

# CONSERVATION HIGHLIGHTS

*Conservation in Action*

## 2018 Annual Report

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THE CAYUGA COUNTY SOIL & WATER CONSERVATION DISTRICT



### Mission Statement

It is the mission of the Cayuga County Soil and Water Conservation District to enhance and protect the natural resources of Cayuga County through "hands-on" implementation of best management practices.

### Cayuga County Soil and Water Conservation District

#### **STAFF**

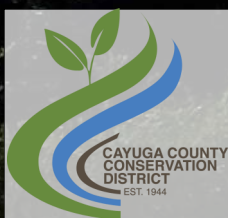
Doug Kierst, CPESC, CPSWQ	<b>Executive Director</b>
Brian Hall, CPESC, CCA, CNMP	<b>Nutrient Management Specialist</b>
Jason Cuddeback, CCA	<b>Grazing Specialist</b>
Jason Schenck	<b>Watershed Conservation Specialist</b>
Valerie Horning	<b>Conservation District Technician</b>
Timothy Schneider	<b>Cayuga County Watershed Inspector</b>
Kimberly Jakaub	<b>Watershed Conservation Specialist</b>
Wanda Jakaub	<b>Principal Account Clerk</b>
Lisa Miller	<b>Senior Typist</b>
Mike Riley	<b>Working Foreman</b>
Pat DeVoe	<b>Motor Equipment Operator</b>
Tim Lozier	<b>Motor Equipment Operator</b>
Sean McCarthy	<b>Motor Equipment Operator</b>
Denise Dixon	<b>Cleaner</b>
Al Noga	<b>Motor Equipment Operator</b>

### **Owasco Lake Watershed Inspection Program**

Andrew Snell	<b>Watershed Specialist</b>
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### **USDA Natural Resource Conservation Service**

Katherine Schor	<b>District Conservationist</b>
Stephanie Freese	<b>Program Assistant</b>
Miranda Ciardulli	<b>Student Trainee</b>



### About Cayuga County SWCD

As the result of petitions and resolutions submitted to the Cayuga County Board of Supervisors (today the County Legislature) by the Farm Bureau, Grange, Dairymen's League, and other farm organizations, the Cayuga County Soil Conservation District was formed on August 8, 1944. Cayuga County is well known for its abundance of productive farmland and high quality water. The foresight of the governing body to protect the natural resource needs located within the County proved to be a good investment. Agriculture is the predominant economic engine of the County.

Over the past 70 years, we have expanded to include Wastewater Management, Nutrient Management, Stormwater Management, and Erosion and Sediment Control Programs.

Today we are the local agency that many community members and government agencies "go to first" with their environmental related problems and concerns. We take pride in not only listening, but getting things solved.

### 2018 Board of Directors

Ray Lockwood	<b>Chairman, Farm Bureau</b>
James Young	<b>Vice Chairman, Member at Large</b>
Andrew Dennison	<b>County Legislator</b>
Paul Pinckney	<b>County Legislator</b>
Roger Conner	<b>Member, Grange</b>
Terry Baxter	<b>Member at Large</b>
Steve Nemec	<b>Member at Large</b>

*"This country will not be a permanently good place for any of us to live in unless we make it a reasonably good place for all of us to live in."*

**- Theodore Roosevelt**

### A message from the Executive Director

Water quality is an ongoing concern to the residents of Cayuga County. Cayuga County is blessed with a lot of fresh water resources. Portions of three Finger Lakes – Cayuga, Owasco and Skaneateles define the watersheds in the southern part of the county, while the Seneca River and Lake Ontario dominate the northern portion.

As more County residents increase their environmental awareness and strive to have a constructive impact on our natural resources, the Cayuga SWCD's role expands to recognize their desire and translate it into an effective yet practical solution that can be implemented. We regularly interact with municipal officials, agricultural producers and lakeshore residents, each of whom bring different perspective and experiences to the table, yet strive for the same goal - to protect our natural resources and keep our water clean. We all do our part.

Without the support that we receive from the Cayuga County Legislature, we would not be able to do our part and provide the programs and services that we offer to the residents of the County. Their support allows us to be the local go-to agency to provide *in the field assistance* where it is requested and needed the most.



## The Value of the SWCD in Cayuga County

Since it was established by the County Board of Supervisors in August of 1944, the Cayuga SWCD has been actively involved with the protection of natural resources throughout the County. The benefits that come with having a local, technical program dedicated to resource concerns includes the immediate availability to provide important technical assistance, local knowledge of the landowners and the environmental resources, an extensive network of partner agencies at the State and Federal levels and the ability to look at the broad picture of the landscape.

### ***Agricultural Assistance:***

The role that agriculture plays in the economy of Cayuga County is substantial. As a result, farms and farm businesses need to remain viable and sustainable to provide healthy, local food, maintain a diversity of open space and continue to provide needed jobs. According to the most recent Census of Agriculture (2012), Cayuga County ranked #2 in NYS in the total value of agricultural products sold with \$293,474,000. When our favorable agricultural environment is combined with statistics that indicate the County has the most freshwater shoreline in NYS, a healthy balance must be obtained. The Cayuga SWCD has the opportunity to have a significant impact throughout our community as a result of its capability to work directly with private landowners as well as local municipalities.

The programs provided by the Cayuga SWCD to assist agricultural operations in remaining sustainable and viable include the Agricultural Environmental Management Program (AEM), assistance with nutrient management planning, the promotion of soil health practices, oversight of water quality protecting best management practice (BMP) implementation, and conservation mowing and seeding. ***In 2018, the Cayuga SWCD assisted with the implementation of on farm agricultural BMPs totaling \$3,766,950. The landowners contributed \$1,392,230 towards the costs, while State funding was leveraged to cover the additional \$2,374,718. The Cayuga SWCD was awarded an additional \$797,794 in new grant funding for important projects on Cayuga County farms. Participating farms will be contributing \$685,259 towards the implementation of the projects.*** The funding is focused directly on agricultural BMP implementation. This is in addition to the on-going conservation work that farms complete utilizing their own resources. In addition, the Cayuga SWCD works closely with our Federal partners, including the Natural Resources Conservation Service (NRCS), to promote additional conservation programs, many of which are available to assist with BMP implementation projects.

### ***Non-Agricultural Residential and Municipal Assistance:***

The Cayuga SWCD also works closely with the non-agricultural landowners and municipalities throughout the County. We further our efforts on protecting water quality through programs that focus on stormwater management, wastewater management, aquatic vegetation control, streambank and shoreline stabilization, proper site drainage, critical area stabilization/seeding, roadside stabilization measures and the proper recycling of yard waste.

Cayuga County is home to a very diverse collection of water bodies. Lake Ontario defines the northern boundary of the County which also includes all or parts of three Finger Lakes - Cayuga, Owasco, and Skaneateles. In addition there are several smaller water bodies including Cross Lake, Duck Lake, Lake Como, and Otter Lake. The Cayuga SWCD's Aquatic Vegetation Control Program's objectives are to increase the accessibility and usability of the County's water bodies, while seeking to leave the lakes in the most ecologically intact manner possible. Over the past 5 years, we have removed an average of 2,153 cubic yards per year of vegetation from the waterbodies that we harvest.

The stabilization of exposed and eroding critical areas continues to be another important area of focus for the Cayuga SWCD. In 2018, the Cayuga SWCD was awarded \$380,000 in new State grant funding that will be used towards the protection, stabilization and revegetation of 4,000 feet of highly erodible streambank throughout Cayuga County.

Being located in the Finger Lakes Region has many benefits, primarily an abundance of clean, fresh water. Farming operations and many others benefit from the availability of clean water. For instance, the tourism industry including recreational boating, hiking and fishing opportunities thrive throughout the County.

***“Don’t judge each day by the harvest you reap,  
but by the seeds that you plant”***

***- Robert Louis Stevenson***



## District Services

A fawn hiding at one of the District's wildlife seeding sites



### No-Till Conservation Seeding

The Cayuga SWCD uses a tractor with a Truax no-till drill to seed for various projects, including: pasture, hay fields, wildlife and pollinator habitat, and cover crops. The Truax drill is capable of handling the wide variety of seed sizes and textures necessary for all of these projects. The seedings provide a variety of benefits to landowners, including reduced erosion, better soil health, and improved habitat. If you are interested in seeding, you should contact Jason Cuddeback.

### Conservation Mowing

The Cayuga SWCD owns two mowers that are used in our conservation mowing program. The boom mower has a floating brush-hog style head on an arm that gives it a reach of over 15 feet. It is best for trimming back overgrown hedgerows, ditches and roadsides. The "bat-wing" deck mower can mow a 15 foot width in one pass, making it ideal for overgrown pastures and field conservation programs. Over the last few years, the Cayuga SWCD has been increasing the number of acres mowed and trimmed. **In 2018, the Cayuga SWCD mowed 12 acres of pasture and wildlife habitat and approximately 100 miles of conservation ditches, field edges and roadsides.**



Bat Wing Deck can cut 15 feet in one pass

Our Tubgrinder travels around the CNY region turning excess wood into mulch



### Wood Waste Recycling

Municipal and commercial wood waste piles can often be difficult to dispose of. With the District's tubgrinder and hydraulic shears, large quantities of wood waste can be quickly and efficiently processed into readily usable wood mulch. Many of the municipalities utilize the mulch that is generated, as a resource to give back to their residents for landscaping. **In 2018, the Cayuga SWCD used its wood waste recycling services to recycle approximately 24,125 cubic yards of wood waste for 10 municipal organizations.**

### Critical Area Seeding

Soil erosion and sedimentation are leading causes of water quality degradation. The Cayuga SWCD uses many tools to establish grass cover on bare soils, from road-side drainage ditches to erosion control on slopes and even establishing athletic fields. Our technicians work with local seed distributors to create formulas that work for any type of situation. Using our 1,000 gallon hydroseeder, the Cayuga SWCD can quickly respond to requests for assistance. The Cayuga SWCD provides hydroseeding for county, town and village governmental departments. **In 2018, the Cayuga SWCD completed critical area seeding on 9 acres of eroding roadbanks and disturbed areas.**



Cayuga SWCD Staff hydroseeding a grass waterway



Calibrating a manure spreader for a CNMP involves weighing the spreader when it's full and when it's empty in order to determine the application rate

### Comprehensive Nutrient Management Planning

Nutrient management plans help farmers balance their nutrient applications (manure and fertilizer) with the needs of the crops. Soil samples are taken on all of the fields to help determine this balance. The nutrient management plan also prescribes crop rotations that will keep soil erosion rates below a defined "tolerable" level. By following this plan, a farm can reduce erosion and nutrient losses from their fields, thereby helping to improve water quality and reduce fertilizer costs. A nutrient management planner must also look at the farmstead facilities. Barnyards, feed storage areas, and milking centers are all potential sources of nutrients that need to be addressed. A plan that covers both the agronomic (field) practices, as well as the farmstead, is called a Comprehensive Nutrient Management Plan (CNMP). CNMP's must be updated annually.



## Owasco Lake Enhanced Watershed Restoration Action Plan

Animals have full access in a tributary of Owasco Lake.



The Owasco Lake Watershed Restoration Action Plan will implement phosphorus reduction efforts on agricultural and non-agricultural sites in the Owasco Lake Watershed. The Cayuga SWCD has been tasked to implement phosphorus reduction BMP's including Erosion Control Systems and Stream Corridor & Shoreline Management Systems.

Hi-tensile fence installed.



Water troughs with livestock pipeline installed.



## Community Recycling Events

The Cayuga SWCD partners with the Cayuga County Planning Department and Cornell Cooperative Extension, who act as coordinators for the Tire Roundup. The Cayuga SWCD assists by making facilities, equipment and staff available.

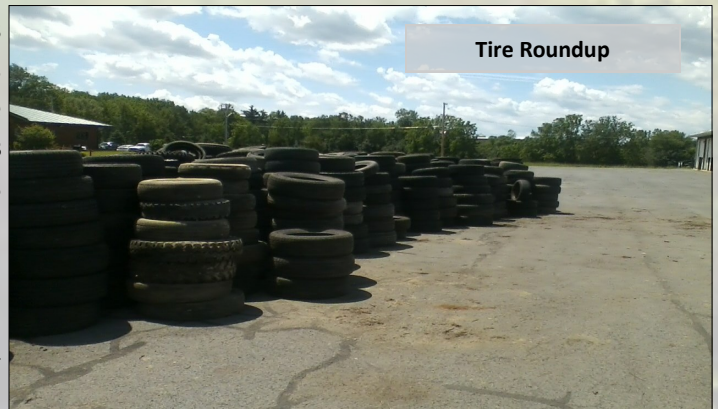
- **TIRE ROUNDUP**– Old tires can be brought in by county residents for a small fee. Lead weights are removed and most of the tires go to NUCOR to supply carbon for steel production. Others are shredded to be reused as road, building and drainage materials. **This year participants recycled approximately 3,000 tires and 27 pounds of lead during the event held on June 23, 2018.**

- **HOUSEHOLD HAZARDOUS WASTE CLEANUP DAY**– Is an opportunity for county residents to responsibly dispose of substances that do not belong in normal garbage, such as pesticides, oil-based paints, and household chemicals that was held at the Natural Resource Center on October 20, 2018.

- **TRADE-A-TREE**– County residents have the chance to drop off Christmas trees from the holiday season in exchange for a voucher granting them a free tree seedling. The trees are chipped with the Cayuga SWCD's tubgrinder and used as mulch. **Over 300 trees were traded and recycled in the winter of 2018.**

Be on the lookout for dates of the upcoming 2019 recycling events.

Tire Roundup





## Assistance to Municipalities & Organizations

During 2018, the Cayuga SWCD assisted many municipalities throughout the county on various erosion control and water quality projects. The projects included streambank stabilizations, ditch stabilization, flood mitigation, and erosion control.

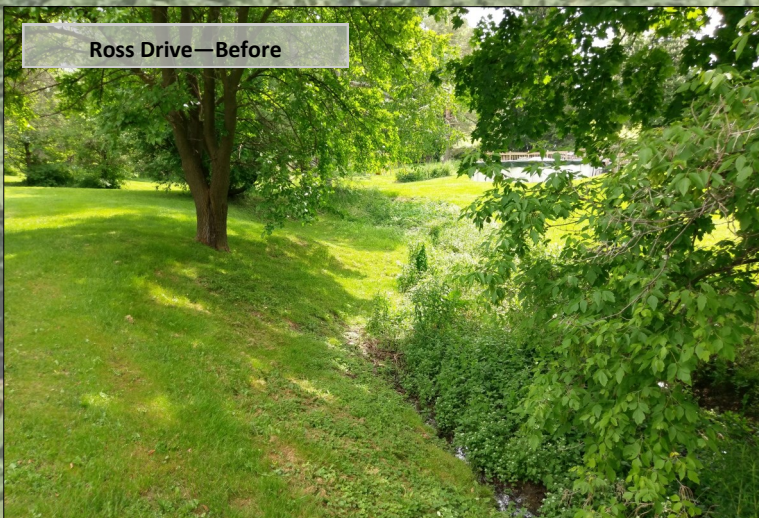
### Town of Moravia— Rockefeller Rd Gully Stabilization



Heavy rain and steep slopes resulted in gully erosion along with sediment deposition in the roadside ditch in the Town of Moravia. Cayuga SWCD staff worked to widen the concentrated flow area and stabilize the bank with rock, as well as creating a storage/ collection basin along the road to allow for a cleanout area for local DPW staff. This Project was funded through a WQIP Critical Area Stabilization grant.

### Town of Brutus—Ross Drive Flood Control

The Cayuga SWCD and the Town of Brutus worked collaboratively on a stormwater, flood reduction project on Ross Drive. The spring snow melt caused severe flooding on Ross Drive due to an undersized culvert and debris build up. The Town of Brutus removed a large tree that was causing constricted flow. The Cayuga SWCD staff cleaned out the drainage swale while also widening the channel to allow for storage for ponding if the culvert was to ever be overwhelmed again with flood water. The project was then re-established with a lawn mix and filter socks placed in the bottom of the channel to prevent erosion until the grass seed took hold. This project was funded through a WQIP Critical Area Stabilization grant.





## Town of Sterling—McFarland Ditch Stabilization

The Cayuga SWCD and the Town of Sterling Highway worked in collaboration to stabilize a steep section of McFarland Road where snow melt and heavy storm runoff have caused severe erosion over the years. In order to reduce the erosion, rock check dams were installed to break up the slope and in turn the velocity, and the lower half of the ditch was completely rock-lined until the ditch entered a low spot in the terrain. Many Municipal ditches in the County need to be completely rock-lined due to steeper slopes. The rock creates roughness and the different angles of the rock cause the water to lose velocity and reduces the likelihood of erosion. This project was funded through a WQIP Critical Area Stabilization grant.



## General Services

Cayuga SWCD staff helped hydroseed over 9 miles of road ditches in the County, as well as installing sediment capturing basins assisting in a number of culvert sizings and designs. Cayuga SWCD staff continues to work closely with municipal highways to ensure that erosion and sediment control practices are in place and installed correctly.



Sediment Basin



Hydroseeding



## Aquatic Vegetation Control (AVC) Program

The AVC program provides relief to the County's waterbodies that have become impaired by dense vegetative growth. Due to nutrient inputs and sunlight, aquatic vegetation is an unavoidable reality in lake ecosystems. From hindering navigation and swimming, to creating water and air quality issues during mass die off events, aquatic vegetation can dramatically interfere with people's use of the lakes. The Cayuga County Aquatic Vegetation Control Program's objective is to increase the accessibility and usability of the County's waterbodies, while seeking to leave the lakes as ecologically intact as possible.

The District's AVC program consists of two boats, an on-shore conveyor, and a small dump truck. The largest boat is a paddlewheel type boat that is designed to access heavy vegetation in shallow water. This boat cuts and picks up the weeds. The second boat is a transport boat, used on the larger lakes to cut down transport time from the cutting area to the truck, increasing the efficiency of the program. The weeds are off-loaded onto the dump truck using the conveyor, and taken to nearby farms where the vegetation is used as compost to enrich the soil.

The water bodies that our program covers are Owasco Lake, Cayuga Lake, Otter Lake, Lake Como and Fair Haven Bay. Some of the common weeds found in our lakes include: Common Elodea, Starry Stonewort, Nitella, Eel Grass, Milfoil, and European Frogbit.

**In 2018, the Aquatic Vegetation Control Program removed from Cayuga County waterbodies:** • 1,788 cubic yards (Yd<sup>3</sup>) Aquatic Vegetation • 232,440 dry pounds Aquatic Vegetation • 4,879 pounds of Nitrogen • 414 pounds of Phosphorus • 2,591 pounds of Potassium



Harvester Boat operated by Tim Lozier



Sean McCarthy using the conveyor to empty a full boat of weeds.

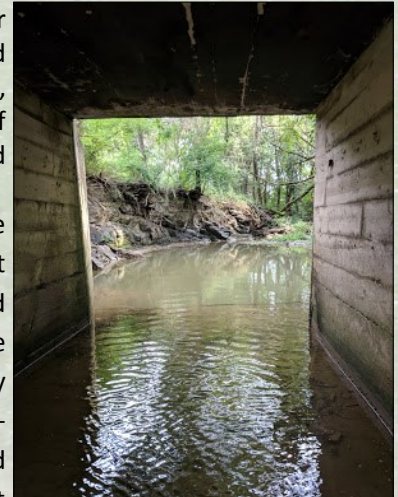
Volume (Yd <sup>3</sup> )	Owasco Lake	Cayuga Lake	Fair-Haven Bay	Lake Como
2018	474	496	780	38
2017	872	627	91	214
2016	734	581	795	N/A
2015	45	306	397	53
2014	940	742	306	122

## New York Great Lakes Road Stream Crossings Assessment Project



The project was to assess the road stream crossings in four selected HUC 12 Watersheds in the Cayuga Lake Watershed (Demont Creek – Cayuga Lake, Red Creek - Cayuga Lake, Yawger Creek and Big Salmon Creek.) During the course of this project, 167 road stream crossings were assessed and added to the NAACC database.

A wide variety of road stream crossing types within those watersheds were encountered. We assessed crossings that appeared to be over 100 years old. The crossings consisted of laid up stone arches, still in very good condition, concrete culverts under state highways, that also appeared to be very old, brand new concrete asymmetrical arch culverts and recently installed plastic culvert pipes on seasonal, unpaved town roads. We also discovered a couple of crossings that



were unable to be assessed at the time, as new culverts were in the process of being installed at the time of the assessment project.



## Moon Beach Project

The Great Lakes Basin Restoration Initiative project on Moon Beach, in the Town of Sterling, Cayuga County was completed in early July by the Cayuga SWCD. Over 330' of steep shoreline was eroding into Lake Ontario, adding nutrients to the Great Lake through soil loss and threatening existing houses. Properties in this area were losing between 1-3 feet of their shoreline each year. The District obtained grant funds, through FLOWPA, from the Great Lakes Basin Restoration Initiative to slow this erosion. These funds were matched by cash contributions from the affected landowners and in-kind services by the Cayuga SWCD.

Due to the very steep banks and limited space to work on some of the properties, large stone blocks were placed at the toe of the slope and continued upwards for several courses to armor the banks from the water, wind and ice. A significant amount of drainfill stone was placed behind these blocks in order to allow for drainage of groundwater coming out of the bank. At the end of the construction, disturbed areas at the top of the bank were graded and seeded.



Moon Beach shoreline — pre-construction



Moon Beach shoreline — post-construction

## Cato-Brutus Trail Project

The Cayuga SWCD assisted the Cayuga County Parks and Trails Department with the installation of a snowmobile/walking trail bridge in the Town of Cato. Cayuga SWCD staff resurfaced the trail system between Smithler Road and Chase Road and built a reinforced pad for the crane to sit on during the lift of the 88 foot long bridge over Muskrat Creek. This bridge is one of three which plan to be installed along the Cato-Brutus Trail and will open up 7 miles worth of trail for recreation.





## Dutch Hollow Brook Project



Dutch Hollow Brook, Before streambank construction.



### BEFORE:

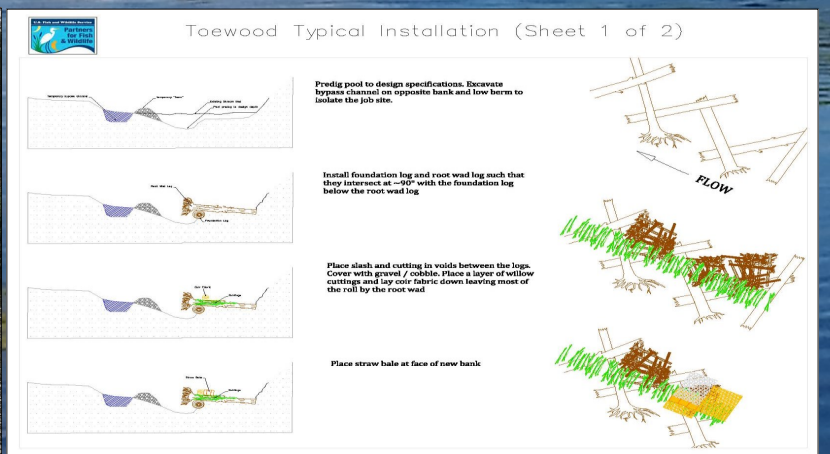
The streambank erosion on the site extends for approximately 290 linear feet, at a height of 10' along the south bank of Dutch Hollow Brook. The erosion is currently encroaching on the farmland abutting the stream.



During construction, toe-wood protection with biomass plantings.



After construction, site stabilized with conservation mix and biomass cuttings.



### AFTER:

290' ft of toe-wood protection installed with trees found on site, tree root balls deflect and slow water velocity creating sediment traps to rebuild new streambanks. A variety of vegetation was planted (grasses, willows and dogwood shrubs) to enhance bank stabilization and shading for habitat. Stone cross veins installed at two points to divert stream flow and velocity back towards the centerline of the channel.



## EDUCATION

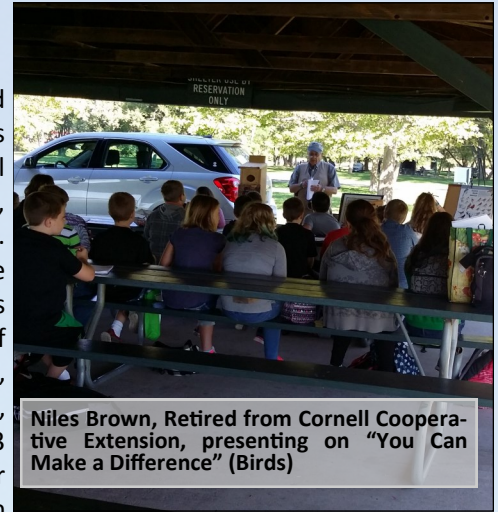
### Conservation Field Days

Conservation Field Days is an exciting way to give sixth grade students from around Cayuga County the opportunity to become better acquainted with natural resources and the environment. Professionals from various fields conduct short educational programs, enabling the students to learn not only about the subject matter discussed, but also see nature and conservation occupations in action.



John Graham, NYS DEC Forester, teaching on the "Trees of Emerson Park"

In 2018, there were 18 stations for the students to attend. The stations covered subjects such as: Trees of Emerson Park, Fish ID and Senses, Soils, Bats, Invasive Species, Birds, Bees, and more. Students from 13 local school districts gathered together at Emerson Park over two days in September. After spending the day at the park, students are asked to write an essay detailing their favorite station at field days. The essays are collected and judged, with the top place winners earning recognition, as well as a voucher for 10 tree seedlings and a bird house to continue their environmental learning.



Niles Brown, Retired from Cornell Cooperative Extension, presenting on "You Can Make a Difference" (Birds)

### Regional Envirothon

The Envirothon is a fun, outdoor, team-based program designed to help high school students better understand their environment through exploration of ecology, natural resource management, and current environmental issues. The Envirothon combines classroom learning with hands-on field experience focused around five major topics:

•Soil and Land Use •Aquatic Ecology •Forestry •Wildlife •Environmental Issues

The 2018 Regional Envirothon was held at the Rogers Environmental Education Center in Sherburne, NY on April 18, 2018.



### District Training Sessions

Throughout 2018, the Cayuga SWCD held **seven** erosion and sediment control workshops for construction site contractors and operators. **Ninety** trainees attended these workshops, which New York State requires for contractors working on construction sites which disturb at least one acre of soil. The four hour workshops covered permit regulations, contractor responsibilities, construction site inspections, and erosion and sediment control best management practices.



Doug Kierst, CPESC, Executive Director, teaching a Stormwater Training Workshop

### Owasco Lake Watershed Inspection Program

***The Owasco Lake Watershed Inspection Program has a new contact information and location!***

The office is now located at the Cayuga County Parks and Trails maintenance building at Emerson Park at 6914 East Lake Rd., Auburn NY. Please, note the Program's new contact information:

E-mail: [asnell@owascoinspection.com](mailto:asnell@owascoinspection.com) | Ph/Txt: (315) 427-5188





## Agricultural Environmental Management (AEM)

The County's **Agricultural Environmental Management** Program is a voluntary, watershed based, locally-led effort to protect and enhance the environment while maintaining the viability of agriculture in Cayuga County.

The AEM Program in Cayuga County is administered through the Cayuga County Soil and Water Conservation District and is designed to assist farmers protect the natural resources that they depend on. The AEM assessment, planning and implementation process helps to target local, state and federal technical and financial resources to farms with the greatest potential for impacting the environment. For additional information or to start the process by completing a Tier 1 Worksheet, visit [www.cayugaswcd.org](http://www.cayugaswcd.org).

### Benefits of AEM Participation:

- Potential funding for planning and implementation of on farm Best Management Practices
- Documentation of current environmental stewardship activities on farms
- Farmer driven decision making and goal setting
- Increased awareness of how farm practices affect the surrounding environment both on and off the farm

### Examples of BMPs that have been implemented on Cayuga County farms through the AEM Program:

- Manure Management Systems, including waste storages and transfer systems
- Silage Leachate Management
- Erosion Control Systems, including Cover Crop, Water & Sediment Control Basins and grassed or lined waterways
- Prescribed Grazing Systems, including Laneways, Water Source Development and Fence



Soil Health Mini Grant, Lime & Cover Crop Application



Access Road to Manure Storage

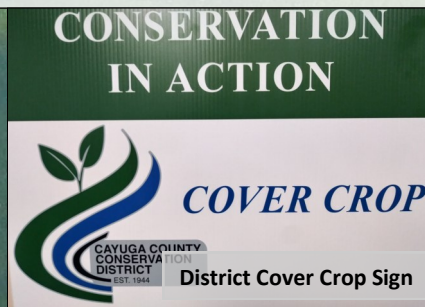


Prescribed Grazing, Watering System

## SOIL HEALTH SEMINAR AT CUDDEBACK FARM & THE 2018 EMPIRE FARM DAYS



Seminar at Cuddeback Farms



District Cover Crop Sign



Inter-seed Crop Trial



Empire Farm Days, Soil Health Building



Farm Show Cover Crop Plot



Reduced Tillage Farmer Panel



## **NYS Agricultural Non-Point Source Abatement and Control Program**

The Agricultural Non-Point Source Abatement and Control Program (AgNPS) is coordinated by the NYS Soil and Water Conservation Committee through NYS Dept. of Agriculture & Markets. It is a competitive grant program that awards cost-share funding to farmers to address water quality challenges facing farms across NYS. Soil and Water Conservation Districts (SWCD) play an integral role in the administration of grant funds and provide planning, design, and implementation assistance for projects.

### **2018 AgNPS Active Grants "ON THE BOOKS"**

- 23 Grants Encompassing 48 Farms
- \$16,869,270 Contracted with NYS and Landowners

### **2018 AgNPS BMPs "ON THE GROUND"**

- 34 Farms Completed BMPs
- 45+ BMP Systems
- \$2,374,718.57 State Share
- \$1,392,231.95 Landowner Share
- \$3,766,949.52 Total Project Costs



## **Installed Best Management Practice (BMP) Systems**

### **Structural BMPs**

- Erosion Control Basins
- Livestock Exclusion
- Access Road Stabilization
- Waste Storage Facilities
- Waste Transfer
- Runoff Control and Treatment
- Heavy Use Area Stabilization

Cayuga SWCD assisted with the implementation of 4,578.5 acres of cover crops within Cayuga County.



### **Management BMPs**

- Nutrient Management
- Soil Management
- Crop Rotations
- Cover Crops
- Soil Testing and Analysis
- Soil Amendments
- Rotational Grazing

Before Cover Crops



After Cover Crops





## **NYS Ag NPS 2018 Installed BMPs Cont.**



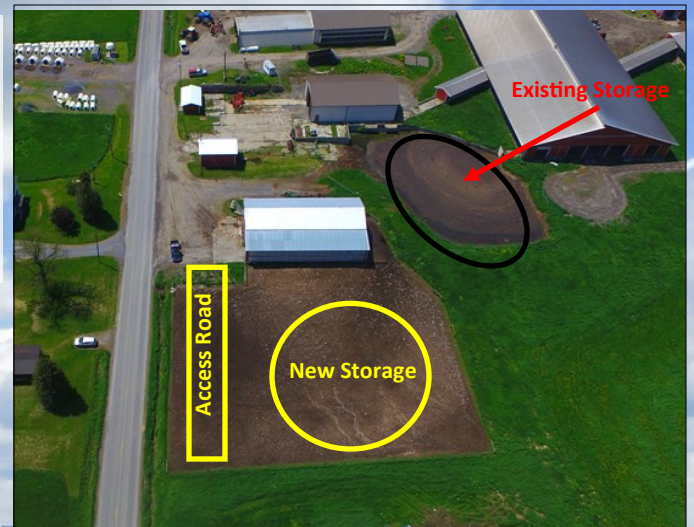
**Waste Storage and Transfer System**—This is a 6.5 million gallon concrete storage installed on a Large CAFO Dairy Farm that will provide 6 months of storage capacity. This allows the farm to better manage their manure during adverse weather conditions especially in the winter months. The project included an access ramp, access roads, diversions, subsurface drainage, and fence.







**Waste Storage and Transfer System** — This is a 1.7 million gallon above ground Slurrystore project installed on a Medium CAFO Dairy Farm that will provide 6.8 months of storage capacity. This allows the farm to better manage their manure during adverse weather conditions especially in the winter



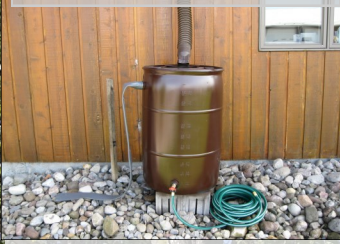
**Silage Leachate Total Collection System with Waste Transfer System**— These two systems are comprised of Multiple BMPs each. These BMPs work in conjunction to collect all the leachate runoff from the bunk silo and transfer it to a long term Waste Storage Structure. This will reduce the potential loss of nutrients and provide multiple options for managing nutrients being recycled on the farm.





Rain barrels are an easy way to collect and store water

## ***Conservation Programs offered at the District***



Cayuga SWCD staff provides technical assistance directly to the residents of Cayuga County by discussing the concern with the individual, conducting site visits and then, if needed, working with the individual to rectify the concern. Services we provide include site planning, technical guidelines and literature, and permitting assistance. When applicable, the Cayuga SWCD seeks grant funding to assist with project implementation.

**Rain Barrels**– The Cayuga SWCD has 55 gallon rain barrels available to purchase at a minimal cost. A rain barrel is an easy way to collect and store rainwater from rooftops, conserving water and helping to lower costs. Rain barrels collect runoff that could otherwise easily travel across paved surfaces, collecting pollution along the way, and into the natural resources area waterways.

**Barley Rolls**– Traditional and chemical methods of controlling the algae in ponds are not always effective or economical. The use of barley straw has been found to be a successful method of algae control. When applied correctly, barley rolls do not kill existing algae, but inhibits the growth of new algae. Our barley rolls float near the surface of the water allowing water to flow through the straw, effectively reducing algae levels.



Annual Fish Stocking Sale

**Annual Fish Stocking Sale**– The Cayuga SWCD held Fish Stocking Sales in May, June and September of 2018 to serve landowners in the county. A variety of fish for ponds were available for sale including rainbow trout, largemouth bass, minnows, channel catfish and grass carp. **In 2018 the Cayuga SWCD sold over 450 fish including 104 grass carp during the fish stocking sales.**

**Tree, Shrub & Groundcover Sale**– The Cayuga SWCD held their 47th Annual Spring Tree and Groundcover Sale in May 2018. As in the past, the Cayuga SWCD offered a variety of conifers, hardwoods, shrubs, groundcovers and perennial plants, fruit trees, and native flowering plants. These seedlings and other plants are a very low-cost way to prevent erosion and to promote wildlife in your area, create noise and visual buffers, and are perfect for creating natural snow and wind breaks. **In 2018 the Cayuga SWCD sold over 8,000 Trees, Shrubs and Groundcovers in our Annual Tree Sale.**

**Bird & Bat Houses**– Wooden nesting boxes help promote backyard conservation and increase the population of local birds and bats. Locally-made wooden nesting boxes that provide safe habitat for bluebirds, screech owls, kestrels, wood ducks, and bats are offered for sale at the Cayuga SWCD office.

**Septic System Inspections & Dye Testing**– The Cayuga SWCD provides services to county landowners for septic system inspections (dye tests) that are mandated by the Cayuga County Health Department. The Cayuga SWCD also provides percolation tests, septic system designs and inspections of newly installed septic systems in compliance with Cayuga County and NY State Health Codes.

**Agricultural Land Assessment**– **254 Soil Group Worksheets were completed for landowners in Cayuga County in 2018.** The Agricultural Land Assessment Program is a state-wide program that provides the opportunity for farmland owners to receive real property assessments based on the value of their land for agricultural production rather than on its development value. Eligibility requirements are outlined by the State Office of Real Property and Department of Ag and Markets, and determined by local assessors.



Cedar and Pine Blue Bird Boxes provide safe habitat

## **Cayuga County Soil & Water Conservation District**

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