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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 2020, the MCSWCD responded to **205** requests for water quality technical assistance and **194** requests for land use management, of which 194 were requests from our local municipalities.

A Year in Review from the Executive Director



2020 proved to be a difficult start to the New Year with the Covid-19 crisis and the challenges that were met at our Conservation District not only to deliver conservation on the ground, but to also continue to deliver critical services to both our rural and urban communities. Navigating through the crisis from policy to remote work while ensuring continuity of normal business operations was one of the many tests of adapting in the face of Covid-19.

Monroe County Soil & Water Conservation District (MCSWCD) showcased resiliency in 2020 in functioning under restricted working guidelines by developing protocols for wearing personal protective equipment, social

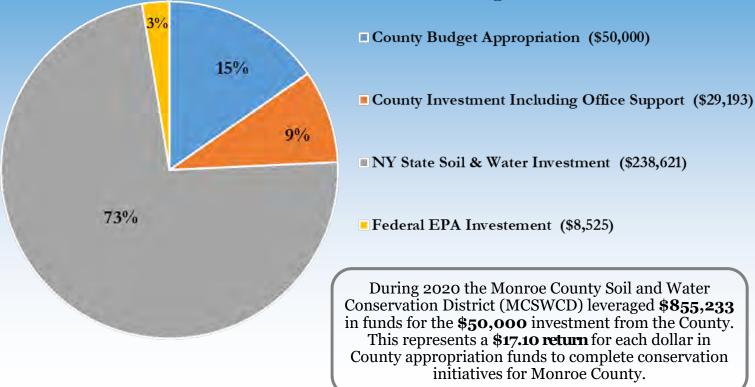
distancing, and masking-up for essential field services to continue supporting our community during this ongoing time of intense difficulty. Virtual activities proliferated and the District took advantage of technology to conduct monthly board meetings as well as attend Stormwater Coalition of Monroe County meetings, Genesee River Watershed Coalition meetings, various watershed group meetings, and also participate in the NYS Conservation District Employees' Association meetings to share ideas, techniques and strategies across New York State for conservation work during this time and beyond.

Due to Covid-19 concerns, many regularly scheduled stormwater professional trainings, and our outdoor environmental youth education events, Conservation Field Days and Envirothon, were cancelled. Many students and teachers look forward to our education events each year and were disappointed, but our primary concern remained the health and safety of the students, advisors/teachers, volunteers, our partners, and our staff. And even though Conservation Field Days was canceled, the MCSWCD was able to push forward with conservation education in creative ways to provide opportunities for the youth in Monroe County.

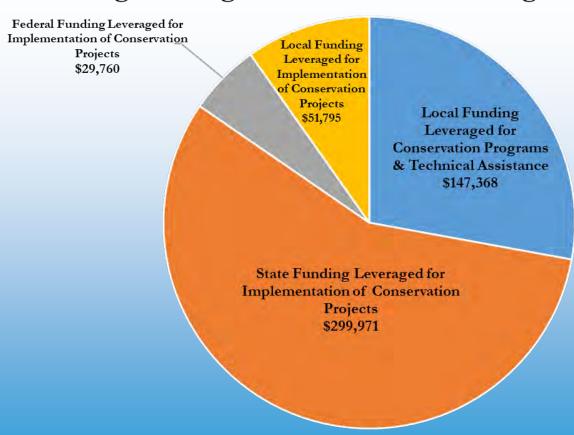
For decades, the Soil & Water Conservation District has worked with residents and municipalities to ensure the viability of agriculture and natural resources by implementing conservation projects for soil erosion control, stream restoration, and stormwater management. These projects provide multiple benefits enjoyed by residents and tourists alike. Our locally led Conservation District is the backbone of delivering conservation to our communities in Monroe County, and through our strong partnerships and dedication throughout 2020, we were able to keep our boots on the ground and continue to provide the programs and services that are more crucial now than they have ever been.

2020 Funding

Partner Investment for MCSWCD Operations

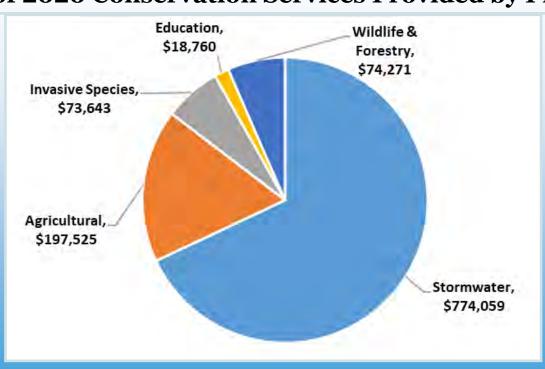


Funding Leveraged for Conservation Programs & Projects



| 2020 ACCOMPLISHMENTS | | | |
|---|--------|---|--------|
| Stormwater management site visits | 127 | Stormwater management trainings | 8 |
| Contractors, developers, qualified inspectors, municipal officials, engineers, & landscape architects trained | 273 | Number of construction site inspections for erosion & sediment control | 90 |
| Fish distributed | 255 | Pounds of agricultural plastic recycled | 1,200 |
| Acres of cover crops planted | 301 | Number of people encountered about invasive species | 4,613 |
| Trees planted | 13,674 | Native trees and shrubs distributed | 20,418 |
| Bluebird & bat boxes distributed | 34 | Number of residents that received native trees and shrubs | 365 |
| Soil group worksheets completed | 187 | Acres of land evaluated using soil group worksheets | 6,651 |

Value of 2020 Conservation Services Provided by Program



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!

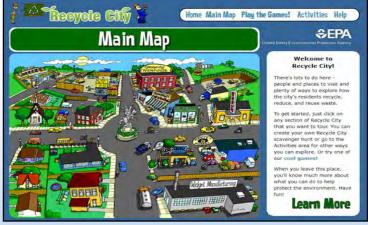
Unfortunately, we were unable to hold our 2020 Envirothon due to the Covid-19 pandemic.



Conservation Field Days

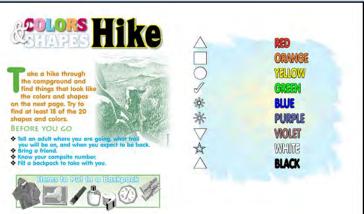
Hosted in Ellison Park, Conservation Field Days is an opportunity for students to learn about environmental issues like invasive species, agriculture, from experts working for the Seneca Park Zoo, US Fish & Wildlife, the NYS Department of Environmental Conservation, and more!

Like our Envirothon, the 2020 Conservation Field Days event was unfortunately unable to be held due to the Covid-19 pandemic. In lieu of this, the District put together resources for schools featuring many activities from various agencies including the NYS DEC, USFWS, USDA, EPA, and more! The materials had options for students in the classroom, outside of the classroom, and at home. Over 30 teachers were interested in these resources, and several even shared the materials with other teachers or schools! Check out a few of the activities we sent to the schools below!









FORESTRY

Conservation Tree & Shrub Program

20,418 trees and shrubs were distributed to over **365** landowners in 2020 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 2020 Tree and Shrub Program included new trees such as eastern redbud, black walnut, and more.

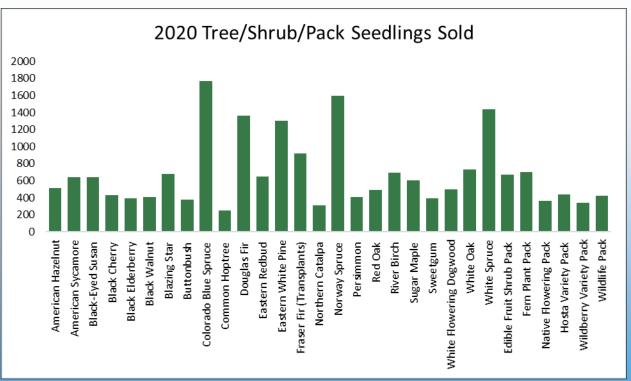
Thank you to the Town of Chili Department of Public Works for providing the space needed for our 2020 Tree & Shrub distribution.



Colorado Blue Spruce, a popular tree amongst landowners



Town of Chili



AGRICULTURAL PROGRAMS

Genesee River Watershed Coalition



Did you know?

The Genesee River watershed covers over 5,000 acres of freshwater streams and creeks, plus 13,280 acres of freshwater lakes, ponds, and reservoirs!

Through 2020, the interseeding and no-till seeding program continued full force, with **657 acres** across **7 farms** seeded using the no-till drill within the Genesee River Basin.

The Interseeder equipment is a new tool developed at Penn State University that allows for drilling of cover crops into a standing cash crop. Interseeded cover crops have more time to grow before winter, protecting the soil over the winter in areas where establishing a cover crop prior to frost could be a challenge. Cover crops provide a number of benefits such as recycling nitrogen in the soil, protecting soil from erosion, and adding organic matter. There are two interseeders available through the GRWCCD rental program, where one

machine has no-till drill capabilities, and may be used in grain crop rotation planting as well. With the no-till drill, the goal is to disturb as little soil as possible where growers plant right into the previous year's residue, cutting through the organic matter on the soil surface. This retains surface residue organic matter, reduces soil erosion and increases water infiltration, while increasing soil health and reducing carbon emissions.



AGRICULTURAL PROGRAMS

Genesee River Watershed Coalition

GENESEE RIVER WATERSHED COALITION OF CONSERVATION DISTRICTS



The Genesee River Watershed Coalition of Conservation Districts was formed in 2015 and has 10 Soil & Water Conservation District members from 10 different counties: Orleans, Ontario, Genesee, Monroe, Livingston, Cattaraugus, Steuben, Allegany, Wyoming, Potter, PA.

During 2020, the GRWCCD, with Bergmann Associates under contract, completed an Agricultural Best Management Practice (Ag BMP) Database to quantify the impacts of agricultural conservation in the watershed. All ten member counties now have a tool to track the abundant Ag BMPs being implemented, as well as highlight the environmental accomplishments of the farms partnering with the Soil & Water Conservation Districts that are doing their part to manage the land within the Genesee River Basin.

Seven member counties continue to implement agricultural projects under the Environmental Protection Agency (EPA) Great Lakes Restoration Initiative grant program. With the project nearly 80% complete, the anticipated goal at the end of the project in 2021 will be to have implemented 3,277 acres of erosion control and soil conservation systems, and riparian buffers as well as 34,070 feet of

Orleans Monroe Genesee Ontario Wyoming Livingston Steuben Cattaraugus Allegany NY PA 20 miles

livestock access control and erosion control systems to control soil erosion, reduce run-off and enhance soil health, and reduce excess amounts of pollutants to streams within the Genesee River basin.

The implementation of 800 feet of streambank stabilization as well as 6.7 acres of riparian buffers adjacent to farmland are currently underway by three member counties within the Genesee River watershed with funding from the Great Lakes Commission (GLC). Riparian buffers consist of planting native trees and shrubs to intercept surface runoff, subsurface flow and shallow groundwater flow from agricultural sources in order to reduce excess amounts of pollutants.

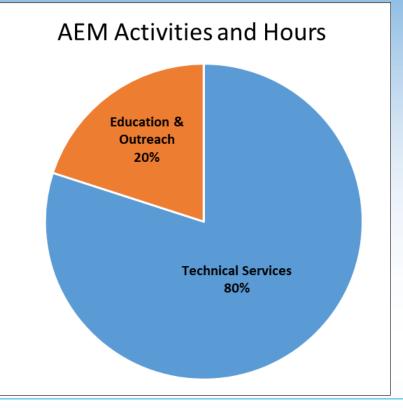
The Coalition will continue its mission into the future to implement conservation initiatives that protect, promote, and enhance the natural resources of the Genesee River watershed in partnership with local, state, and federal partners and stakeholders.

AGRICULTURAL ENVIRONMENTAL MANAGEMENT



\$197,525 in
Agricultural Services
were provided by the MCSWCD in 2020!

MCSWCD dedicated **762 hours** to **AEM Services in** 2020 with 527 hours dedicated to technical services provide to our farms and **187.5** hours dedicated to education, partnership, and outreach services!



Mission

of Monroe County AEM Program

Promote the awareness and adoption of agricultural **conservation** practices on local farms, and to increase **environmental stewardship** and **climate resiliency** among agricultural producers while enhancing the **economic viability** of agriculture in Monroe County.

The AEM program seeks to:

- ⇒ improve awareness of the benefits of agriculture throughout the County,
- ⇒ assist agricultural producers with achieving their farm's objectives,
- ⇒ and protect and improve local water quality and natural resources.

Program began in 1998 and now covers all the watersheds across Monroe County and has expanded to include over 600 participants!

Our Farms volunteer to go through a series of tiers to participate in the program as follows:

Tier 1 - Inventory current activities, future plans, and potential environmental concerns

Tier 2 - Document current land stewardship; assess and prioritize areas of concern

Tier 3A - Develop conservation plans addressing environmental resource concerns while helping to reach farm goals

Tier 4 - Implement plans utilizing available financial, educational, and technical assistance

Tier 5A, 5B - Evaluate to ensure the protection of the environment and farm viability

AGRICULTURAL PROGRAMS

Silvopasture & Prescribed Grazing Management Project

MCSWCD completed a \$14,391 project converting a farm's woodland habitat into silvopasture—the purposeful integration of trees, forage plants, and livestock into one system—for sheep. Understory brush, small trees, and invasive plants were removed on 10 acres of woodland, which in turn was planted with crimson clover, balansa clover, and Kentucky rye grass for pasture establishment.

Once the pasture is established, the sheep will be moved in during the hot, summer months where they will be provided with food and shade.

Nutrient savings in this project equate to **o.6 lbs** of nitrogen per year.



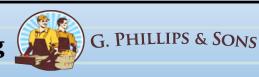


Urban Agriculture: Community Garden

In 2020, MCSWCD became involved in a project providing funding from NYS Part B Conservation Project Assistance to a local community garden at Asbury First Methodist Church in the City of Rochester. The District partnered with the City of Rochester, Asbury First United Methodist Church, and the Children's Ministry. This garden will provide produce for local food banks, along with educating and engaging the public on sustainable urban agriculture practices that will be displayed by the garden.

In 2020, we purchased seeds and lumber for ten 8x4 foot raised beds. MCSWCD built the beds after planning the planting and location designs for them, and delivered them to the project area. Due to the COVID-19 pandemic, many aspects of this project were not possible to complete in 2020, and will be continued into 2021.

Agricultural Plastics Recycling



The Monroe County Soil & Water Conservation District assisted with recycling **1,200 pounds** of agricultural plastic in 2020 with G. Phillips & Sons (GPS Ag Recycle).

GPS Ag Recycle partners with states, retailers, and manufacturers alike to turn their agricultural plastic and scrap into sustainable objects like crates and pallets.

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

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 2020, 301 acres of annual rye, radish, and clover cover crops were planted in Monroe County as part of the Great Lakes Restoration Initiative (GLRI), with a project cost of \$25,919. With this planting, it is estimated that 47.4 lbs. of nitrogen, 6.6 lbs. of phosphorus and 3.8 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.

LAKE ONTARIO DRAINAGE BASIN WATERSHED FRIENDLY **FARMER** Great Lake

This Project is Funded in part by the US EPA's **Great Lakes Restoration Initiative**



Aquatic Invasive Species Prevention

MCSWCD partnered with Monroe County Department of Environmental Services (DES) for the third year for 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 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 **1,911** boats at launches and educate **4,613** 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.



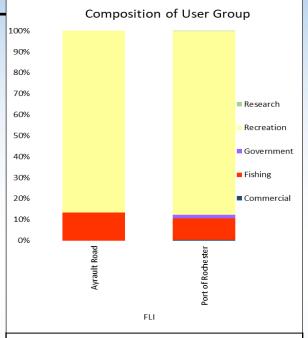


Eurasian Watermilfoil

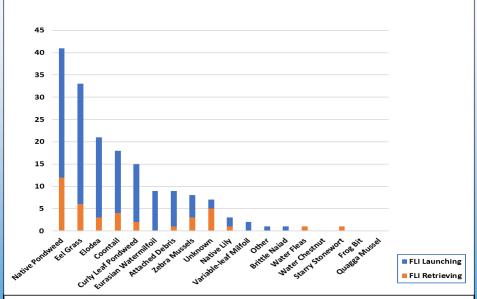
(Barry Rice, Bugwood.org)



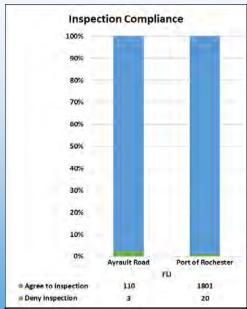
Curly Leaf Pondweed (Chris Evans, University of Illinois, Bugwood.org)



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



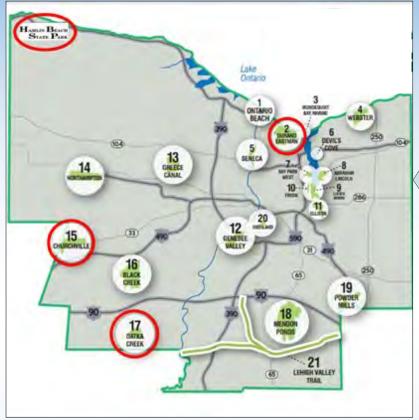
This graph shows the most common species found by stewards in 2020 inspections. Although many of these invasive species are well established in our region, this coverage plays an important role in stopping their spread to unaffected areas.



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

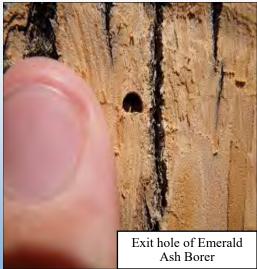
Emerald Ash Borer Mitigation

Emerald Ash Borer (*Agrilus plannipenis* 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.



A look at the Monroe County parks map with all our planting parks and areas circled





MCSWCD received funding for this project from the U.S. Forest Service under the Great Lakes Restoration Initiative (GLRI) Program 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 2020, the MCSWCD completed its Supplemental Tree Planting for Emerald Ash Borer Mitigation that began in 2018, planting **13,674 trees** in 5 public parks in Monroe County for a total of **21,240** trees planted during the project. This amounts to roughly **1,274.40** metric tons of CO₂ sequestered (EPA). Funding for this project was provided through the U.S. Forest Service under the Great Lakes Restoration Initiative Program.

See the next page for the equivalent greenhouse gas emissions sequestered by our tree plantings according to the EPA's Greenhouse Gasses Equivalency Calculator!

INVASIVE SPECIES

Emerald Ash Borer Mitigation—CO₂ Emissions Sequestered



INVASIVE SPECIES

Japanese Angelica Tree Control & Eradication

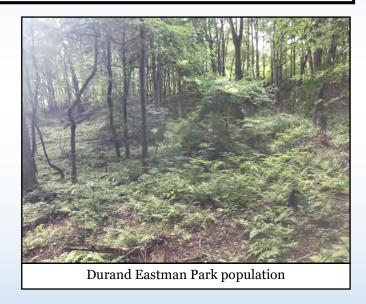
Japanese Angelica Tree (JAT) (*Aralia elata*) is a non-native invasive plant species originally native to eastern Asia introduced to the United States as an exotic ornamental. It reproduces sexually and asexually, forming dense thickets with large leaves (over 1 meter at times) that outcompete native species through rapid growth. In addition to large leaves, JAT has prickles along the bark, branches, and leaf/leaflet stems and veins. The most noticeable characteristic is arguably the large, white inflorescences that appear in late summer. JAT has become a major problem in the regions of Philadelphia, PA and the entire lower Hudson area, NY.

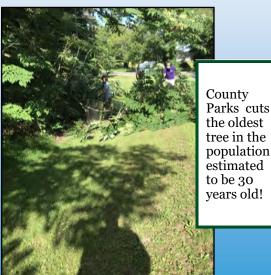
In October 2019, a large JAT population was found in Mendon Ponds Park, revealing the first verified JAT population in Monroe County. Working with SUNY Brockport, the MCSWCD surveyed the rest of Mendon Ponds Park, 14 other county parks, Hamlin Beach State Park, and Rush Oak Openings Unique Area. Four other populations were found at Mendon Ponds Park, along with 22 individual small stands. One population was also found at Durand Eastman Park. Working with SUNY Brockport and

Monroe County Parks, the MCSWCD sampled the populations to get necessary information on age, reproduction, growth habit, and more. Populations were then treated and removed by Monroe County Parks, totaling **0.37 acres** of infestation treated, while samples were taken by SUNY Brockport for help with identification. Some samples were even sent to the New York State Museum in Albany!













WATER QUALITY IMPROVEMENT PROGRAM

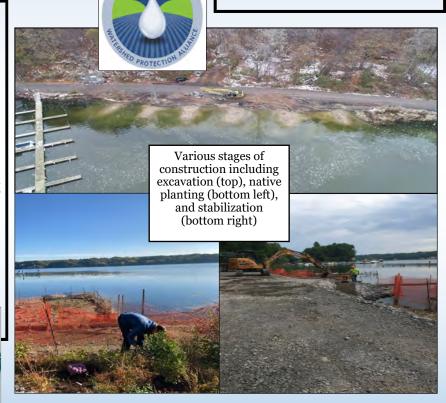
Nature Based Shoreline—Irondequoit Bay Park West

Irondequoit Bay Park West has provided recreation, primarily fishing and boating, for many years. In 2017, the shoreline and adjacent Bay Front South roadway were damaged from flooding due to predominant shoreline erosion, which settled onto the road, as before this project there was little to no wetland vegetation protecting the road and shoreline.



Debris and sediment on the road after 2017 flooding. Notice how close the water is to the road, with little soil left. This \$315,000 project was funded through NYS Water Quality Improvement Program, Monroe County DES, Monroe County Parks, NYS Part C Performance Measures Financial Assistance, and Finger Lakes-Lake Ontario Watershed Protection Alliance (FLLOWPA).

Partnering with Monroe County Parks Department and Monroe County Department of Environmental Services (DES), construction occurred from November 2019 until June 2020, splitting the project into four stabilization sections. The project involved several bioengineering and nature-based stabilization techniques to achieve goals including use of turbidity curtains, basic excavation and fill, placing rocks, coir logs, and goose and carp barriers, establishing anchored habitats (e.g. logs), top soiling, establishing large trees, and establishing native wetland vegetation.





Note how far the road is from water on new shoreline

Approximately 450 feet of shoreline was restored and stabilized, enhancing wetland and buffer ecosystems. Shoreline stability, flood resilience, water quality, and fishing access were all enhanced.



New shoreline, including newly planted native wetland vegetation and trees

STORMWATER MANAGEMENT

Requests for Technical Assistance in 2020 included:

- 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 2020, the District provided **1,183 hours** of technical assistance requests responding to **29 requests** by coalition members for stormwater services to landowners and municipalities! The total value of 2020 stormwater services was **\$774,059**.

Stormwater Management Training

The MCSWCD hosted 8 stormwater related trainings and workshops in 2020.

The MCSWCD held **3 sessions** of the 4 Hour Erosion/Sediment Control Training Sessions, and **5** WNY Stormwater Management Training Series courses.

A total of **273 people**, such as engineers, municipal officials, landowners and contractors received necessary stormwater management training.





STORMWATER MANAGEMENT

Construction

The MCSWCD conducted a total of **90 Erosion & Sediment Control Construction Inspections** in 2020.

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 stormwater pond with excessive vegetation due to the lack of a vegetative buffer



Field visit to a stream with natural erosion occurring, leading to concerns of tree falls and eventual erosion of lawn and recreation areas

Stormwater Pond Inspections

23 stormwater pond inspection requests were completed by the MCSWCD in 2020. 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 during storms.





A stormwater pond with beginning erosion issues due to no riparian buffer—allowing excess nutrients to flow in and attracting waterfowl like Canada geese

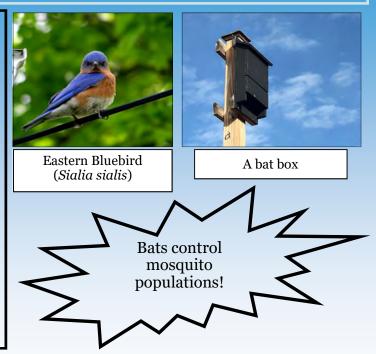
WILDLIFE PROGRAMS

Wildlife Houses

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

In 2020, **34 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.

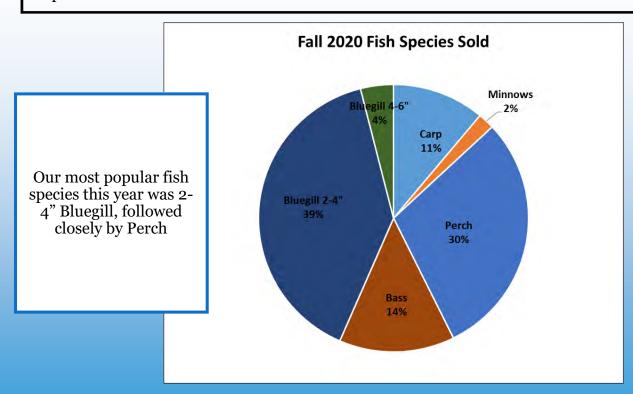
All bat populations in New York state are threatened due to White Nose Syndrome —a fungus originally from Europe. Bat boxes can help local bat populations recover, which means that they can get back to eating insects. Having a bat or bird house in your yard can help these creatures find a safe place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



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. This year, however, only our Fall program was held. Landowners often purchase fish to stock their backyard ponds for fishing to control aquatic plants.

In 2020, **255 fish fingerlings** were distributed to **7 landowners**. Of those fish, **28** were Triploid Grass Carp.



Staff & Board Members

Staff throughout 2020

Board of Directors 2020

Kelly Emerick

Executive Director

Kristin White

Principal Office Account Clerk

James Sroka

Soil & Water Resource Technician

Jeremy Paris

Soil & Water Planning Technician

Jacob Kearney

Conservation Intern

Sarah Berry

Conservation Intern

Amanda Little

Soil & Water Resource Technician

Matthew Gallo

Conservation Program Specialist

Teresa VanEpps

Principal Office Account Clerk

Stephanie Castle

Watershed Agricultural Coordinator

Josh LaFountain

Soil & Water Resource Technician

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

Rollin Pickering

Chairman & New York Grange Representative

Mark Greene

Vice-Chairman & Practical Farmer Representative

Steve Brew

Legislative Representative

Chuck Colby

Member at Large & Assistant Treasurer

Marc Krieger

Farm Bureau Representative

Maureen Leupold

Member at Large



Monroe County Soil & Water Conservation District

145 Paul Road, Building 5 Rochester, NY 14624

Phone: (585) 753-7380 Fax: (585) 753-7374 Email: mcswcd@monroecounty.gov www.monroecountyswcd.org



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

Cover Photo: Completed Nature Based Shoreline Project at Irondequoit Bay Park





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.