will receive by mail after payment is made.. Please e-mail slf226@cornell.edu for more information. *Must be pre-registered to attend.



Sediment and Erosion Control Workshop

A NYSDEC– endorsed 4-hour GP-0-15-002 permit training course

Step 1: Please fill out the registration form below

Step 2: Select your payment option below and follow instruction

credit card (*must pre-pay through this form*) **check or** **exact cash**

If paying day of event, only checks or exact cash will be accepted.

Step 3: Mail completed registration form with payment option to CCE Onondaga

Step 1

Participant Name:	
Company/ Affiliation:	
(Home) Street Address:	
City, State, Zip Code:	
County:	
Phone/ Fax	
E-Mail:	

Step 2

If paying by credit card, please fill out form below and submit with registration

Credit Card # :	
Expiration Date :	
CVV (# on back of card):	
Circle One:	Mastercard Visa Discover American Express

If paying by check, please make check payable to Onondaga County SWCD for \$100.00 and mail with completed registration form to CCE Onondaga at address below.

Step 3

Please mail/ fax completed registration form with payment and/or payment option to:

CCE Onondaga*
The Atrium, 100 So. Salina St.,
Suite 170, Syracuse, NY 13202
Phone: 315-424-9485 ext 232 | **Fax:** 315-424-7056

***All checks payable to
Onondaga County SWCD*

Those who pre-pay will receive their wallet card with training # at event, others will receive by mail after payment is made. Please contact Shannon Fabiani, slf226@cornell.edu for more info. *Thank you.*



CORNELL COOPERATIVE EXTENSION
ONONDAGA COUNTY PRESENTS

SEPTIC SYSTEM AND WELL WATER WORKSHOP

THURSDAY, SEPTEMBER 26 | 6 PM - 8 PM
SKANEATELES UNITED METHODIST CHURCH
26 JORDAN ST. SKANEATELES, NY

This workshop will cover septic systems: maintenance, signs of failure & Onondaga County's Septic System Replacement Funding Program. The workshop will also discuss well water testing, contamination & protection measures.

Speakers: Camille Marcotte, *CCE Onondaga* and Jeff Till,
Onondaga County Division of Environmental Health

Register at <http://bit.ly/septicandwells> or contact Camille Marcotte at (315) 424-9485 ext.232 or ctm78@cornell.edu.

*Free and open to the public. Light refreshments will be provided.
Parking is available in the municipal lot behind the church.*



Cornell Cooperative Extension | Onondaga County



LEARN TIPS FOR LANDSCAPING SHORELINES TO
PROTECT WATER QUALITY

SHORESCAPING WORKSHOP

Tuesday, November 5, 2019
6:30 PM - 7:30 PM

**Click here to register. Questions? Contact
Camille Marcotte at (315) 424-9485 ext.232.**

Skaneateles Library (Library Hall on 2nd floor)
49 East Genesee Street - Skaneateles, NY 13152

Winter Threats, Water Quality, and Your Wallet

A Free Workshop by CCE Onondaga



Thursday, February 28

7:00pm-8:00pm

The Creamery, Skaneateles | 28 Hannum St, Skaneateles

https://reg.cce.cornell.edu/winterthreats_231

Though the groundhog ‘predicted’ an early Spring, there is still time to learn how to reduce threats from winter weather activities this season.

Join CCE Onondaga educators and learn how to adopt simple steps to protect **water quality**, **our wallets**, and **our health** from lesser known threats during the winter months.

Topics and Tips will include:

- ◆ Road salts and De-icing agents
- ◆ Water quality, fish, and wildlife*
 - ◆ Freezing and Burst Pipes
 - ◆ Cost-saving & Safety Tips

*Attendees will learn how to test chloride levels in streams/ water sources and will leave with personal testing kit to take home.

Please pre-register by [clicking here](#) or scanning QR code on right.

Workshop designed for residents, private property/ business owners, and all interested stakeholders.



Cornell Cooperative Extension
Onondaga County



Funding for CCE Onondaga programming in the Skaneateles Lake Watershed is provided by the City of Syracuse Department of Water.

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

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