# 2022 ANNUAL

# REPORT

of the Soil and Water Conservation Committee and Agricultural Environmental Management Program

Photo: Ontario County Soil and Water Conservation District installs a water control and sediment basin on a farm in the Finger Lakes.

AGRICULTURAL ENVIRONMENTAL MANAGEMENT

AEM

NEW YORK STATE

Soil and Water Conservation Committee

# New York State
# Soil and Water Conservation Committee

## About

The New York State Soil and Water Conservation Committee (SWCC) operates under the leadership of the NYS Department of Agriculture and Markets to establish policy, foster partnerships, and support diverse conservation programming.

New York's 58 county Soil and Water Conservation Districts (SWCDs) provide programs and services to conserve, enhance, and protect soil and water resources across the State. The SWCC works closely with SWCDs to implement conservation projects and initiatives.

Through the support of local SWCDs, State Aid, and programmatic funding opportunities, the SWCC works to protect the State's natural resources, focusing on environmental planning, and conservation best practices.

## Voting Members:

Dale Stein, Chair, Farm Interests

David Brass, New York State Grange

Darin Hickling, New York Farm Bureau

Erica Goodman, Urban-Suburban and Rural Interests

Scott Ryan, New York Association of Conservation Districts

## Advisory Members:

Cornell Cooperative Extension

Cornell University

SUNY Environmental Science and Forestry

NYS Department of Environmental Conservation

NYS Department of Agriculture and Markets

NYS Department of Health

NYS Department of State

NYS Conservation District Employees' Association

USDA Natural Resources Conservation Service

## Table of Contents



NEW YORK STATE OF OPPORTUNITY. Soil and Water Conservation Committee

NEW YORK STATE OF OPPORTUNITY. Agriculture and Markets

Ontario and Yates County SWCDs facilitate a joint summer soil health workshop.

Greene County SWCD collecting bedrock data to support management recommendations.

Wayne County SWCD's no-till drill is available to landowners to implement no-till planting.

Tioga County SWCD's completed buffer implementation along Owego Creek.

In 2022, SWCDs conserved New York's natural resources through:

**1055 acres**

of habitat restoration

**277 acres**

of riparian buffers for stream protection and carbon sequestration

**755 acres**

of wetland created

**344 acres**

of critical area seeding for erosion and sediment control

**499,077**

tree and shrub seedlings sold by SWCDs for conservation and reforestation efforts on private land

**77**

individual forest management plans developed

**29,124 acres**

of forest in SWCD management plans to sequester carbon, increase biodiversity, and protect forestland

# Conservation Policy: Looking Back to Look Forward

Soil and Water Conservation Districts (SWCDs) were established throughout the United States in response to the Dust Bowl of the 1930s. The New York State Soil Conservation District Law, creating the State Soil Conservation Committee (SWCC) and authorizing counties to create local SWCDs, was passed in 1940. New York's first SWCD was established just a few months thereafter in Schoharie County.

Passage of both federal and State legislation, such as the federal Clean Water Act in 1972 and the State Environmental Protection Fund in 1993, has driven the expansion of the roles of both the SWCC and Conservation Districts. Protecting soil and water resources has been proven to benefit downstream communities, conserve the environment, and foster climate resiliency.

For over 80 years, the SWCC, in parallel with county SWCDs, has led the charge to implementing critical programming to increase New York's resiliency to climate change. The recent legislative push to reduce human impact on the environment is no exception.

As the impacts of climate change intensify, there has been a wave of renewed interest in climate legislation and initiatives. On December 19, 2022 New York's Climate Action Council adopted the landmark Climate Leadership and Community Protection Act Scoping Plan which will serve as a road map for the next 28 years. The Department of Agriculture and Markets, including the SWCC, was heavily involved in the development of the Scoping Plan and public comment review and integration, in collaboration with other state agencies and stakeholders.

Schuyler County SWCD's Hi-boy interseeder funded through the SWCC's Climate Resilient Farming program is used to aid farmers in planting cover crops directly within an existing crop to improve soil health through reduced erosion, increased soil organic matter, and improved water retention.

Additionally, the Soil Health and Climate Resiliency Act (signed into law in 2021) came into effect June 1, 2022. The Act charged the Department of Agriculture and Markets in collaboration with the Soil and Water Conservation Committee with developing efforts to promote and encourage soil health in urban, suburban, and rural communities in addition to conducting and distributing soil health research.

The SWCC plays an integral role in the advancement of climate programs and policy and will continue to lead the charge to meet New York State's ambitious climate goals by continuing to increase, adapt, and monitor existing programming, and support research and development of new and innovative climate solutions.

The Soil and Water Conservation Committee's commitment to conservation has existed long before 2022 and will continue to improve the future of agriculture and natural resources for New Yorkers and beyond.

## Total SWCC Program Outcomes to Date:

| **112,200** metric tons of $CO_2$ equivalent reduced/ sequestered per year* | **8.2 million** estimated pounds of nitrogen emissions saved per year* | **1.3 million** estimated pounds of phosphorous emissions saved per year* | **273 million** estimated pounds of sediment saved per year* |
|---|---|---|---|
| This is equivalent to:<br>• removing **25,000 passenger car vehicles** off the road<br>• carbon sequestered on **133,800 acres of forest** per year | This is equivalent to:<br>• **293 dump truck loads** worth of nutrients kept on farms to increase yield, decrease greenhouse gas emissions, and improve environmental conservation<br>• **$6.6 million** worth of fertilizer savings/year | This is equivalent to:<br>• **46 dump truck loads** worth of nutrients kept on farms to increase yield and improve water quality and environmental conservation<br>• **$1 million** worth of fertilizer savings/year | This is equivalent to:<br>• **9,754 dump truck loads** worth of sediment kept on farms to reduce erosion, improve soil health and water quality |

*Estimates generated using available data for completed projects using the Chesapeake Assessment Scenario Tool and USDA COMET Planner modeling.

# Warren County SWCD Hosts The State Committee

In September 2022, the Soil and Water Conservation Committee (SWCC) convened at SUNY Adirondack for its monthly meeting and tour hosted by the Warren County Soil and Water Conservation District (SWCD). The tour showcased conservation projects implemented by the Warren County SWCD in collaboration with local municipalities, State Committee programs, community members, universities, and local leaders.

Beginning at SUNY Adirondack, the SWCC met with a professor about educating the future generation of farmers and conservationists. While on campus, the SWCC also heard from a farmer who partners with the university and engages in on-farm conservation through implementing cover crops, manure management, and soil health practices.

The group then visited the Orchard Street Gardens, an urban garden created through collaboration between the Warren-Washington Association of Mental Health and the Warren County SWCD, illustrating the need for investment in urban agriculture and demonstrating the harmony between sustainable food production and the urban setting.

Following stops with the Crandall Park Beautification Committee and the Glens Falls Department of Public Works addressing community access to green spaces and water management, the group visited the Murray Street Urban Garden. The urban garden increases community access to a diverse range of produce, addressing food insecurity and providing educational opportunities to local residents.

SWCC members touring SUNY Adirondack.

SWCC touring the Orchard Street Gardens green house and urban garden.

SWCC touring the Murray Street Urban Garden raised beds.

# AEM Leopold Conservation Award

Greenfield Farms of Skaneateles in Onondaga County was New York's 2022 Agricultural Environmental Management (AEM)-Leopold Conservation Award winner. Awarded by the Sand County Foundation, in partnership with the Department of Agriculture and Markets, Greenfield Farm, and the Onondaga County Soil and Water Conservation District, the Greenfield family was honored for its efforts to protect the environment and farm viability.

Greenfield Farms, LLC, is a family-owned, 1,400 acre corn, soybean, hay, oat, and wheat farm overlooking Skaneateles Lake. Jim Greenfield is one of the original leaders and farmer advocates of Syracuse's Skaneateles Lake Watershed Agricultural Program and the family is dedicated to environmental stewardship and were among the first in the area to implement conservation practices from an AEM Whole Farm Plan. To protect community water supplies and improve soil health, the farm has adopted dozens of conservation practices, including 20 water and sediment control basins, 12 miles of grassed waterways, hundreds of acres of cover crops, precision nutrient management, and more than two miles of stabilized access roads.

Greenfield Farms viewed from Skaneateles Lake.


Commissioner Richard Ball of the Department of Agriculture and Markets and Basil Seggos of the Department of Environmental Conservation presenting the AEM-Leopold award to the Greenfield Farms.

The Greenfield family also helped develop the State's AEM framework as we know it today. As farmer leaders in the Skaneateles Lake Watershed Agricultural Program, they had their first AEM Whole Farm Plan completed in 1997 and have been working with the Onondaga County Soil and Water Conservation District ever since.

# Agricultural Environmental Management Program 2022 Annual Report

## AEM Framework

The New York State Agricultural Environmental Management (AEM) framework continues to advance water quality, soil health, adaptation to extreme weather, climate change mitigation, and farm viability in its third decade since becoming codified into New York State law. As such, AEM is central to many local, State, and federal priorities, such as the Climate Action Council Scoping Plan, Total Maximum Daily Load plans, and Nine Element Watershed and Harmful Algal Bloom Action Plans.

The AEM framework, administered by the NYS Soil and Water Conservation Committee under the leadership of the Department of Agriculture and Markets, is implemented at the local level by county Soil and Water Conservation Districts (SWCDs), guided by five-year AEM Strategic Plans. AEM is the umbrella program used in partnership with farmers to identify existing stewardship and environmental concerns through a comprehensive whole farm assessment and match identified needs with existing financial opportunities for farms of all sizes and commodities. AEM is voluntary and open to all farmers.

Every year, thousands of farmers and fellow community members participate in SWCD-led AEM outreach and training events.


## AEM Base Program Funding

Based on a solid track record of implementation by farmers, SWCDs, and other AEM partners, the AEM Base Program was expanded to better meet the demand for conservation among the diverse range of farms in New York State. Over the last two decades, the AEM Base Program has provided annual, non-competitive funding for SWCDs to work with farmers on technical assistance through the five tiers of AEM:

- **Tier 1:** Inventory current activities, interests, and potential environmental concerns of the farmer.
- **Tier 2:** Document current environmental stewardship and assess and prioritize areas of concern.
- **Tier 3:** Develop conservation plans addressing concerns and opportunities tailored to farm goals.
- **Tier 4:** Implement plans using available educational, technical, and financial assistance.
- **Tier 5:** Evaluate practices and plans for conservation and farm viability.

Starting in 2020, the AEM Base Program (Round 16) was expanded to operate on a two-year cycle and include a new, cost-share funding track to implement conservation practices prioritized in AEM Tier 3 conservation plans. As expected, SWCDs and farmers rose to the challenge, with 52 SWCDs providing technical assistance, outreach, local coordination, and conservation practice implementation according to their AEM Strategic Plans with hundreds of farmers on a wide span of farms.

Technical assistance and funding to support practice adoption will continue with AEM Round 17 for 2022-2023. Landowners are encouraged to connect with their local SWCD to learn more.

## AEM Base Round 16 by the Numbers*

**$9.3 million**

in statewide funding for SWCDs to provide technical assistance ($5.8 million) and implementation ($3.5 million) through AEM Base Round 16

**152 farms**

implementing 390 conservation practices through Round 16 of AEM Base

**52 SWCDs**

leading AEM efforts with farmers and other community members according to updated, local strategic plans

**2,259 farms**

partnering with SWCDs for technical assistance on AEM Tiers 1 - 5 through Round 16. A breakdown of farm participation by tier is as follows:

**Tier 1:** 708 farms
**Tier 2:** 206 farms
**Tier 3:** 347 farms
**Tier 4:** 366 farms
**Tier 5:** 632 farms

*Projects completed 2020-2021 and outcomes evaluated in 2022.

# AEM Base Round 16 Project Showcase

**Tioga County SWCD**

The Tioga County SWCD worked with a diversified livestock and vegetable farm managed by beginning farmers to implement 7.2 acres of prescribed grazing (as pictured right). By converting cropland to perennial pasture, the farm will improve soil health, increase soil carbon sequestration, and reduce nutrient, water, and sediment runoff. The project also created 1.1 acres of wetland, restored 1.2 acres of existing wetland, and installed two acres of riparian forest buffer which will all increase biodiversity, habitat, and water and soil management. The farmers are satisfied and there are now several new conservation practices supporting the State's water quality in the Susquehanna River leading to the Chesapeake Bay Watershed.

**Clinton and Franklin County SWCDs**

The Clinton and Franklin County SWCDs worked together with a farmer to implement erosion control systems on a 3,000-tap maple farm. The forest landscape is located on a steep slope and harvest trails were severely rutted and unstable, causing erosion. The SWCDs implemented a rock-lined waterway, seven belt deflectors (as pictured left), replaced six failing stream culverts, and increased vegetation, all contributing to decreased erosion and increased trail stability. The system will allow farm equipment to maneuver the trails while ensuring all flow is captured and directed to a stable outlet off the trails which will, in parallel, allow vegetation to reestablish, further reducing erosion. The plan used to develop this project was repurposed as a Sample Forest Conservation Plan and will be used in training other District professionals.

**Orleans County SWCD**

The Orleans County SWCD worked with two farms to install a micro-irrigation water management system on nearly 50 acres of orchards using AEM Base funding (as pictured right). Previously, the farms were using overhead irrigation, so the SWCD worked with the farmers to assess opportunities to improve water use efficiency and reduce runoff losses to the Great Lakes Watershed. Micro-irrigation systems deliver water and fertilizer directly at the root system applied so that the amount, rate, timing, and method of application promote the desired crop response, while conserving water and protecting water quality. By switching from overhead irrigation to micro-irrigation, the farms will reduce both nutrient loss and water usage while increasing farm resilience to drought conditions.

**Yates County SWCD**

The Yates County SWCD worked with a large, diversified organic crop farm to reduce gully erosion concerns, improve soil health, and manage storm flows from a large field system, increasing the farm's climate resiliency. The farm already adopted strip cropping, crop rotation, and cover crops, but still experienced erosion after heavy rainstorm events in the Seneca Lake Watershed. The District used AEM Base funding to construct 11 water and sediment control basins (WASCOBs). WASCOBs are a series of embankments that reduce gully erosion, sediment, and nutrient runoff to slow and stabilize stormwater flows. The system was tested during a significant storm (as pictured left) and worked as designed.

## AgNPS Practice Systems Completed in 2022:

**2,108 acres**
of cover crops planted to improve water quality

**21 acres**
of riparian herbaceous and forest buffer established

**543 acres**
of prescribed rotational grazing established

**33 Nutrient Management Systems**
built consisting of manure storage facilities

**543 acres**
of conservation crop rotation implemented

# Agricultural Nonpoint Source Abatement and Control Grant Program

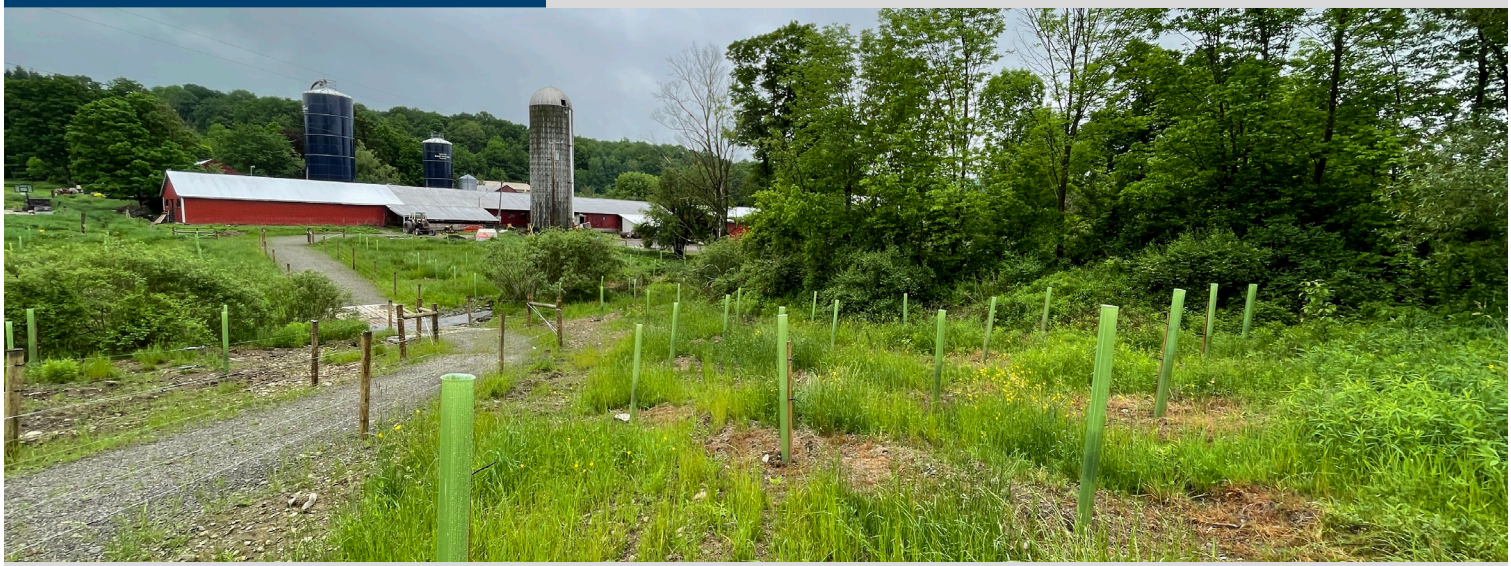
Over 28 rounds, the Agricultural Nonpoint Source Abatement and Control (AgNPS) grant program has awarded 1139 contracts totaling over $237 million toward projects that reduce agricultural nonpoint source pollution and mitigate water quality concerns.

In January 2022, Round 28 of the AgNPS program was released. Project awards were made in October 2022. A total of $13.1 million was awarded to 24 Soil and Water Conservation Districts (SWCDs) to support 36 project proposals. Through Round 28, approximately 50 farms will receive funding to address water quality challenges within priority watersheds across the State.

A variety of best management practice systems are supported through the AgNPS Program. Eligible systems can include those that involve changes in farm management, increase the amount of vegetation on highly erodible areas and along streambanks, or control surface runoff of agricultural pollutants through structural practices. Through Rounds 28, a total of 5600 acres of cover crops, six acres of riparian herbaceous buffer, and 22 acres of riparian forest buffers will be implemented.

In 2022, 50 contracts from the AgNPS grant program were completed. These projects invested over $13 million in State funding to implement a wide range of conservation practices. BMP systems were completed on 68 farms across the State.

Chenango County SWCD riparian forest buffer to aid in streambank stabilization.



Access control and riparian buffer implemented on a farm by the Delaware County SWCD.

## Climate Resilient Farming Program

Over six rounds, the Climate Resilient Farming (CRF) grant program has awarded over $20 million toward projects that improve on-farm climate resiliency and adaptation. Climate change impacts the agricultural sector in a variety of ways. From increasing the risk of soil erosion, reduced soil quality, and pollution events to threatening agricultural productivity and impacting food security, climate change's effects can be felt by farmers, the communities they live in, and consumers alike.

CRF offers cost share grants to help farmers adopt transformative management practices that reduce greenhouse gas (GHG) emissions, increase carbon storage in soils and woody plants, and protect at-risk agricultural lands, all while providing multiple benefits that improve the health and resiliency of the State's farms, ecosystems, and communities. CRF supports farmers in proactively addressing climate concerns across the State.

Released in 2022, Round 6 of CRF grants allocated $8.4 million in funding. Round 7 of CRF, released in 2023, will have $15 million allocated for cost share grants.

Impermeable cover on a manure storage to reduce methane emissions, eliminate rainwater from entering the storage, and reduce waste runoff into water bodies.

## CRF Practice Systems Completed in 2022:

**2,699 acres**

of cover crops planted to reduce erosion and sequester carbon

**126 acres**

of residue and tillage management implemented

**20 acres**

of prescribed rotational grazing implemented

**1,360 feet**

of lined waterway or outlet implemented to reduce erosion and improve water quality

**30 acres**

of vegetation planted to reduce erosion, sequester carbon, and improve water quality

Wetland installed on a farm in the Skaneateles Lake watershed in Onondaga County. The project involved the creation of a 1-acre constructed wetland with an extensive floodplain capturing 2 million gallons during high flow events.

# Agricultural Nonpoint Source Abatement and Control Best Management Practice Highlight

Access Control Systems provide for the controlled and limited exclusion of livestock from a water body or hydrologically active area. Best management practices included in these systems work together to restrict livestock access to a water body and can protect the stability of streambanks from livestock traffic. An Access Control System often includes the use of fencing to restrict livestock access. This system may also include watering facilities and/or stream crossings to provide an alternative source of water and limit livestock access to the water body.

To maximize the water quality benefits, Access Control Systems are often installed in conjunction with Riparian Buffer Systems. Riparian Buffer Systems can be installed within or adjacent to an Access Control System to provide for an area of vegetation that works to intercept surface runoff, subsurface flow, and shallow groundwater. These systems are designed to filter sediments and nutrients.

Access control system implemented by the Wayne County SWCD.

# Climate Resilient Farming Best Management Practice Highlight

**What is cover cropping?**

Cover crops are an annual crop variety typically planted after harvest or intercropped before harvest. Their purpose is to increase soil health, sequester carbon, and reduce erosion. By covering the soil during times of precipitation, cover crops lead to significantly reduced soil erosion and sediment runoff, protecting both soil health and water quality. Additionally, while a cover crop is growing, it is actively sequestering carbon from the atmosphere, with some varieties synthesizing nitrogen from the atmosphere into a form that is usable for plants. When the farmer is ready to plant the next year's crop, the cover crop is either tilled into the soil or terminated without utilizing tillage. The biomass of the cover crop then decomposes into the soil, increasing soil carbon, depositing soil nutrients, increasing soil water holding capacity, and fostering soil microbe communities, in addition to many other soil health benefits.

CRF provides cost share funding for the initial three years of cover crops, but many farmers choose to continue the practice long after funding has expired because of the clear environmental and economic benefit cover cropping provides to the farm.

Left: Cover crops in Erie County on a sloped field will help to reduce erosion during the winter. Right: Drone images of fall cover crop plantings in Essex County.

# Climate Resilient Farming Program Farmer Testimony

One CRF recipient in Erie County has become a local ambassador for cover crops and soil health, sharing the following story as testimony:

One day the farmer was working on one of his fields and a small thunderstorm came over the hill. The rain was so intense that the farmer could not see the hood of the tractor, even with the windshield wipers on high. After 15 minutes, the storm passed and, to the farmer's astonishment, there was no standing water or surface runoff from the storm. The field had completely infiltrated 1.5 inches of rain in 15 minutes. As the farmer drove back to the farm, he looked at his neighbor's field that had a river of water running across it, cutting a gully through the field. The farmer realized that conservation tillage and cover crops had just saved his crop and his field. This farmer is not alone in his recognition of the benefits of cover crops and soil conservation.

As extreme weather events become more frequent, many farmers across the state have adopted soil health practices like cover cropping through cost share assistance like CRF to increase their climate resiliency and adaptation.

A no-till drill is used in Erie County to plant cover crops in the existing post-harvest crop residue.

# Ecosystem Based Management Program

The Ecosystem Based Management (EBM) Program kicked-off in 2006 as part of New York State's Ocean and Great Lakes Initiative. The program began by implementing pollution preventative practices in one of the State's pilot areas, the Sandy Creek Watersheds in Jefferson County. Today, the program works to target high priority areas and best management practices in all watersheds to address pollutants currently threatening our Great Lakes and ocean resources.

The EBM Program is a flexible program that can target single watersheds and specific pollutants to address high priority concerns. At the same time, the program can also be used to pilot new approaches to conservation and fill in gaps that other programs cannot reach. Over the past ten years, this approach has been used to bring light to the benefits of micro-irrigation, soil health, and field-level erosion control, and it has reduced environmental risks on specialty crop farms. Since the onset of the Ocean and Great Lakes Initiative, the EBM Program has awarded $6 million to fund 189 projects.

In 2022, EBM awarded over $350,000 for 17 Erosion Sediment Control projects that will result in 1,350 tons of sediment loss reduction once implemented. Projects included filter strips, grassed waterways, water and sediment control basins, cover crops, and other best management practices.

Through EBM, the SWCC partnered with the Department of Environmental Conservation and Soil and Water Conservation Districts (SWCDs) to implement Community Resiliency Trainings in the Upper Hudson and Lake Champlain Watersheds. Emergency Stream Intervention, Rural Roads Active Management Program, and North Atlantic Aquatic Connectivity Collaborative trainings were held. In 2023, the EBM program is focusing on soil health and working on new approaches that will make it easier for more farms to participate.

Left: Livingston County installation of underground outlet and water and water and sediment control basin.
Right: Orleans County installation of agricultural chemical handling facility.

# Conservation in the Lake Champlain Watershed

Two new pilot projects, below, began in 2022 in the Lake Champlain Watershed to target phosphorous reduction through cover crop plantings and forest and rural road erosion-reduction projects.

Funding for these projects was awarded by Lake Champlain Basin Program to the Champlain Watershed Improvement Coalition of New York (CWICNY). CWICNY members include five county Soil and Water Conservation Districts: Franklin, Clinton, Essex, Warren, and Washington.

### Assessment, Planning, and Piloting Implementation to Address Forest and Rural Road Erosion Project

Forested lands compose nearly 90% of land use in the New York portion of the Lake Champlain Basin and contribute 36% of total phosphorus loading to Lake Champlain. Phosphorus reductions from forested land uses primarily involve remediating erosion and altered hydrology associated with forest trails and roads and legacy logging operations. This project assesses forest parcels to identify, prioritize, and implement water quality improvement projects to reduce phosphorus loading from forested land uses and the use of an existing inventory to implement roadside erosion BMPs on rural roads.

Forest trail erosion data collection training.

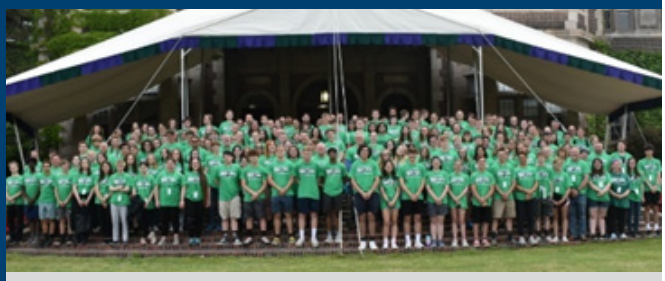

Cover crops in Franklin County.

### Enhanced Agricultural Best Management Practice Pilot Project

Though agriculture is a minor land use in the New York portion of the Lake Champlain Watershed (8.7% of all land cover in the basin), this land use delivers an estimated 38% of the total phosphorus load to the lake. Sediment and nutrients have been linked to the degradation of water quality and the incidence of harmful algal blooms in Lake Champlain. This project funds cover cropping in the Lake Champlain Basin to reduce erosion, improve soil health, and increase nutrient supply, all benefits that will reduce sediment and nutrient runoff into Lake Champlain.

# New York State Envirothon

In 2022, 42 teams from across New York State participated in the 33rd New York State Envirothon. The team from Mount Academy in Ulster County was named New York State Champion at the long-standing hands-on environmental competition that challenges students on their knowledge of natural resource science, public speaking, and civic engagement. Skaneateles High School from Onondaga County and Hudson High School from Columbia County were awarded second and third place respectively. The New York State Envirothon is coordinated by the New York State Envirothon Committee which consists of members of the New York State Conservation District Employees Association, New York State Soil and Water Conservation Committee, Department of Environmental Conservation, Department of Agriculture and Markets, USDA Natural Resource Conservation Service, and volunteers. The program services hundreds of high school students throughout the State, including the five New York City boroughs. Winning teams from regional and county Envirothon competitions advance to the state level and then to the national level Envirothon, earning awards and scholarships at each level.



Teams compete at the 2022 New York State Envirothon.


New York State Envirothon Champions from Ulster County.

# State Aid to Soil and Water Conservation Districts

## Protecting Community, Promoting Conservation

The Soil and Water Conservation Committee administers State Aid funding to 58 Soil & Water Conservation Districts (SWCDs) through the New York Environmental Protection Fund. In 2021, SWCDs received a total of $14.5 million to support technical assistance and conservation programs to municipalities, landowners, and producers.

### Forest Management

Through the use of State Aid, the Oswego County SWCD provided forestry technical assistance to more than 70 landowners, recreational clubs, and municipalities. Assistance was provided regarding forest management, invasive species, insect/disease identification and control, tree planting, hazardous trees, best management practices, implementation of forestry practices for the Conservation Stewardship Program and urban forestry. Providing forestry technical assistance to the public promoted sustainable forest management and water quality improvement.

Oswego County SWCD technician records data while assisting with timber marking on an Oswego County reforestation property.

Oswego County SWCD manager marks a tree as part of a sustainable silvicultural prescription developed for this land.

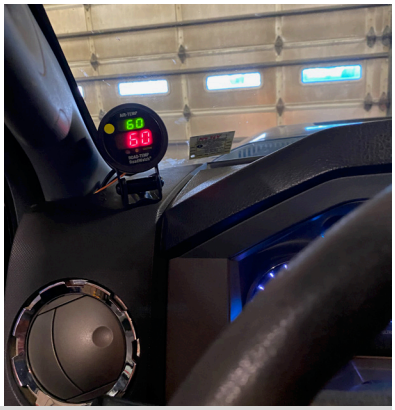

Franklin County SWCD agricultural education and outreach initiatives.

### Fostering Education

Youth conservation education has many benefits including increasing time spent outside, gaining understanding of the food system, learning responsibility, and instilling environmental awareness and knowledge of natural systems. Many SWCDs across the state work with schools and youth organizations to encourage agricultural and conservation education. In 2022, the Franklin County SWCD utilized State Aid to work with multiple schools to diversify and enhance conservation and natural resource curriculum. The SWCD utilized State Aid to purchase materials for students to participate in a variety of conservation activities. By utilizing state aid, the Franklin County SWCD School Assistance Program allowed the SWCD to create a lasting impact for students.

### Environmental Protection

The Adirondacks face the adverse impacts of road salt on vegetation, wildlife, and water quality. Due to increased concern about salt contamination of streams and groundwater, the Clinton County SWCD implemented State Aid to assist the local highway departments implement best management practices that would help them better manage and reduce road salt applications. Eight of fourteen towns in Clinton County participated. Three towns installed road temperature sensors to more appropriately time salt application, and five towns purchased and installed adaptive plow blades to help remove ice from the road thus reducing the amount of salt applied. These innovative measures will lead to improved environmental and water quality.



Left: Plow with adaptive blade retrofit to help remove ice from the road, using less salt.
Right: Road temperature sensor to better gauge when to apply salt reducing the amount applied.

# Soil and Water Conservation Districts in Action: Hamilton County SWCD

County Soil and Water Conservation Districts (SWCDs) are governed locally by a board of directors and operate, in part, through Soil and Water Conservation Committee funding. Across the State, 58 SWCDs work to conserve, manage, and protect New York's most precious resources: soil and water. Each SWCD develops unique programming and initiatives to suit the needs of local communities and address differing natural resource concerns. Hamilton County SWCD is one example of a District meeting the needs of their community.

Hamilton County SWCD Manager Caitlin Stewart, dressed as Munchy the invasve Asian longhorned beetle, teaches Wells Youth Recreation kids about the adverse impacts of invasive insects, and how they can survey their trees for signs of invasion.

Hamilton County is the third largest county in New York State by land mass, and the least populated. SWCDs are often known for their conservation efforts on New York farms; however, the Hamilton County area is comprised of 89% forested land, 5% water bodies, and only 6% open area and hamlets. This unique geography means the Hamilton County Conservation District predominantly focuses its efforts on rural conservation priorities, including invasive species, soil erosion reduction, water quality, and public education. To protect the integrity of Hamilton County's natural resources, the Hamilton County SWCD works with local, State, private, and federal partners to provide technical assistance to landowners, municipalities, and organizations to help meet their conservation needs.

**Warner Brook Stabilization and Fish Passage Project Highlight**

One example of this work is the 2022 Warner Brook Stabilization and Fish Passage Project. Warner Brook, a classified trout stream in Arietta NY, has been impacted by bank erosion for years. Instead of exhibiting natural steps and pools that are characteristic of steep mountain streams, the downstream section of Warner Brook was straight and steep, restricting trout from migrating upstream to spawn.

Installing filter fabric at Warner Brook.

To alleviate this problem, the Hamilton County SWCD worked with federal, State, and local partners including the Hamilton County of Department Public Works, the NYS Department of Transportation, the Town of Arietta Highway Department, and the United States Fish and Wildlife Service. Through this extensive partner coordination, the District placed large boulders below the brook's culvert to shorten the distance of the waterfall and create steps and pools. The step-pool system promotes aquatic passage and dissipates stream energy, decreasing erosion that can impact downstream water quality. Filter fabric was installed to prevent sub-surface flow, enhancing fish passage.

Warner Brook before (left) and after (right) the stabilization and fish passage project was completed.

The estimated project cost including equipment rental, labor, and rock, was $70,000. The Hamilton County SWCD was able to partner and collaborate with local, state, and federal partners who donated time, equipment, and materials, to completed this project for just $400.

In 2023, willow trees will be planted to further stabilize the banks of Warner Brook and provide shade to enhance trout habitat and provide food for ruffed grouse, rabbits, beaver, and muskrat.

For more information about the Hamilton County SWCD, visit hamiltoncountyswcd.org.

For more SWCD led projects, visit http://bit.ly/soil-water-conservation-committee.

# SWCDs in Action: 2022 In Photos

Madison County SWCD hosted buffer steward trainings.

Silvopasture experts hosted a the inaugural New York Silvopasture Showcase Tour for 160 farmers, SWCD staff, and community members.

Wyoming County SWCD staff sorting macroinvertebrate samples for analysis.

Essex County SWCD hosted a logging community education event to practice and improve chainsaw handling, logging skills, and logging best management practices.

Ontario County SWCD partnered with the County to facilitate a tire recycling event.

Schuyler County SWCD partnered with various organizations and community members to perform water chestnut invasive species management.


Cayuga County SWCD hosting soil health workshops demonstrating the benefits of cover crops.

Greene County SWCD field assessment crew capturing data of an existing beaver dam.

For more information, please visit:

Soil and Water Conservation Committee
http://bit.ly/soil-water-conservation-committee

Agricultural Environmental Management
http://bit.ly/agricultural-environmental-management

Photo: Ontario County Soil and Water Conservation District

NEW YORK STATE | Soil and Water Conservation Committee

NEW YORK STATE | Agriculture and Markets