Monroe County Soil & Water Conservation District

2021 Annual Report

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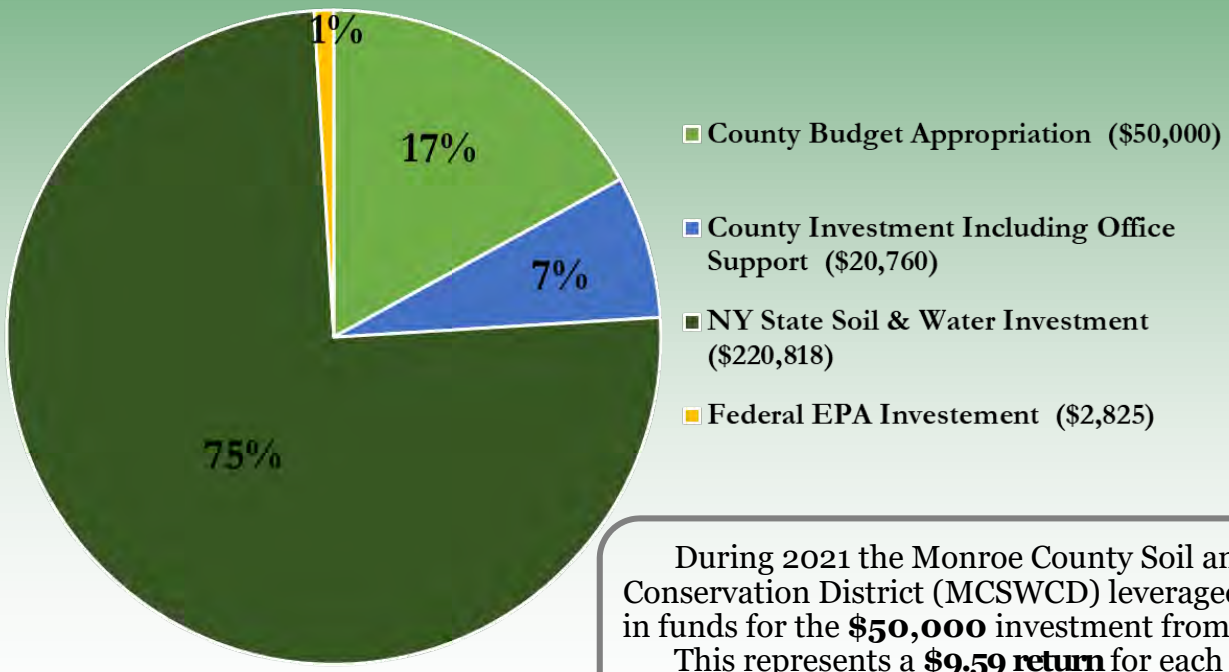
Who Are We & What is Our Mission?

The MCSWCD is a municipal subdivision that partners with state, local and federal agencies, as well as watershed groups to educate and assist landowners and municipalities in planning and implementing best management practices that stabilize soil, improve water quality, manage stormwater runoff , preserve open space, and manage fish and wildlife habitat.

The District provides technical assistance in the preservation and restoration of streams, wetlands, woodlots, agricultural land and low impact development to landowners, farmers, engineers, contractors, developers, and municipalities. In fact, in 2021, the MCSWCD responded to **210** requests for water quality technical assistance and **123** requests for land use management, of which 187 were requests from our local municipalities.

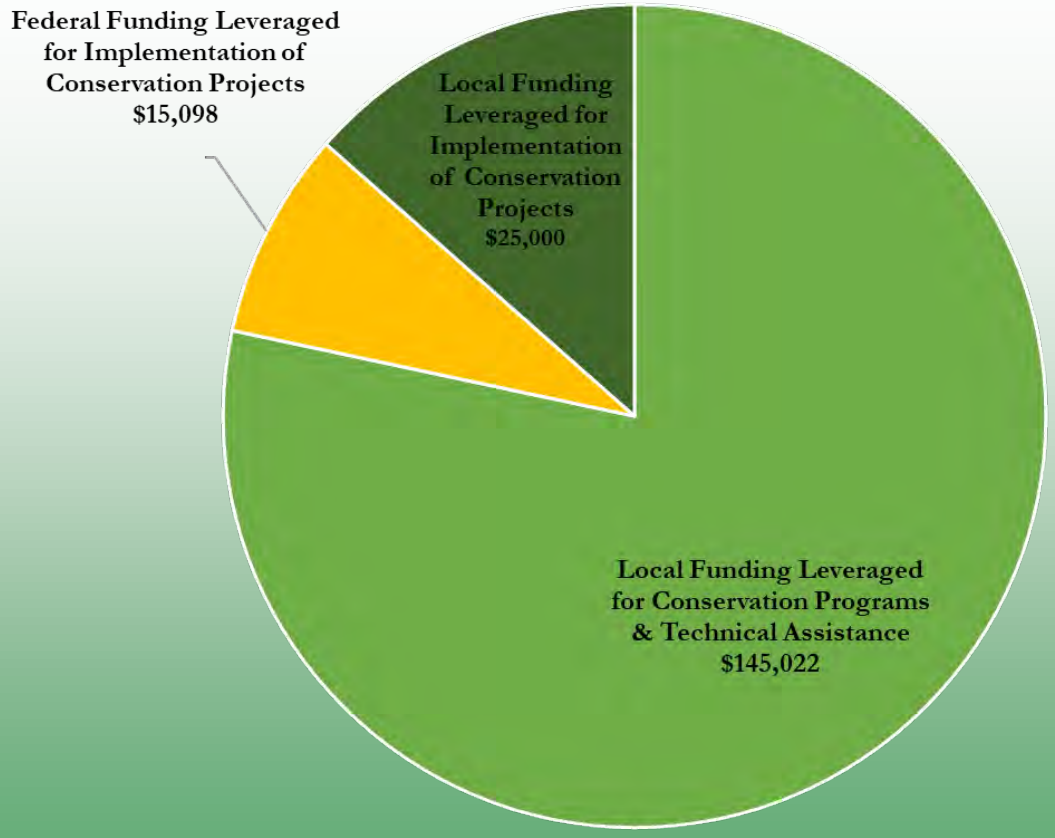
2021 Funding

Partner Investment for MCSWCD Operations



During 2021 the Monroe County Soil and Water Conservation District (MCSWCD) leveraged **$479,523** in funds for the **$50,000** investment from the County. This represents a **$9.59 return** for each dollar in County appropriation funds to complete conservation initiatives for Monroe County.

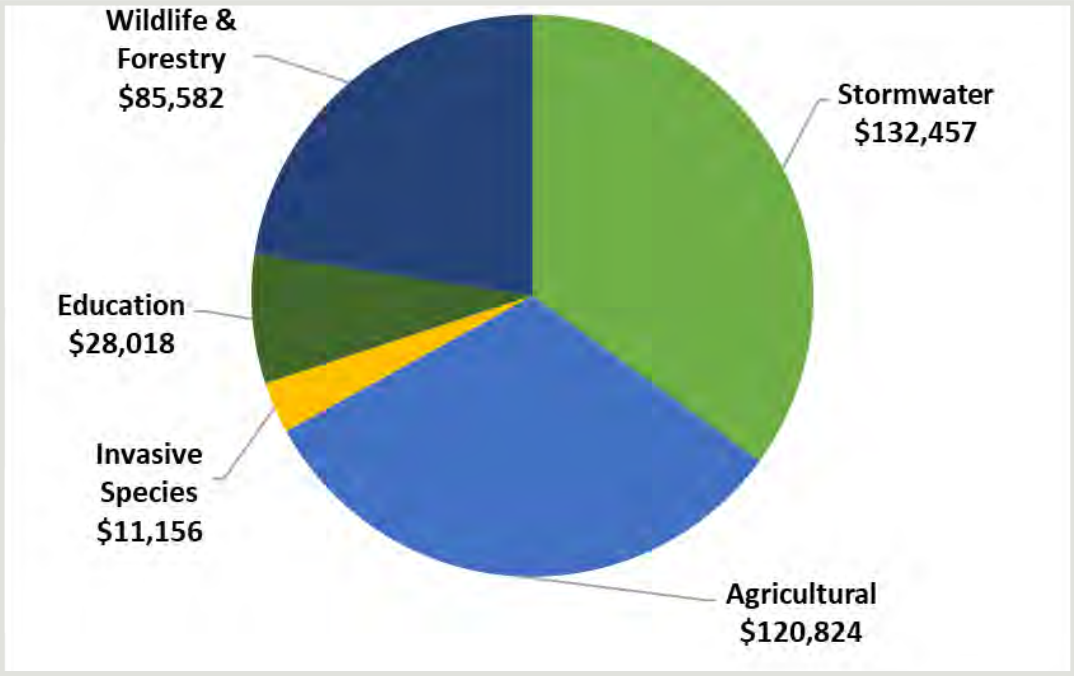
Funding Leveraged for Conservation Programs & Projects



2021 ACCOMPLISHMENTS

Stormwater management site visits	**70**	**Stormwater management trainings**	**13**
Contractors, developers, qualified inspectors, municipal officials, engineers, & landscape architects trained	**463**	**Stormwater technical assistance requests completed**	**163**
Hours dedicated to stormwater technical services	**929.5**	**Students educated on environmental topics**	**364**
Fish distributed	**3,393**	**Number of people encountered about invasive species**	**6,503**
Pounds of produce yielded through urban agriculture	**250**	**Native trees and shrubs distributed**	**20,285**
Bluebird & bat boxes distributed	**58**	**Number of residents that received native trees and shrubs**	**443**
Soil group worksheets completed	**84**	**Acres of land evaluated using soil group worksheets**	**2,143**

Value of 2021 Conservation Services Provided by Program



District Wins State Partnership Award

Monroe County SWCD was awarded the 2021 State Partnership Award by the New York Association of Conservation Districts (NYACD) in recognition of our partnership efforts with other SWCDs to implement conservation projects, enhance educational activities, and/or improve conservation efforts at all levels.

The District's role in promoting the NYS Department of Environmental Conservation's (DEC) Stormwater Program through the various Erosion & Sediment Control trainings paved the way for our reception of this award. The Erosion & Sediment Control course ensures various developers, contractors, and more are knowledgeable in managing soil disturbances on active construction sites, in addition to providing enhanced training for other SWCD staff. The income earned for SWCDs is then able to be implemented in various conservation projects protecting water quality.

Specifically, though, it was the District's role in leading the development of an online version of the Erosion & Sediment Control course allowing the continued education to those responsible for protecting our waterways during construction activities that stuck out most to the NYACD. Partnering with New York State Conservation District Employees' Association (NYS CDEA), SUNY Brockport, NYS DEC, Chemung County SWCD, Ontario County SWCD, and Seneca County SWCD to develop the online course has now led to half a million dollars being generated to NYS CDEA funding!

The District was honored to receive this award and cannot thank our own Board of Directors enough for their support in the undertaking of this challenge to continue to enhance the educational opportunities for our contractors on their construction sites and to improve the efforts of providing education and training to our fellow SWCDs throughout NYS.

Our Board Chairman, Executive Director, and Board Member at Large proudly display the District's award at the NYACD Annual Meeting and Training

Envirothon

The Envirothon is a series of events in which teams of high school students compete by answering questions about five environmental topics: Aquatics, Forestry, Soils, Current Issues, and Wildlife.

Teams also prepare a short oral presentation based off of the Current Issue topic each year. Winners at the county level advance to represent their SWCD in the State competition!

While a live, local event was unable to be held this year, Monroe County had one local team compete in a regional event: Brockport High School.

Conservation Field Days

Hosted in Ellison Park, Conservation Field Days is an opportunity for students to learn about environmental issues like invasive species, agriculture, from experts working for the Seneca Park Zoo, US Fish & Wildlife (USFWS), the NYS Department of Environmental Conservation (DEC), and more!

Conservation Field Days returned to a live, outdoor event once again this year! Due to uncooperative weather and school transportation issues, this year's event was on a much smaller scale though. The event was still a success with over **350 5th and 6th grade students** from **6 schools** coming out to Ellison Park to learn about a variety of topics including invasive species, stormwater issues, dairy farming, tree identification, and more through engaging, hands-on presentations from **14 different organizations**!

THANK YOU TO THOSE WHO VOLUNTEERED FOR THE EVENT AND A SPECIAL THANKS TO OUR SPONSORS FOR THIS EVENT: WEGMANS AND MONROE COUNTY PARKS DEPARTMENT

USFWS has students become invasive species to learn how easily they spread

Rochester Museum & Science Center lets students learn about the water cycle using an Enviroscape

Cornell Cooperative Extension hosts a station where students use their surrounding to create art

Conservation Tree & Shrub Program

20,285 trees and shrubs were distributed to over **440** landowners in 2021 throughout Monroe County to be used for various conservation purposes such as wind breaks, wildlife habitat, soil erosion control, and aesthetics.

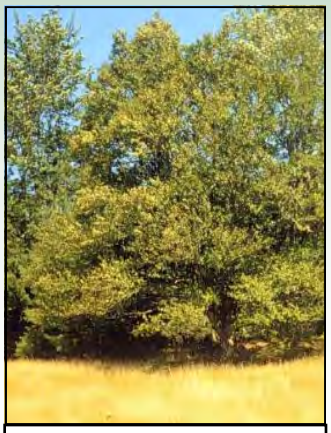
Some species that were offered in the 2021 Tree and Shrub Program included new trees such as red maple and balsam fir, along with popular returning species like Colorado blue spruce and American sycamore.

Thank you to the Monroe County ecopark for providing the space needed for our 2021 Tree & Shrub distribution.

Balsam Fir

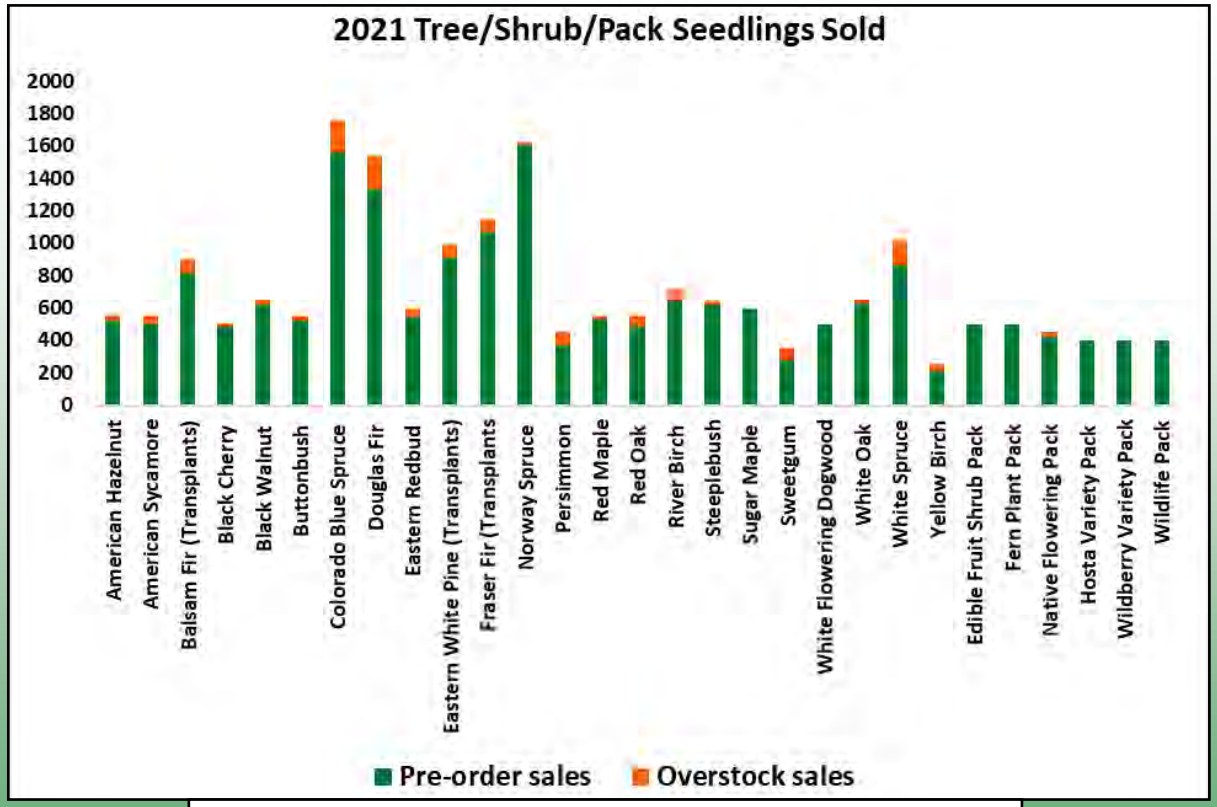
Red Maple

Steeplebush



Yellow Birch

2021 New Species Offered



MCSWCD broke a record this year with seedling orders!

Agricultural Environmental management

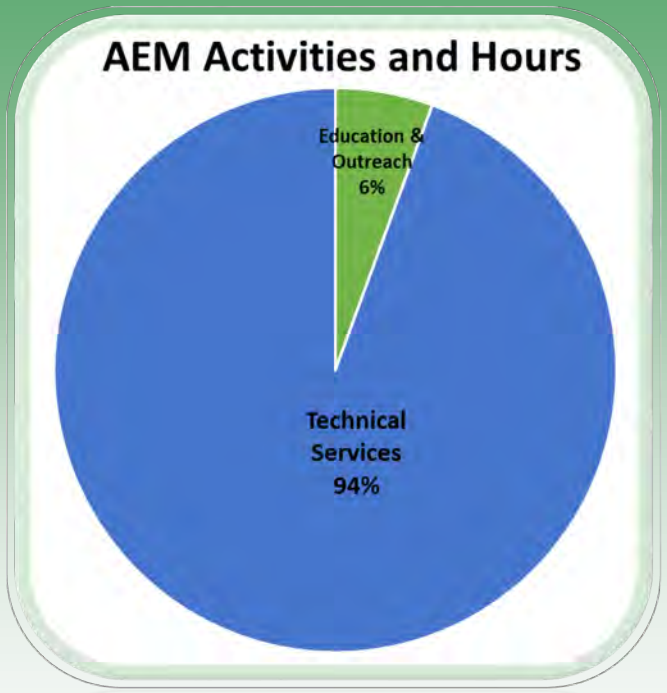
AGRICULTURAL ENVIRONMENTAL MANAGEMENT

AEM

AEM is a voluntary NYS program that provides technical assistance to farmers to identify environmental risks on their farms, identify solutions through planning, and implement those solutions through design and cost-share funding sources.

The NYS Soil & Water Conservation Committee develops the policy and administers the programming for AEM

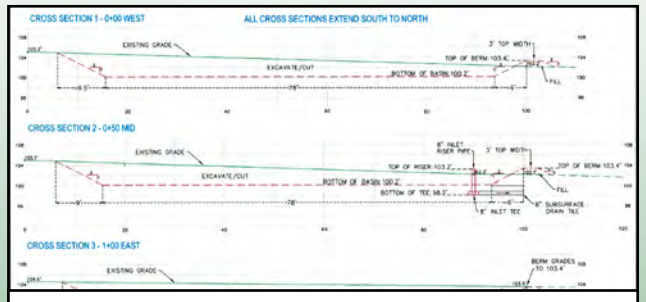
In 2021, the MCSWCD updated our **AEM 5-Year Strategic Plan** and it can be found on our website on our AEM page: https://www.monroecountyswcd.org/



MCSWCD dedicated **517.5 hours** to AEM Services in 2021 with **488.5 hours** dedicated to technical services provided to local farms and **29 hours** dedicated to education, partnership, and outreach services.

AEM planning is developed through a tiered process at the County SWCD level:

Tier 1: Inventory



Tier 3: Plan development

Tier 5: Site evaluation

Tier 2: Site visit

Tier 4: Plan implementation

Agricultural Programs

Soil Health

In 2021, **60 acres** of annual oats cover crops were planted in Monroe County as part of the AEM Cost-Share Funding, with a project cost of $4,768.80. With this planting, it is estimated that **10.0 lbs. of nitrogen, 2.5 lbs. of phosphorus and 1.9 tons of sediment per year** will be reduced. Cover crops are planted in the fall after the main crop has been harvested. The roots from cover crops prevent erosion and keep soil and its nutrients on the land—leading to higher yields of the cash crop in the long term.

Field with cover crops planted in Monroe County

Cover crops protect the soil over winter and provide numerous benefits such as recycling nitrogen in the soil, protect soil from erosion, and add organic matter!

Climate Resilient Farming

Climate resilient farming is the concept of reducing the impact of agriculture on climate change and increasing the resiliency of farms in the face of a changing climate. The basic idea of climate resilient farming is to mitigate (reducing the impact) and adapt (increaser resiliency).

In the case of our 2021 project, adaptation was the driving factor. Increased periods of drought are on the rise and expected to continue.

A 0.6 acre irrigation reservoir was implemented on a dairy farm to hold an estimated water volume of 540,000 gallons for the purpose of storing water during periods of drought that can be used to irrigate the farm's alfalfa fields on the northern and eastern portions of the farm in order to sustain the farm's forage for the 200 cows present.

Before

During

After

Prescribed Grazing Management

As a continuation of the silvopasture and prescribed grazing project completed in 2020, MCSWCD assisted with implementation of an additional part of the project: establishing living fences to act as windbreaks to protect livestock.

In total, **12 rows** of plantings consisting of **638 trees and shrubs** were established on the pasture.

Various living fences during and after installation

Windbreaks not only provide shelter from wind, snow, or other inclement weather for the animals on the farm, but also assist in reducing soil erosion from wind, enhance wildlife and pollinator habitat, improve air quality, and increase carbon storage in the biomass and soils.

Urban Agriculture: Community Garden

MCSWCD partnered with Asbury First United Methodist Church (AFUMC), located in downtown Rochester, to create a local community garden promoting sustainable urban agriculture. Funding was provided by the support of NYS Part B Conservation Project Financial Assistance. While there was limited available green space on the church campus, a perfect location was found by the church's garden team where the garden would receive plenty of sunlight, partial tree shading, and provided easy access to the water source and from the driveway/parking lot.

Garden consisted of ten 8' x 4' raised beds using the square foot gardening technique allowing each square to be managed individually. Installed in April.

Beds and pollinator garden were completely mulched by mid-May with a 2:1 mix of mushroom soil compost and topsoil.

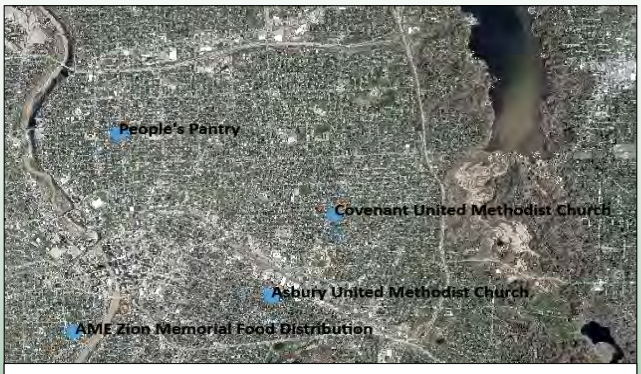
By late-May, all the crops and pollinator plants were planted in each bed and garden.

Vegetables planted and produced include tomatoes, peppers, lettuce, chard, kale, beans, eggplant, broccoli, cucumber, carrots, and squash.

Crops continued to grow well throughout the rest of summer and into the fall, with a successful crop yield of **over 200 lbs** of produce.

Promising growth was already seen in early June as AFUMC volunteers worked to maintain the garden.

MCSWCD also worked with Cornell Cooperative Extension (CCE) of Monroe County to provide educational programs to the community, along with the various garden volunteers. Produce from the garden was delivered to the Dining and Caring Center at the AFUMC, the Asbury First Grocery Bag Ministries, the African Methodist Episcopal Zion Memorial for food distribution, and the Salt Center South Wedge Food Program.



Distribution of produce around the City of Rochester

According to AFUMC, the garden brought together a community, and not just members of the church, as non-members took part in volunteering with the garden. Local youth volunteered to fill the beds with soil, while the garden team consistently had almost twenty volunteers to help with watering, weeding, and harvesting. Through the church's summer vacation Bible school, local children were educated on urban agriculture, and MCSWCD was told these children went home asking their parents if they could start their own vegetable garden.

With the successful produce yield (**over 200 lbs**) from the garden and enthusiastic base of volunteers already ready for next year's planting, MCSWCD expects this project to have continued success for years to come!

Genesee River Watershed Coalition

The Genesee River Watershed Coalition of Conservation Districts (GRWCCD) is made up of 10 Soil & Water Conservation District members from 10 different counties: Orleans, Ontario, Genesee, Monroe, Livingston, Cattaraugus, Steuben, Allegany, Wyoming, Potter, PA.

Seven member counties completed the implementation of agricultural projects under the Environmental Protection Agency (EPA) Great Lakes Restoration Initiative grant program. The project costs totaled $732,076 with 88% of the costs supported by the federal grant funding. Over the life span of the practices installed, it is estimated that **6,854 pounds of phosphorous** and **1,254 tons of sediment** have been saved from entering streams within the Genesee River Basin!

Best Management Practice	Amount Completed
Cover Crops	3,733 acres
Grassed Waterways	960 feet
Stream Exclusion	25,943 feet
Critical Area Planting	1 acre
Diversions	3,880 feet
Residue/Tillage Management	500 acres
Water & Sediment Control Basins	1,735 feet
w/ Underground Outlets	7,052.5 feet
w/ Outlet Protection	340 ft^2

Agricultural Best Management Practices installed throughout the Genesee River Basin from 2017-2021 under the **Genesee River Watershed Phosphorous & Sediment Reduction Project**

Best Management Practice	Amount Completed
Subsurface Drainage	1,440 feet
Riparian Forest Buffers	0.30 acres
Stream Crossings	800 ft^2
Streambank Stabilization	100 feet
Access Roads	475 feet
Livestock Pipeline	1,600 feet
w/ Pumping Plant	1 unit

Genesee River Watershed Coalition

Under the Great Lakes Commission grant, **Genesee River Watershed Streambank Erosion Remediation Project,** Genesee, Allegany, and Monroe County District's continue to move projects forward. Genesee County completed a 6.5 acre Riparian Forest Buffer with $22,000 in funding and it is estimated that it will save **6.3 tons of sediment**, **52.4 pounds of phosphorous, and 206 pounds of nitrogen** over a 15-year life span.

Did you know?

Irondequoit Bay was created when the Genesee River was rerouted to its current course over 12,000 years ago allowing for what is now the bay to become flooded in by Lake Ontario!

https://www.glc.org/work/sediment

The Genesee River Watershed Coalition of Conservation Districts continued to input project data into the **Agricultural Best Management Practices (BMPs) Web Application** that was built by Bergmann and funded under a contract with the NYS Department of Agriculture & Markets to help track, manage and report on the AEM Agricultural BMPs for farms within the Genesee River Basin. Practices installed from 2010 and on were captured into this custom database for those farms that participate in the AEM Program. Of the farms that participate with the Soil & Water Conservation District's, data was summarized and captured below through 2021.

Total # of BMPs – 837

Total owned farmland – 209,762 acres

Total rented farmland – 118,549 acres

BERGMANN ARCHITECTS ENGINEERS PLANNERS

GENESEE RIVER WATERSHED COALITION OF CONSERVATION DISTRICTS

NEW YORK STATE OF OPPORTUNITY. Agriculture and Markets

Genesee River Watershed Coalition

THE GENESEE RIVER INTERSEEDING PROGRAM

GENESEE RIVER WATERSHED
COALITION OF CONSERVATION DISTRICTS

The GRWCCD purchased a no-till drill attachment for one of the machines

RENTAL RATES

Interseeders and No-Till Drill:
$15/acre

- Farmers within the Genesee River Watershed will be given priority
- Transport of the machine will be the responsibility of the farmer
- Farms must provide proof of insurance
- Seed mixes not included

The interseeder is designed to plant three rows of cover crop in each corn row at the V7 or earlier stage. Interseeding cover crops in standing row crops, or relay planting, makes it possible to develop a soil cover year-round and can help farmers save time and money. When the corn is harvested, cover cropsburst to life, maturing faster than with any other planting method. Your local Soil and Water Conservation District staff can help you select the right covercrop seed mix for your farm. The interseeder is an environmentally responsible way to improve crop yields while reducing soil erosion and runoff.

Benefits of relay cover cropping include supplying nutrients to row crops, suppressing weeds, providing supplemental forage, and promoting healthy soils. In the fall, the machine can be converted into a no-till drill for winter cover crop planting. Work with your Soil and Water Conservation District staff to reserve a machine for the next planting season.

INTERSEEDER DETAILS

- 6-Row Capacity
- Weight: 4,500 lb
- Width: 16.5 feet
- Required Tow Capacity: 6,000 lb
- Required Horsepower: 110-130 hp
- Custom Built by InterSeeder Technologies
- Two Units Available for Rent

No-till drills disturb as little soil as possible! Growers plant right into the previous year's residue, cutting through the organic matter on the soil surface retaining the surface residue organic matter, reduces soil erosion and increases water infiltration, while increasing soil health and reducing carbon emissions.

⇒ **In 2021, over 1,000 acres of farmland have been seeded across 15 farms using the no-till drill**

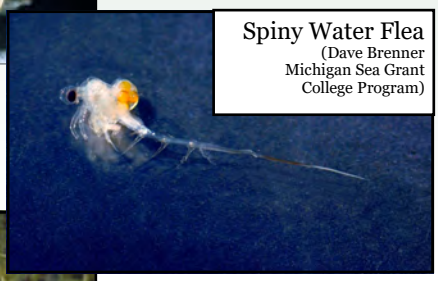
⇒ **Penn State has partnered with the GRWCCD to implement trials in 2021 on two farms to collect data to investigate the benefits and drawbacks of intereseeding in Western NY and Northern PA**

Aquatic Invasive Species Prevention

MCSWCD partnered with Monroe County Department of Environmental Services (DES) for the fourth year to provide a Watercraft Steward Program at the Port of Rochester on Lake Ontario, and the Ayrault Road launch on the Erie Canal.

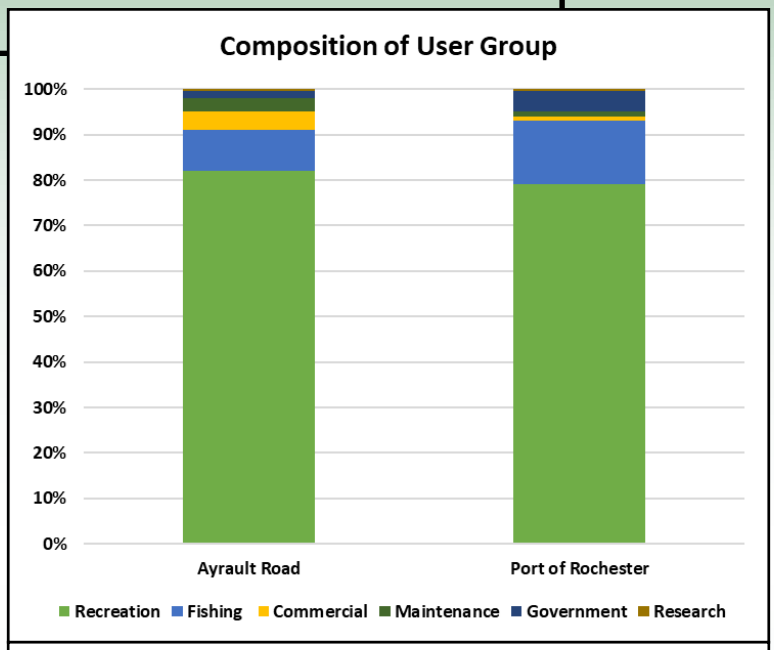
These boat stewards act as the frontline of aquatic invasive species detection and education, directly working with the public. Monroe County partnered with the Finger Lakes Institute to hire two stewards who were able to inspect **3,714** boats at the launches and educate **6,497** people during the course of the season. Some invasive species found were various water fleas, Eurasian watermilfoil, zebra mussel, curly leaf pondweed and variable milfoil.

Zebra Mussles
(Randy Westbrooks, Bugwood.org)

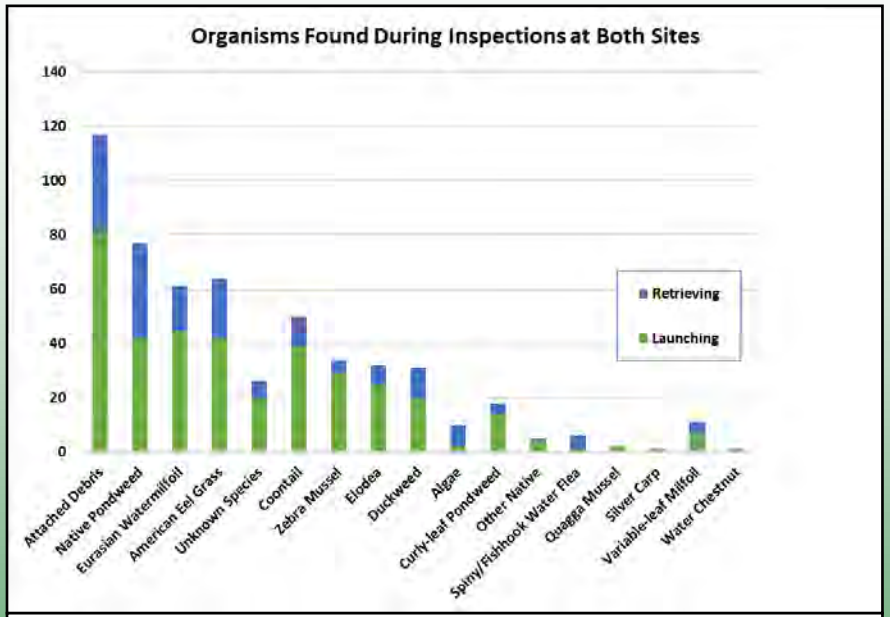


Spiny Water Flea
(Dave Brenner
Michigan Sea Grant
College Program)

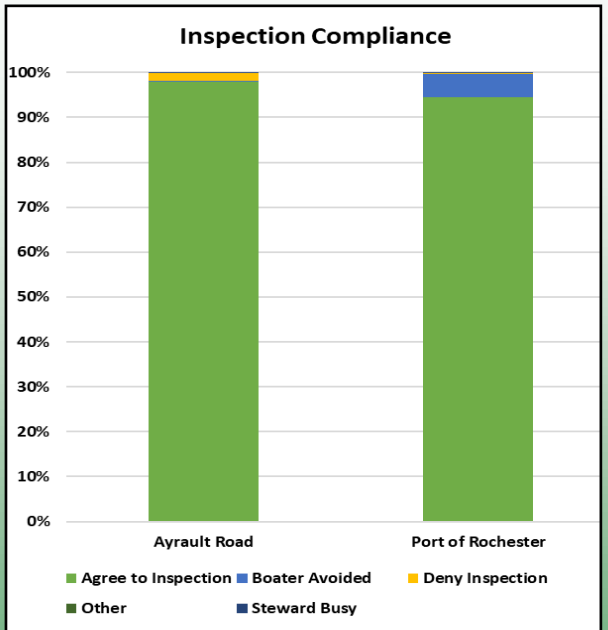
Eurasian Watermilfoil
(Alison Fox, Bugwood.org)



Watercraft user groups, most watercrafts were being used for recreation and fishing.

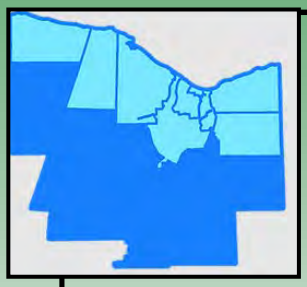


Most common species found by stewards in 2021 inspections. Although many of these invasive species are well established in our region, this coverage plays an important role in stopping their spread to unaffected areas.



Proportions of boaters agreeing to an inspection of their watercraft. Over 95% of boaters agreed to an inspection!

Community Resiliency Planning



Executive Director Kelly Emerick is a member of the Steering Committee for the Coastal Lakeshore Economy & Resiliency (CLEAR) Initiative for Monroe County (https://www.monroecountyclear.com/) to represent the interests and priorities of the County in developing a strategic plan for coastal lakeshore resiliency along Lake Ontario. The plan incorporates current and future extreme water levels, and provides guidance to communities for resilient options to rebuild and adapt in the face of a changing climate. The Steering Committee met monthly to provide outreach and participation in community engagement events. The final plan created included regional strategies and recommendations for local actions such as updated zoning, installation of Green Infrastructure, and more sustainable water dependent businesses.

Stormwater Management Training

The MCSWCD hosted **11 stormwater related trainings and workshops** in 2021.

The MCSWCD held **6 sessions** of the 4 Hour Erosion & Sediment Control Training, and **5** Stormwater Management Training Series courses.

A total of **463 people**, such as engineers, municipal officials, landowners and contractors received necessary training to improve planning, design, and construction practices to protect water quality now and into the future.

STORMWATER COALITION
OF MONROE COUNTY EST 2000

MCSWCD tech inspects a silt fence on a construction site

A SWPPP mailbox on site at a construction project in Greece

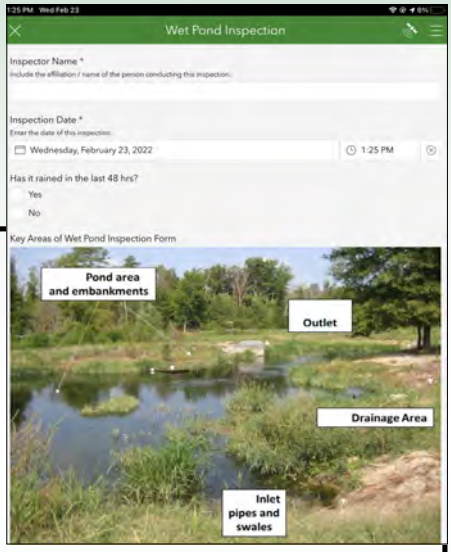
Town of Webster Stormwater Infrastructure Inspection Training

Stormwater Pond Inspections & Education

MCSWCD responded to **27 pond-related requests** in 2021! These include landowner pond consultation and stormwater pond inspections. Inspection requests can be triggered by issues such as nuisance wildlife populations or excessive plant growth.

A stormwater pond is excavated and depths are re-established due to excessive vegetative

Stormwater ponds are designed to capture and treat stormwater (although they are often mistaken for recreation). As water runs over impervious surfaces during storms it picks up pollutants. This water is diverted to a stormwater pond before it reaches a stream so these pollutants can settle into the pond or taken up by plants. These ponds also help reduce local flooding during storms.



STORMWATER COALITION OF MONROE COUNTY EST 2000

In conjunction with Monroe County Department of Environmental Services (DES), a new post-construction inspection mapper application was implemented to collect and store pond inspections all over Monroe County. This application allows various professionals inspecting a pond to create inspection reports right in the field, where they are then automatically collected and stored for others to see. This new way of inspecting ponds is pioneering a way to allow various stormwater professionals of Monroe County to see all updated inspections of ponds around the county. As seen in screenshots to the right, the mapper gives various categories and options to look at when inspecting including drainage outlets, vegetation, bank erosion, and more. Pictures are shown as references, and once the inspection is complete the report is saved and automatically collected right there in the field!

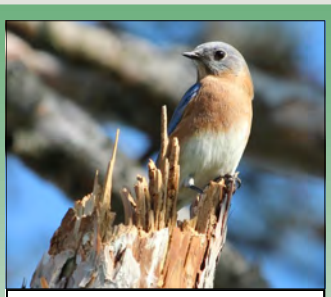
As part of MCSWCD's partnership with the Stormwater Coalition of Monroe County, we designed and manufactured signs detailing the purpose, uses, management, do's and don'ts, and more of stormater ponds. These signs were installed around Monroe County to educate the public on the importance of stormwater ponds and their purpose of protecting our waterways. The signs were distributed to our local municipalities as outreach to install in areas with residents living next to stormwater ponds. Various practices are illustrated on the sign including no recreation, no dumping, no feeding waterfowl, and more. Check out the sign to the left that was installed throughout the county!

Wildlife Houses

Purchasing a wildlife house for your backyard is an easy way to help conservation!

In 2021, **58 bluebird and bat houses** were distributed to the residents of Monroe County. These wildlife houses are available from the MCSWCD year round and provide shelter for our backyard friends! Purchasing a bluebird house helps the state bird of New York in the cold winter months, and gives it a home that invasive birds cannot access.

All bat populations in New York State are threatened due to White Nose Syndrome —a fungus originally from Europe. Bat boxes can help local bat populations recover, which means that they can get back to eating insects. Having a bat or bird house in your yard can help these creatures find a safe place to live!



Eastern Bluebird
(*Sialia sialis*)

A bat box

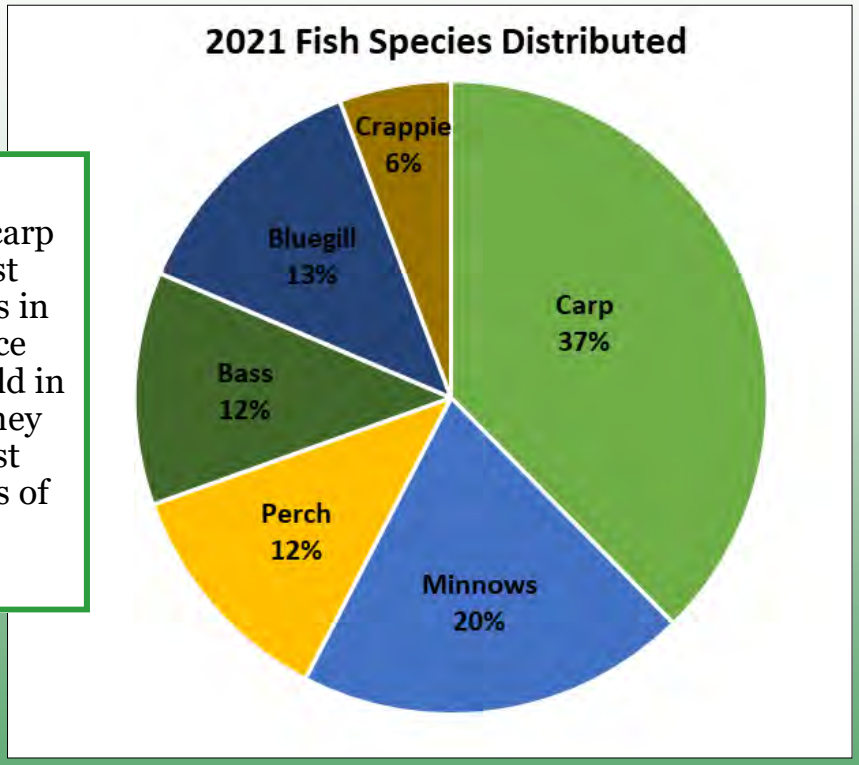
Bats control mosquito populations!

Fish Stocking Program

The MCSWCD holds 2 Fish Stocking Programs each year giving landowners the chance to purchase native fish species including largemouth bass, catfish and, for those who have the proper permitting, Triploid Grass Carp. Landowners often purchase fish to stock their backyard ponds for fishing to control aquatic plants.

In 2021, **3,393 fish fingerlings** were distributed to **18 landowners**. Of those fish, **79** were Triploid Grass Carp.

Triploid grass carp were the most ordered species in 2021, but since minnows are sold in groups of 75 they were our most popular species of 2021



Staff & Board Members

Staff 2021

Kelly Emerick
Executive Director

Kristin White
Principal Office Account Clerk

James Sroka
Soil & Water Resource Technician

Jacob Kearney
Conservation Intern

Board of Directors 2021

Rollin Pickering
Chairman & New York Grange Representative

Chuck Colby
Treasurer & Member at Large

Maureen Leupold
Assistant Treasurer

Steve Brew
Legislative Representative

Jackie Smith
Legislative Representative

Marc Krieger
Farm Bureau Representative

The Monroe County SWCD was created in **1953** by the Monroe County Board of Supervisors under New York State Soil & Water Conservation District Law.

MCSWD staff receive training at the annual Conservation Skills Workshop in Cortland, NY

Monroe County Soil & Water Conservation District

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Rochester, NY 14624
Phone: (585) 753-7380
Email: mcswcd@monroecounty.gov
www.monroecountyswcd.org

Find us on Facebook at: **www.facebook.com/MonroeCountySWCD**
Find us on Instagram at: **www.instagram.com/monroecoswcd_ny**

Cover Photo: Asbury First United Methodist Church Community Garden

Programs and services offered through the MCSWCD are made possible through the financial support of the County of Monroe, State of NY, specialized grant opportunities, and fundraising programs. All SWCD programs and services are offered on a nondiscriminatory basis without regard to race, color, national origin, political beliefs, religion, sex, age, marital status, sexual orientation, or disability.