



Monroe County Soil & Water Conservation District

2019 Annual Report

Inside:

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- Agricultural Environmental Management
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- Stormwater Programs & Projects
- And More.....!

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About Us

Our mission is to provide technical support to the people, government, and businesses of Monroe County to preserve the health of our soil and water for generations to come.

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

Staff 2019

Kelly Emerick
Executive Director

Teresa VanEpps
Principal Office Account Clerk

Jeremy Paris
Soil & Water Planning Technician

Josh LaFountain
Soil & Water Resource Technician

Amanda Little
Soil & Water Resource Technician

Matthew Gallo
Conservation Program Specialist

Stephanie Castle
Watershed Agricultural Coordinator

Board of Directors 2019

Rollin Pickering
Chairman & New York Grange Representative

Mark Greene
Vice-Chairman & Practical Farmer Representative

Steve Brew
Legislative Representative

Joshua Bauroth
Treasurer & Legislative Representative

Chuck Colby
Member at Large & Assistant Treasurer

Marc Krieger
Farm Bureau Representative

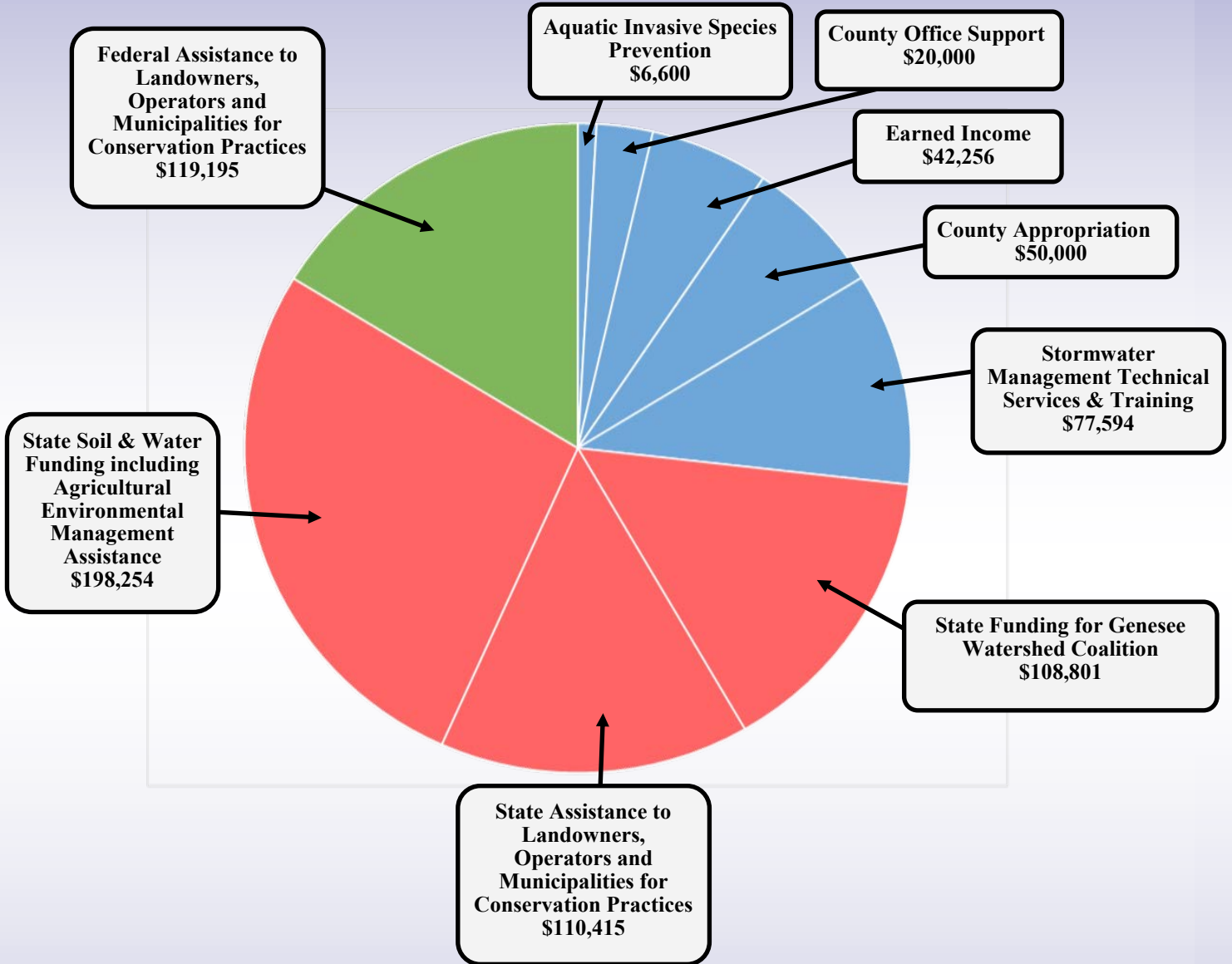
Maureen Leupold
Member at Large



Find us on Facebook at:
[www.facebook.com/
MonroeCountySWCD](http://www.facebook.com/MonroeCountySWCD)

2019 Funding

During 2019 the Monroe County Soil and Water Conservation District (MCSWCD) leveraged **\$733,115** in funds for the **\$50,000** investment from the County. This represents a **\$14.66 return** for each dollar in County appropriation funds to complete conservation initiatives for Monroe County.



In 2019, the MCSWCD responded to **241** requests for water quality technical assistance and **263** requests for land use management. Our technical assistance helps protect local water quality, improve soil health, and preserve wildlife for the landowners, farmers, and people of Monroe County. The Soil & Water District also provides environmental educational events where students across all ages can learn about conservation issues from environmental experts in the field!

We've been hard at work since **1953** assisting with conservation efforts across Monroe County and will continue to preserve our natural resources for years to come.

2019 ACCOMPLISHMENTS

Stormwater management site visits	177	Value of agricultural services provided	\$228,750
Contractors, developers, qualified inspectors, municipal officials, engineers, & landscape architects trained	491	Number of construction site inspections for erosion & sediment control	133
Stormwater management trainings	10	Pounds of agricultural plastic recycled	3,967
Acres of cover crops planted	345	Number of people encountered about invasive species	4,913
Value of stormwater services provided	\$302,665	Native trees and shrubs distributed	17,432
Bluebird & bat boxes distributed	31	Number of residents that received native trees and shrubs	314
Soil group worksheets completed	242	Fish distributed	2,441
Acres of land evaluated using soil group worksheets	9,485	Number of area schools participating in educational events	17
Students educated on environmental topics	1,238	Trees planted	7,336

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!



Monroe County
Parks

Thank you to
the
County Parks
Department for
use of beautiful
Ellison Park!



Board of Directors Member Maureen Leopold judges the oral presentation of a group of students

80 students from **5 schools** participated in Monroe County's Envirothon! This environmental education event at Monroe County's Ellison Park gives high school students the opportunity to spend the day outside competing in teams to test their knowledge on 5 topics: soils, aquatics, forestry, wildlife and current issues. The 2019 current issues topic was Agriculture and the Environment.

Brighton High School Team 1, came in first place at our event and placed 19th out of 46 in the New York State Envirothon competition!



Thank you to our 2019 Sponsors,
Instructors and Volunteers:

Brittney Brun, Claire Hartl, Garrett Koplun, Karl Korfmacher, Maureen Leopold, Ron Schroder and Kaeti Stoss!



Conservation Field Days

Drawing over **1,100 5th and 6th grade students** across **12 schools** in Monroe County, our 2019 Conservation Field Days was another resounding success!

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, the NYS Department of Environmental Conservation, and more!

THANK YOU TO ALL OF THOSE WHO VOLUNTEERED FOR THIS WONDERFUL EVENT!



Raptor Demonstration from the Braddock Bay Bird Observatory



Thank you Wegmans & Monroe County Parks Department for supporting our program!



Monroe County Parks



Students learn where the water goes in a watershed talk from the RMSC



Students learn about local ecology from Cornell Cooperative Extension of Monroe County



Corky Kelsey & Andy Fraser from Monroe County Department of Environmental Services teaches kids about wastewater treatment

Celebrate Agriculture Dinner

Each year in partnership with the Monroe County Farm Bureau and Cornell Cooperative Extension, the MCSWCD hosts the “Celebrate Agriculture” dinner, a farm-to-table event with all food coming from local farms!

This dinner is a great opportunity for district employees, farmers, and legislators to meet and mingle, and for farmers to show off their harvests. Proceeds generated from the dinner go to fund the Farm Bureau Scholarship Fund that helps high school seniors continue their education in agriculture. Thank you to all of our dedicated sponsors that make this event possible!



Above: Guests partaking in the dinner

Thank you to Monroe County Parks Department for the use of the Club House at Durand Eastman Park to host this event!



Monroe County
Parks

Below: District staff enjoying the dinner together!



EDUCATION

Conservationist of the Year



Maureen Leupold & husband Steve with the 2018 COTY Award

Our 2018 Conservationist of the Year (COTY) is none other than Maureen Leupold. She spent 25 years as a science teacher and biology professor, earning the NYS Chancellors award twice for distinction in teaching, eventually retiring as the Director of Science at Genesee Community College.

A member at-large of our board, Maureen has donated countless hours to our environmental education programs—specifically as a judge at Envirothon and an instructor at Conservation Field Days.

She and her husband Steve have also been instrumental in our Tree and Shrub program, helping pack thousands of trees for the sale.

CONGRATULATIONS MAUREEN!

In recognition of your dedication to the Monroe County Soil & Water Conservation District's programs; your remarkable effort in promoting natural resources conservation locally; and your outstanding accomplishments in conservation & preservation of soil & water resources.

FORESTRY

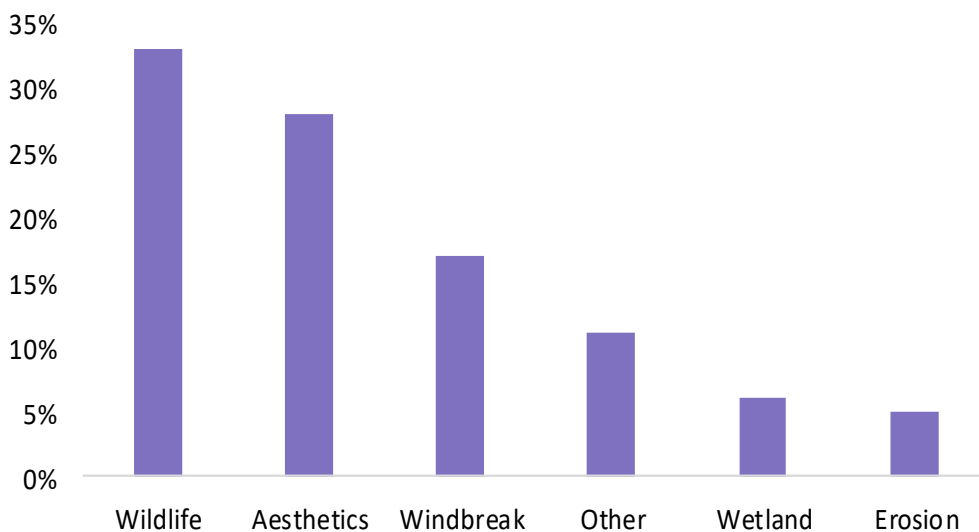
Conservation Tree & Shrub Program

17,432 trees and shrubs were distributed to over **314** landowners in 2019 throughout Monroe County to be used for various conservation purposes (pictured in the pie graph below).

Some species that were offered in the 2019 Tree and Shrub Program included new trees such as tulip tree, hazelnut, and more. Board member Maureen Leupold and her husband Steve, as well as Cornell Master Gardeners assisted with the packaging of trees for distribution at the Monroe County ecopark.



2019 Conservation Uses for Trees & Shrubs



River Birch, a popular tree amongst landowners

Genesee River Watershed Coalition

GENESEE RIVER WATERSHED
COALITION OF CONSERVATION DISTRICTS



Did you know?

The Genesee River watershed covers over 2,500 square miles!

The Genesee River Watershed Coalition of Conservation Districts (GRWCCD) completed its second full year with a full-time coordinator. Meetings were held in February, May, August and December. During 2019, the coordinator worked to move forward GRWCCD priorities.

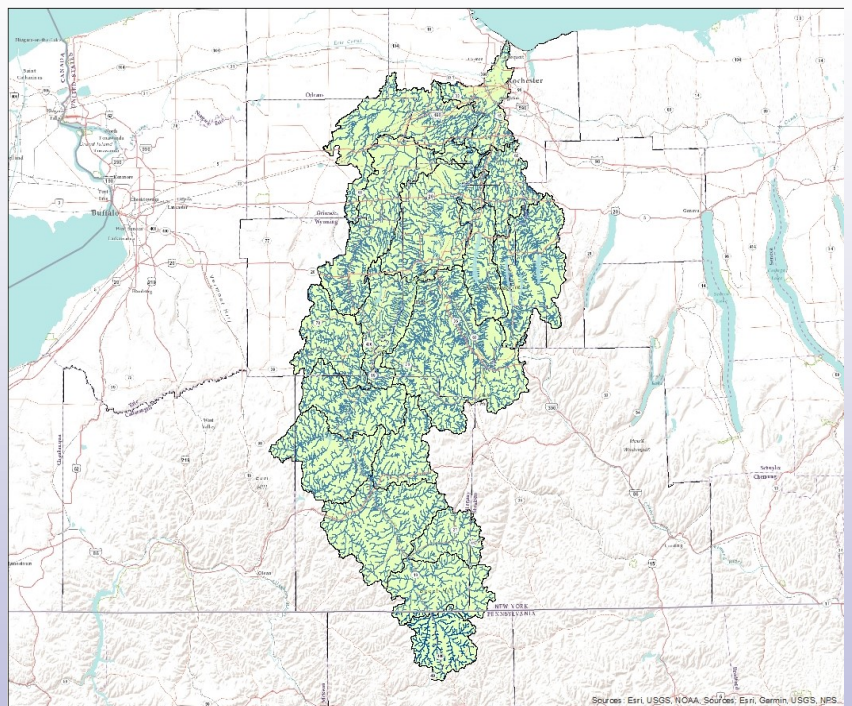
The interseeder rental program generated more interest in 2019 where nearly 100 acres were planted in Allegany County using the no-till drill, and 12 acres of corn were interseeded to demonstrate the equipment for watershed farmers during a field day held in late August in Livingston County.

The Agricultural Best Management Practice (Ag BMP) Database was launched in May 2019. Three interns located at Genesee County, Allegany County and Wyoming County successfully entered Agricultural Environmental Management (AEM) information from 2010-2019 into the database over the summer. Ag BMP data in the Genesee River watershed will be summarized in a 2020 report, showing all Ag BMP's that have been implemented by Conservation Districts over the past 9 years across the watershed. The Coalition is working to incorporate a model into the database to quantify the impacts of agricultural conservation in the watershed, and show the great work that farmers and Conservation Districts are implementing throughout the entire Genesee River Basin.

Genesee County SWCD, on behalf of the GRWCCD, continues to administer the Environmental Protection Agency (EPA) Great Lakes Restoration Initiative (GLRI) grant awarded in September 2017 to seven Conservation Districts in the amount of \$749,240, where approximately 65% of agricultural conservation BMP's have been put on the ground.

2019 Funding & Partnerships

- The GRWCCD successfully acquired a \$200,000 Great Lakes Commission (GLC) grant to complete streambank stabilization projects in the Genesee River watershed in Allegany, Genesee and Monroe Counties.
- The GRWCCD is also a partner on a recently funded \$951,328 GLRI grant awarded to American Farmland Trust to build a farmer-to-farmer nutrient reduction efforts throughout the Genesee River watershed.



AGRICULTURAL ENVIRONMENTAL MANAGEMENT



\$228,750 in
Agricultural Services
were provided by the MCSWCD
in 2019!

Monroe County has some of the largest pumpkin farms in NYS!

Farms in the AEM program progress through a series of Tiers as follows:

2019 AEM Accomplishments	
Tier 1 - Inventory current activities, future plans, and potential environmental concerns	5 survey worksheets completed
Tier 2 - Document current land stewardship; assess and prioritize areas of concern	3 new farm assessments completed
Tier 3A - Develop conservation plans addressing environmental resource concerns while helping to reach farm goals	3 farm plans completed
Tier 4 - Implement plans utilizing available financial, educational, and technical assistance	2 farm best management projects implemented
Tier 5A, 5B - Evaluate to ensure the protection of the environment and farm viability	1 farm plan information update completed
	1 farm conservation plan update completed

For almost 70 years, the Monroe County Soil & Water Conservation District has been providing technical assistance to the farms of Monroe County. The technical expertise of the MCSWCD combined with its access to funding opportunities gives local farmers the chance to take on soil health, erosion control, and best management practice projects that they would not have the funds to implement.

The primary tool used to help farmers get projects on the ground is AEM. Hundreds of Monroe County farmers have taken part in the AEM program.

MCSWCD completed **242** soil group worksheets in 2019 totaling **9,485 acres** of land evaluated. Soil group worksheets are used to apply for tax exemptions for land used for agricultural purposes.



A pumpkin field in Monroe County

Great Lake Restoration Initiative Project

Approximately 5,400 feet of fencing was installed for 18 acres of pasture for rotational grazing on a Monroe County beef farm. This effort and practice will ensure the farm has adequate forage for the animals during any type of weather situation, especially during time of extreme drought and extreme wetness. The fencing will also provide exclusion of the livestock to the ditches and the stream on the property, which flows into Black Creek, a high priority waterbody within Monroe County. With the farm's rotational grazing system and the installed fence practice, it is estimated that **9.8 lbs. of nitrogen, 1.5 lbs. of phosphorus and 0.75 tons of sediment per year** will be reduced to these sensitive areas, improving water quality in the Black Creek watershed.

Below: Before the fencing was put in place, livestock had unrestricted stream access
Right: With new fencing put in place, livestock waste will now be excluded from entering the stream on the farm



Agricultural Plastics Recycling

The Monroe County Soil & Water Conservation District assisted **7 Monroe County farms** participating in the USAg Plastic Recycling Program. Nearly **3,967 pounds** of agricultural plastic were recycled in 2019.

Plastic waste is a growing concern, and USAg works with the farming community to recycle plastics used in agriculture. These products are collected by USAg and either reused or recycled into new products. This program gives farmers the chance to recycle the many plastics that are used on the farm.

By recycling agricultural plastic, we help save space in landfills, reduce the use of fossil fuels and save water!



A truck filled with plastic to be recycled



AGRICULTURAL PROGRAMS

Soil Health

Soil health is a growing environmental concern because it has the potential to impact a wide variety of environmental issues from water quality to climate change. The MCSWCD is working at the forefront to protect soil health for the future.

In 2019, **345 acres** of cover crops were planted in Monroe County. 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.

Three soil health projects were completed in 2019 across three farms. There were two cover cropping projects—one in the Genesee River Watershed and one in the Irondequoit Creek Watershed. Radishes, rye, and clover were planted at these sites.

Alfalfa and oats were planted in a forage and biomass planting in the Black Creek Watershed, an impaired tributary of the Genesee River. This project will provide a sustainable feed for livestock, and will not only help improve the health of the soil at the site, but also play a role in carbon capture—the process by which plants take in CO₂ and it becomes sequestered in the soil long term.



Above: Erosion on a bare corn field in winter

Right: Radishes planted as a cover crop

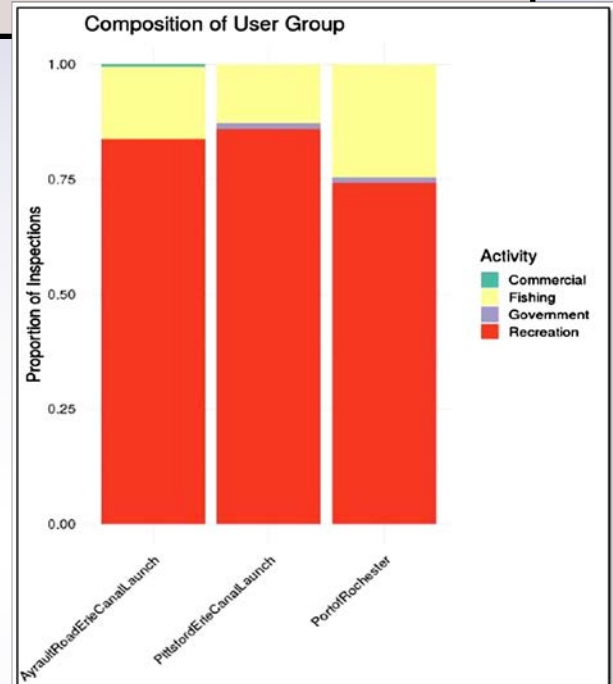
Aquatic Invasive Species Prevention

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

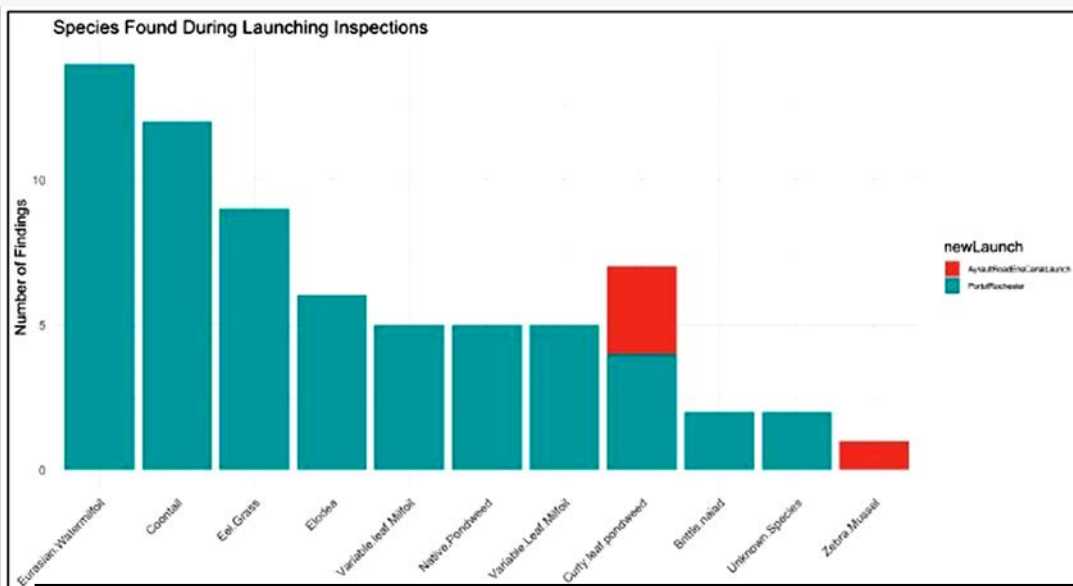
These boat stewards act as the frontline of invasive species detection and education, directly working with the public. Monroe County partnered with the Finger Lakes Institute to hire three stewards who were able to inspect **2,730** boats at launches and educate **4,913** people during the course of the season. Some invasive species found were spiny waterflea, Eurasian watermilfoil, zebra mussel, curly leaf pondweed and variable milfoil.



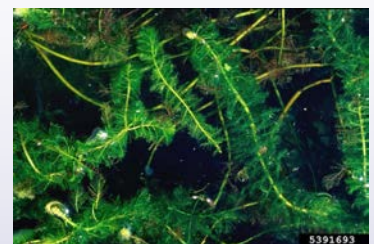
Zebra Mussels washed up on a beach (The Nature Conservancy)



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



This graph shows the most common species found in inspections at the Port of Rochester (teal) and the Erie Canal (red) launches. 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.



Eurasian Watermilfoil (Barry Rice, Bugwood.org)



Curly Leaf Pondweed (Chris Evans, University of Illinois, Bugwood.org)

INVASIVE SPECIES

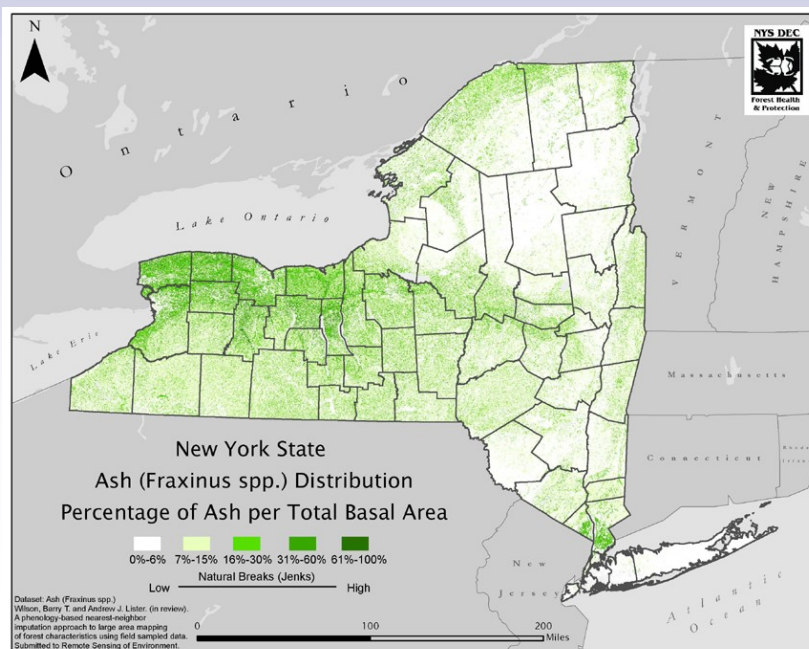
Emerald Ash Borer Mitigation

Emerald Ash Borer (*Agrilus plannipennis* or EAB) is an invasive beetle originally native to eastern Asia, and introduced to the United States in 2002. Since then, the beetle has spread throughout the eastern US, responsible for killing tens of millions of native ash trees. Specifically, the beetle lays its eggs inside the bark of the tree, and the larvae eat the tree from the inside out. With no resistance to this new pest, native ash trees have declined significantly across the entirety of their ranges.



UGA1241011

Emerald Ash Borer Size, Howard Russell, Michigan State University, Bugwood.org



Ash Tree Distribution in New York State, the darker colors represent greater distribution



5471771

Ash bark peels after extensive damage

Monroe County is home to some of the highest density of ash trees in the state, meaning loss of ash trees here has had a disproportionate impact on our parks, our forests, and along our waterways. Ash frequently grows along streams, swamps, and lakes, and is key to reducing nutrient runoff and sediment erosion – both of which are known to contribute to harmful algal blooms and water quality decline.

In 2019, the MCSWCD continued its Supplemental Tree Planting for Emerald Ash Borer Mitigation that began in 2018, planting **7,336 trees** in 5 public parks in Monroe County. Funding for this project is through the U.S. Forest Service under the Great Lakes Restoration Initiative Program.

Stormwater Management Training

Requests for Technical Assistance in 2019 including:

- Construction inspection assistance for erosion & sediment control
- State Pollution Discharge Elimination (SPDES) Permit assistance
- Stormwater Pollution Prevention Plan education and review
- Municipal Separate Stormwater Sewer Systems (MS4) audit assistance
- Construction site and drainage complaints
- Streambank erosion assistance
- Stormwater pond assistance for weed & algae control

In 2019, the District provided **\$302,665** and **101** technical assistance requests by coalition members for stormwater services to landowners and municipalities!



The MCSWCD hosted **10 stormwater related trainings and workshops** in 2019.

The MCSWCD held 6 sessions of the 4 Hour Erosion/Sediment Control Training Sessions, and 4 WNY Stormwater Management Training Series courses.

A total of **491 people**, such as engineers, municipal officials, landowners and contractors received necessary stormwater



An example of a well designed stormwater pond with proper design and function.

STORMWATER MANAGEMENT

Construction

The MCSWCD conducted a total of **133 Erosion & Sediment Control Construction Inspections** in 2019.

Construction practices are a significant contributor to soil erosion and require sediment and erosion controls. The MCSWCD inspects construction sites to ensure that these practices are installed and operating correctly. Successfully installed erosion control practices are instrumental to protecting our local water quality.



A poorly installed inlet protection;, anything flowing on the construction site will be washed into our rivers and streams



A stormwater pond with a proper aquatic bench with vegetation that provides treatment for nutrients

Stormwater Pond Inspections

14 stormwater pond inspection requests were completed by the MCSWCD in 2019. Inspection requests can be triggered by issues such as nuisance wildlife populations or excessive plant growth.

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 used by plants. These ponds also help reduce local flooding in storms.



Stormwater pond under construction

STORMWATER MANAGEMENT

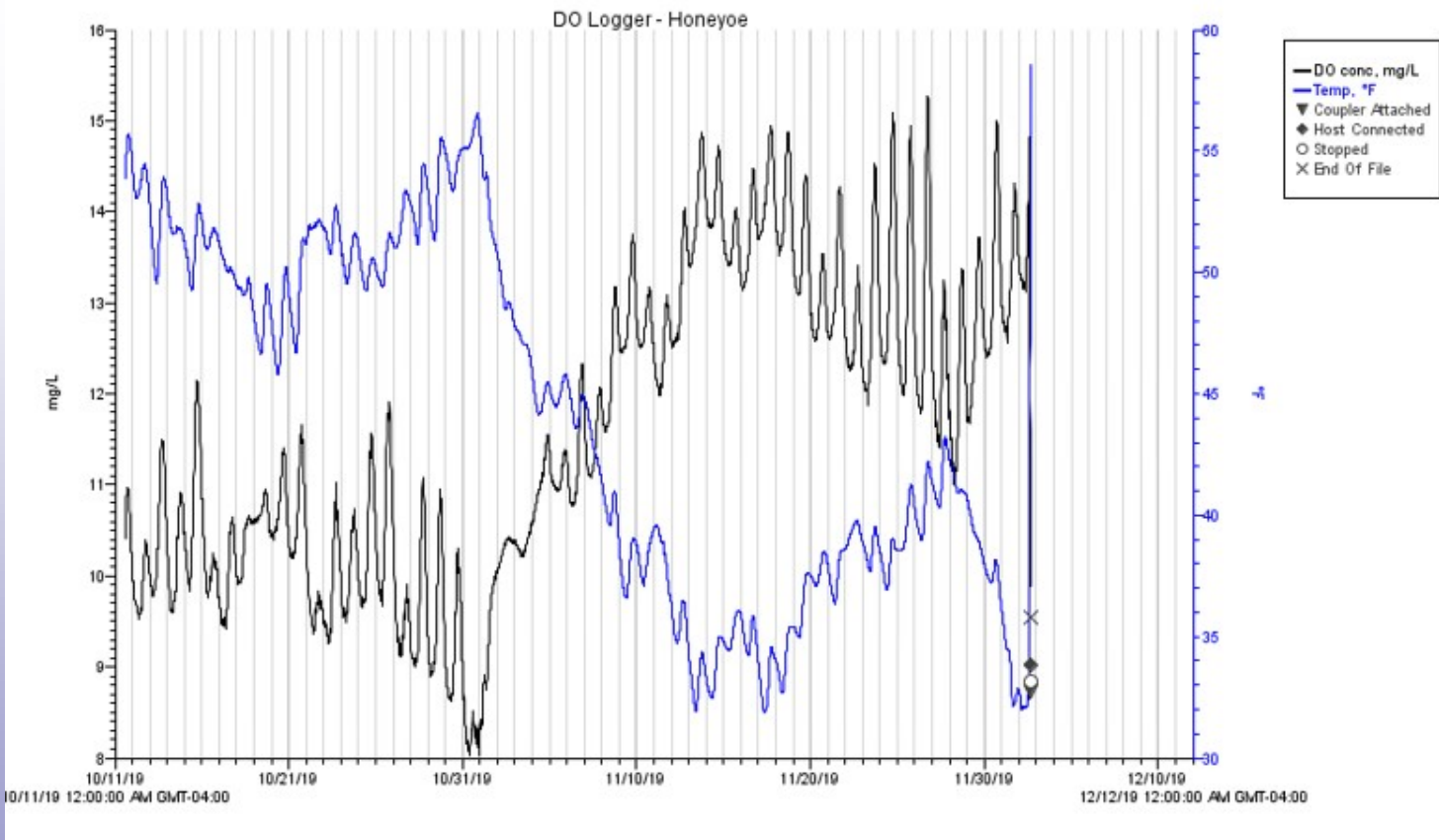
Local Water Quality Monitoring

The main goal of this project was to fill data gaps in Monroe County's water quality monitoring program. **Two (2) new monitoring sites** were added to the County's baseline monitoring program. The loggers measured Dissolved Oxygen (mg/L), water level (m) and temperature (C) at **Honeoye Creek** and Dissolved Oxygen (mg/L), water level (m), Conductivity (S/m), and temperature (C) at our **Salmon Creek** location.

Honeoye Creek watershed was chosen due its previous status as a priority watershed due to its high level of agricultural activity. Salmon Creek was chosen because of previous studies that have been conducted by the County. Approximately 5,000 readings were retrieved from each logger at each location, with data collected every 15 minutes. Each of the loggers will provide new data to add to the county database and supplement the County's other monitoring activities in those watersheds. The data will be shared with the County and the MCSWCD will continue longer term monitoring to determine how these parameters are affecting the watershed, with the goal of creating new water quality projects in each watershed. This project was funded using NYS Part B Conservation Project Financial Assistance.



Above: Technician Jeremy Paris installing a monitor
Below: Dissolved Oxygen (Black) and Temperature (Blue) of Honeoye Creek during the project period



TECHNICAL ASSISTANCE



MCSWCD responded to **16 technical assistance requests** for site visits and assisting landowners over the phone. These services can include requests concerning drainage, soils, erosion, conservation compliance, constructing ponds and vegetation issues.

District staff responded to **10 site visits** regarding drainage issues in 2019. These are most often caused by obstructed areas of water flow. We work with the landowner to determine the source of the problem, and identify possible solutions. One such site visit was with the Powder Mills Park Fish Hatchery. A poorly constructed stream culvert near the fish hatchery would cause water to overflow over the banks and flood the fish hatchery's tanks—causing significant fish mortality. The District worked with the hatchery to identify the issue and generate actionable solutions.

We also assist with helping landowners complete permits for their land that are often mandated by the state or federal government. Typically these permits focus on streams, pond stocking, and floodplain development, and can be difficult to complete without the appropriate technical knowledge.

These images (above, below) all show site visits with drainage concerns



A pond visited by staff in 2019 over an excessive algae concern



WILDLIFE PROGRAMS

Wildlife Houses

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

In 2019, **31 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 give 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 2019, **2,441 fish fingerlings** were distributed to **34 landowners**. Of those fish, 58 were Triploid Grass Carp.

The MCSWCD distributed **7 bales of barley straw** in 2019. Barley straw releases compounds that inhibit algal growth.



Bales of barley straw that will improve
pond water quality



A customer and future fisherman take a
look at their carp order

Monroe County Soil & Water Conservation District

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Find us on Facebook at: www.facebook.com/MonroeCountySWCD

Cover Photo: Stormwater Pond, Chili NY



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.