

NIAGARA NATURE NEWS

An Environmental Publication by Niagara County Soil & Water Conservation District Winter 2022

*****TREE SEEDLING ORDER FORM ENCLOSED*****

SUPPLIES ARE LIMITED, ORDER EARLY SO YOU DON'T MISS OUT!

COVER CROPS Wet Fall Weather Delays Some Cover Crop Planting

The Niagara County Soil and Water Conservation District has been working on cover crop plantings in the Twelvemile Creek watershed under the Agricultural Nonpoint Source Pollution Grant (AGNPS). In the past 3 years the District has completed cover crops on six farms. The rains this fall delayed harvest of soybeans on the last farm and due to grant requirements the project will have to close without completing the final year of the project on one farm.

NCSWCD has been working on the Johnson Creek watershed completing cover crops for six landowners in 2021. In 2021 Steve Smith Farm was able to complete cover crop utilizing the District's interseeder after corn planting and now has a nice cover crop to protect the soil after corn harvest.

Austin Farms, Torrey Farms, and McCollum Farms were able to get all or most of their cover crop seeded after harvest. The wet weather after harvest has precluded two farms from getting in any cover crop seeding after harvest. These weather concerns really show the benefits of the District's interseeder for planting cover crop into standing corn when it is still dry enough to get on the fields easily.





Field Days

Wildlife Festival

Water Bug Sampling Ag. Chemical Facility /

Petroleum Storage

Tree Planting

HERE'S WHAT IS COMING UP IN 2022

Seeding Sale Envirothon Site Plan Review Knotweed Control Cover Crops Fish/ Carp Sale Niagara County Fair 4 Hr. Contractor Trainings Surface Water Monitoring Irrigation

And so much more!

Niagara County Soil & Water Conservation District 4487 Lake Avenue Lockport, New York 14094

District Directors

David C. Wilson Chairman

James Bittner Vice Chairman

Gerald Farnham Treasurer

Mary Gumaer Member

Scott White Member

David Godfrey Legislator

William Collins Legislator

District Staff

Mark J. Seider, P.E.

District Engineer mark.seider@ny.nacdnet.net

<u>Katie Pfeifer</u> District Secretary/Assistant Treasurer katherine.pfeifer@ny.nacdnet.net

Scott M. Collins Remedial Action Plan Coordinator

scott.collins@ny.nacdnet.net
<u>David V. Reckahn</u>

Natural Resource Technician david.reckahn@ny.nacdnet.net

USDA NRCS

Charles T. Kesterson

Resource Conservationist charles.kesterson@ny.usda.gov

<u>Justus Barczewski</u>

Soil Conservationist justus.barozewski@usda.gov

Inside This Issue	Page		
Manure Storage	2		
New Soil Conservationalist	2		
2021 AOC Report Card	3-6		
Tree Sale	7-10		
Fish Sale	11-12		
Water Quality Monitoring	12		
Japanese Knotweed	12		
AEM 16 Grant	13		

Niagara Nature News - Niagara County Soil & Water Conservation

Follow Us On Facebook!

Niagara County Soil & Water Conservation District

Eighteenmile Creek Great Lakes Area of Concern



How Can We Help You?

Seedling/Tree Sale Pond Stocking/ Carp Sale Bird/Bat/Duck Houses Eighteenmile Creek RAP Invasive Species Control & Eradication Pond Site Evaluations Pond Maintenance Agriculture Value Assessments Inter Seeder Rental No-Till Drill Rental Educational Programs Drainage /Tiling Assistance Bird/Bat/Duck Houses Permit Application Assistance Mining Assistance **Erosion Control** Flood Prevention Water Conservation & Use Wetlands Ground Water, Water Quality & Quantity Nonpoint Source Pollution Forestland Protection Wildlife Recreation Manure Management Waste Water Management

And so much more!



MANURE STORAGE COMPLETED WITH DISTRICT PARTNERSHIP

Chaffee Farms in the Town of Somerset completed construction of a 14.7 million gallon manure storage facility to address their storage needs for Confined Animal Feeding Operations (CAFO) requirements under the permit the farm has through NYS Department of Environmental Conservation.

Project funds were gathered by the partnering of NCSWCD and the USDA Natural Resource Conservation District. NCSWCD provided funds from the CAFO Waste Storage Grant program through NYS Ag and Markets and NRCS provided funds out of the Environmental Quality Incentives Program (EQIP).

The project was designed and approved by a local consulting engineering firm and district staff provided assistance by inspecting the site during construction. The project was so large that during construction it disturbed more than five acres at one time and required two site inspections per week to meet NYS DEC permit requirements. Even with some fall rains during construction and the flat topography of Niagara County there was little or no runoff impact to the site. The site has been temporarily seeded and mulched to protect it for the winter and the permanent seeding will be completed in the spring.



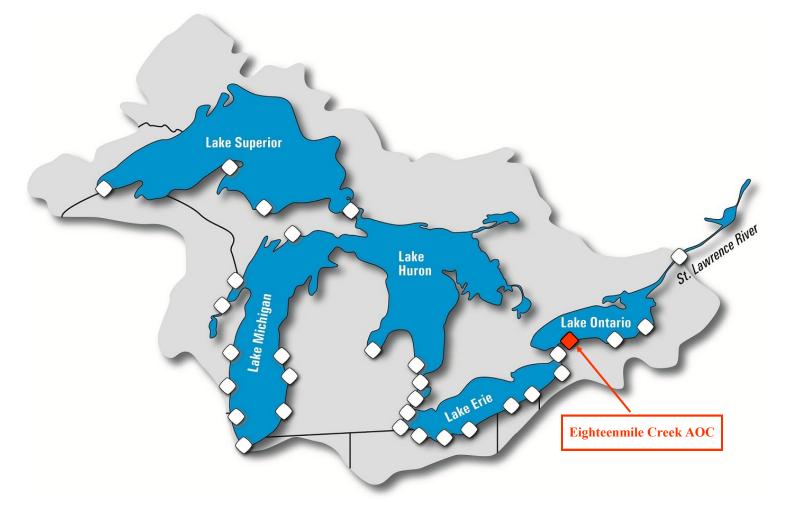
NRCS WELCOMES NEW SOIL CONSERVATIONALIST

We're happy to introduce the newest member of our team, Justus Barczewski, a new soil conservationist for the NRCS. Justus is a graduate of Syracuse's SUNY ESF program for Forest Resource Management. Please feel free to reach out to Justus with any questions.



The Niagara County Soil & Water Conservation District is a local government subdivision under New York State law. The District was established as a public benefit by the County of Niagara in 1954. Your support of our programs aid in the District's conservation efforts to protect natural resources and water quality for our residents. In these wavering economic times, we thank you for your continued assistance in fulfilling our goals.

EIGHTEENMILE CREEK AREA OF CONCERN -



2021 REPORT CARD



A COMPILATION OF SUCCESSES, IMPROVEMENTS & CURRENT CONDITIONS











Department of Environmental Conservation

2021 AOC Newsletter Update

Progress has continued at Eighteenmile Creek Area of Concern (AOC) throughout 2021. The mink study was completed by SUNY Brockport, the US Army Corps of Engineers are nearly complete with surface water monitoring and outreach opportunities have restarted. The status of each project will be discussed in the following sections:

Are the results from the mink contaminant study ready yet?

This is the same question/topic as last year! A topic wouldn't normally be repeated, but there's good news- a final report was released in December 2021! Started in 2017 the study assessed impairment status of Beneficial Use Impairments (BUI) #3 ("Degradation of Fish and Wildlife Populations") and BUI #5 ("Bird or Animal Deformities/Reproductive Problems"). Mink are the most sensitive species to PCBs, so they became a focal point to determine if contaminants caused deformities or reproductive problems. Given the small size and poor habitat of the AOC, live mink weren't able to be captured forcing a modeled approach. Mink dietary and bioaccumulation models have been used across other NYS AOCs by SUNY Brockport. Those models were refined and optimized for Eighteenmile Creek. Brockport's model captures mink prey (fish, crayfish and amphibians) as well as water samples to calculate an amount of PCBs that would bioaccumulate. Additional support for this project was provided by US Army Corps of Engineers and NYS DEC.



Above: Brockport grad student searches for frogs to be used in the study.



Above: Brockport's staff electrofishing in Eighteenmile Creek.

There are two different results that this type of

modeling can determine. Chronic (health) would indicate reproductive failure or other deformities. Acute endpoints would show if mink accumulate PCBs that would result in death. Final modeling of this study suggests any mink permanently residing at Eighteenmile Creek AOC would likely suffer deformities and reproductive impairment. While chronic toxicity has been reached at Eighteenmile Creek AOC, acute toxicity is not probable.

These findings directly impact removal criteria in BUIs 3 and 5. BUI 3 may be removed when three separate criteria are met. The criteria addressed by the mink study states "PCB concentrations in fish tissue and other prev are below thresholds likely to result in acute toxicity to fish or piscivorous wildlife (birds and mammals)." The mink study fully addressed this criteria and will be discussed with a Remedial Advisory Committee to determine if the rest of the criteria are adequately

met. BUI 5 removal criteria has two parts, only one of them has to be met. The criteria addressed by the mink study states "PCB concentrations in fish and other prey are below tissue concentrations known to cause deformities or reproductive impairment in piscivorous wildlife.". Based on SUNY Brockport's results this criteria will remain impaired and may be monitored though the AOC program while remedial activities through the federal Superfund program continue. A full report can be found at eighteenmilerap.com data repository.

US Army Corps of Engineers SPMD Monitoring

In 2020, the US Army Corps of Engineers (USACE) reviewed data available from the AOC, Superfund and other programs to determine the causes of BUI impairments. Their conclusion was that most BUIs are driven by high amounts of PCBs suspended in the water column. The source of PCBs will be determined by Superfund, but passive water monitoring of PCBs was completed by USACE throughout 2020 and 2021. Results of this sampling will estimate the amount of PCB loading from above Burt Dam as well as confirm their findings from the 2020 report.

Semipermeable membrane devices (SPMDs) were used because the devices can be left in a stream for weeks. By leaving SPMDs out for long periods of time, hundreds or

Below: Burt Dam power station September 2020



thousands of gallons of water pass through the samplers and a long term average of contaminants for that period can be determined. This saves time and money when compared to surface grab samples, that would require multiple field personal, many trips to Eighteenmile



Above: SPMDs collected from Eighteenmile Creek September 2020.

Creek/reference site and multiple sampling events to build similar types of long term data.

In Eighteenmile Creek, SPMDs were deployed at two sites in the AOC and one in Lake Ontario at the west pier in Olcott. Oak Orchard Creek had one sampling location below Waterport Dam and another sample at Lake Ontario. The first set of samples were installed in fall 2020. A second round was deployed at the same sites during spring 2021. Results of this study will be available in early 2022.

Where are we at with the BUIs?

BUIs are still impaired under the new removal criteria. It's easiest to discuss these as their own separate topics.

BUI 1.	Restrictions on Fish and Wildlife Consumption
Removal Criteria:	There are no AOC-specific fish and wildlife consumption advisories issued by New York State
Discussion:	Fish above and below Burt Dam continue to have elevated levels of PCBs. After a discussion with NYS Department of Health (DOH), an AOC specific consumption advisory is expected to remain in place until remedial work is complete and there has been a declining trend in contaminant levels in fish. Knowing Superfund remedial work will take years to complete, this is a BUI that is unlikely to be removed in the near future.
BUI 3.	Degradation of Fish and Wildlife Populations
Removal Criteria:	Fish community metrics (e.g., diversity, abundance, biomass, and condition) are similar to reference site(s); AND
	Benthic macroinvertebrate community composition is within the range expected and similar to reference site condition; AND
	PCB concentrations in fish tissue and other prey are below thresholds likely to result in acute toxicity to fish or piscivorous wildlife (birds and mammals).
Discussion:	The first part of this removal criterion was addressed in the fish community study by USGS in 2019. In general, there are no major differences in fish community metrics between Eighteenmile Creek and Oak Orchard Creek. Since the fish communities are similar, this part of the criteria is considered to be met.
	Benthic macroinvertebrate communities were addressed in reports from 2013 and 2017. Minor differ- ences in macroinvertebrate communities were found between Eighteenmile Creek and Oak Orchard Creek, but not at a level that would impact fish and wildlife population levels. Since macroinverte- brate communities are similar to Oak Orchard Creek, this part of the criteria is also considered met.
	The third part of this criteria was addressed with the mink study from SUNY Brockport. Brockport modeled acute (lethal) toxicity to mink and results suggest no impairment.
	Since all three criteria are met, this data will be reviewed by the Remedial Advisory Committee to determine if BUI removal is appropriate.
BUI 5.	Bird or Animal Deformities/Reproductive Problems
Removal Criteria:	PCB concentrations in fish tissue from comparable functional feeding groups are similar to reference site(s); OR
	PCB concentrations in fish and other prey are below tissue concentrations known to cause deformities or reproductive impairment in piscivorous wildlife.
Discussion:	It's well known that resident fish in the AOC have elevated levels of PCBs. Therefore, this part of the BUI will not likely be met until after remediation is complete. The second criteria for deformities or reproductive impairment is also still impaired based on the SUNY Brockport mink study.
BUI 6.	Degradation of Benthos
Removal Criteria:	Benthic macroinvertebrate communities are "non-impacted" or "slightly impacted" according to NYSDEC indices; OR
	Benthic macroinvertebrate community condition is similar to unimpacted control sites of comparable physical and chemical characteristics; AND
	Toxicity of sediment-associated contaminants is similar to unimpacted control sites of comparable physical and chemical characteristics.
Discussion:	The first criteria uses DEC guidelines as a measuring stick, which is a good starting point for assess- ment. Previous studies have shown that both Eighteenmile Creek and a suitable reference site are slightly to moderately impacted by DEC guidelines, causing us to use the second and third criteria. Analysis of benthic macroinvertebrate community structure and sediment toxicity were generally similar between Eighteenmile and Oak Orchard Creek, although one site in the AOC ranked more poorly than other sites. A recent data review suggests that other factors such as seasonal eutrophica- tion or poor habitat could be the cause of impairment. USGS started an assessment in 2021 to confirm

WHAT IS THE EIGHTEENMILE CREEK AREA OF CONCERN (AOC) ?

Local, state and federal officials identified a section of Eighteenmile Creek as one of 42 "Areas of Concern" (AOC) in the Great Lakes Basin. Eighteenmile Creek received this designation because of poor water quality and contaminated sediments present throughout the watershed. Eighteenmile Creek's long history of use by major industries in the area, especially near the City of Lockport and Town of Newfane, has played a large role in the present condition of the creek.

WHAT IS THE EIGHTEENMILE CREEK REMEDIAL ACTION PLAN (RAP)?

A RAP is an integrated, whole ecosystem approach to remediating impaired water bodies. The RAP first identifies use impairments, their causes, and contaminant sources, using existing studies and data. Next, existing cleanup and regulatory programs which apply to the water body are identified. A coordinated cleanup strategy is then developed to eliminate the use impairments. The NYS Department of Environmental Conservation produced the Stage 1/2 RAP in 1997 in an effort to restore the integrity of the creek's ecosystem.

WHAT IS THE EIGHTEENMILE CREEK REMEDIAL ADVISORY COMMITTEE (RAC) ?

The Eighteenmile Creek RAC is comprised of a group of local, state and federal stakeholders, representing industries, organizations and local communities with a vested interest in the health of Eighteenmile Creek. The RAC is responsible for implementing the RAP, monitoring restoration efforts, and assessing ongoing needs and conditions. After a brief hiatus, the RAC reconvened in 2005 and is currently making progress in moving the RAP forward.

If you have a vested interest in Eighteenmile Creek and are want to help advance the RAP, contact our office and we would be happy to speak with you!

GREEN Outreach

Through the Global Rivers Environmental Education Network (GREEN) we've teamed with our local General Motors plant in Lockport to explore the Eighteenmile Creek watershed. The program allows students from Lockport, Newfane and Niagara BOCES to visit streams within the Eighteenmile Creek watershed and other areas in the county to investigate water quality issues through observations or nutrient testing (photos below). Throughout the school year classes will discuss solutions to the issues found in the fall field trip. These discussions will lead to the class implementing one of their solutions in spring 2022.





FOR MORE INFORMATION Contact:

Niagara County Soil & Water Conservation District U.S.D.A. Service Center 4487 Lake Avenue Lockport, NY 14094 Phone: (716) 434-4949 Ext. 4 Website: www.eighteenmilerap.com





NIAGARA COUNTY SOIL AND WATER CONSERVATION DISTRICT 2022 SEEDLING ORDER FORM



EVERGREENS	Avg Height	25	50	100	Total #	Total
Species & Age (years)	in Bundle	For	For	For	Ordered	Cost
Cedar, Red (1)	5-10"	\$21.00	\$40.00	\$76.00		
Cedar, White - Arborvitae (2)	9-12"	\$20.00	\$38.00	\$72.00		
Fir, Douglas(2)	10-18"	\$24.00	\$46.00	\$86.00		
Fir, Frasier (2)	9-12"	\$21.00	\$40.00	\$76.00		
Pine, Austrian (2)	7-12"	\$17.00	\$32.00	\$61.00		
Pine, Red (3-0)	9-15"	\$21.00	\$40.00	\$76.00		
Pine, White (2)	7-10"	\$17.00	\$32.00	\$61.00		
Spruce, Blue (2)	9-15"	\$18.00	\$34.00	\$65.00		
Spruce, Norway (2)	10-18"	\$24.00	\$46.00	\$86.00		
Spruce, White (2	10-18"	\$21.00	\$40.00	\$76.00		
EVERGREEN TRANSPLANTS	Avg Height	10			Total #	Total
Species & Age (years)	in Bundle	For			Ordered	Cost
Cedar, White (2+1=3yrs)	8-14"	\$23.00				
Fir, Balsam (2+1=3yrs)	8-12"	\$22.00	These items are transplants			
Fir, Fraser (2+2=4yrs)	10-18"	\$23.00				
Pine, White (2+1=3yrs)	10-18"	\$19.00	Order in 1	0's only		
Spruce, Blue (2+1=3yrs)	10-18"	\$24.00		,		
Spruce, Norway (2+1=3yrs)	14-20"	\$20.00				
DECIDUOUS TREES	Avg Height	10	25	50	Total #	Total
Species & Age (years)	in Bundle	For	For	For	Ordered	Cost
Birch, Canoe	18-24"	\$16.00	\$38.00	\$72.00		
Cherry, Black (1)	12-18"	\$14.00	\$33.00	\$63.00		
Eastern Redbud	12-18"	\$14.00	\$33.00	\$63.00		
Hazelnut, American (2)	10-18"	\$17.00	\$40.00	\$77.00		
Hickory, Shagbark (2-3)	6-12"	\$19.00	\$45.00	\$86.00		
Maple, Red (1)	12-18"	\$13.00	\$31.00	\$58.00		
Oak, Red (1)	12-18"	\$13.00	\$31.00	\$58.00		
Oak, White (1)	12-18"	\$13.00	\$31.00	\$58.00		
Pecan, Northern (1)	12-18"	\$14.00	\$33.00	\$63.00		
Persimmon (1)	12-18"	\$13.00	\$31.00	\$58.00		
Sycamore (1)	12-18"	\$14.00	\$33.00	\$63.00		
Tuliptree (1)	18-24"	\$15.00	\$35.00	\$68.00		
Walnut, Black (1)	12-18"	\$14.00	\$33.00	\$63.00		

SPECIAL OFFERS

Species & Age (years)			Total # Ordered	Total Cost
Chestnut, American (2)	16-24"	5 seedlings for \$19.00		
Apple, Starter Package	4-6'	5 trees for \$91.00		
Apple, Wildlife Package	4-6'	5 trees for \$63.00		
Clip & Save*	***Clip & Save***	***Clip & Save***	***Clip & Save***	

THIS WILL BE YOUR ONLY REMINDER UNLESS AN E-MAIL IS PROVIDED WITH YOUR ORDER!! **PICK-UP INFORMATION**

Tree Seedling Distribution : Friday, April 22, 2022 8:00am to 4:00pm Saturday, April 23, 2022 9:00am to 12:00pm

Location: Merchant Building - Niagara County Fairgrounds - 4487 Lake Ave (Rt 78), Lockport

For Information Call #434-4949 Ext. 4

Extra Trees: Unsold seedlings will be available for sale on a cash basis on the above pickup dates.

DECIDUOUS SHRUBS	Avg Height	10	25	50	Total #	Total
Species & Age (years)	in Bundle	For	For	For	Ordered	Cost
Butterfly Bush (1)	6-12"	\$13.00	\$31.00	\$50.00		
Cranberry, American	12-18"	\$14.00	\$33.00	\$63.00		
Dogwood, Red Osier (1)	12-18"	\$12.00	\$28.00	\$52.00		
Elderberry (1)	12-18"	\$16.00	\$38.00	\$72.00		
Lilac (2)	12-18"	\$14.00	\$33.00	\$63.00		
Ninebark (1)	12-18"	\$13.00	\$31.00	\$58.00		
Rose of Sharon (1)	12-18"	\$13.00	\$31.00	\$58.00		
Serviceberry / Juneberry	12-18"	\$13.00	\$31.00	\$58.00		
Winterberry (1)	18-24"	\$14.00	\$33.00	\$63.00		

			Total # Pacs	Total
CONSERVATION PACS		**Price**	Ordered	Cost
Edible Fruit		\$33.00		
Nut Tree	All Pacs Include 10 Plants	\$20.00		
Perennial Flower	2 of Each Variety (See Description)	\$20.00		
Wetland Habitat		\$20.00		

OTHER ITEMS	**Price**	Total # Ordered	Total Cost
Pachysandra - Groundcover - 50 rooted cuttings	\$43.00		
Milkweed Seed - 150mg packet	\$5.00		
Wildflower Seed - 4oz bag (covers 2500 sq ft)	\$15.00		
Conservation Grasses - Deer Plot Mix Large 25lbs bag (covers 3/4 ac)	\$104.00		
- Deer Plot Mix Small 10lbs bag (covers 1/3 ac)	\$70.00		
- Tall Mix Large 25lbs bag (covers 1 ac)	\$55.00		
Fertilizer Tablets - 25 Count (20-10-5 pellets)	\$4.00		
Marking Flags - 100 Count (30" wire staff)	\$12.00		
Bat Roost - Bachelor	\$17.00		
Bat Roost - Maternity	\$27.00		
Bluebird House	\$17.00		
Wood Duck Box	\$40.00		

Name:	Phone:				
Street:	City: Zip:				
Email:	(to receive electronic noti	ce)			
All orders must be prepaid by cash or check payable to Niagara County SWCD. We do not accept debit/credit cards Mail to: Niagara Co SWCD, 4487 Lake Ave, Lockport NY 1409 For additional information call #434-4949 Ext. 4	<u>Order# (O</u>	ffice Use Only)			
LAST DAY TO ORDER IS MONDAY, FEBRU	ARY 28, 2022				

Clip & Save

Clip & Save

MARK YOUR CALENDARS NOW! IF EMAIL IS PROVIDED, AN EMAIL REMINDER WILL BE SENT ONE WEEK PRIOR TO THE PICK UP DATES.

Clip & Save

Clip & Save

Seedling orders are filled on a first come, first served basis. As we have no control over the weather or your choice of planting sites, times or techniques, the SWCD WILL NOT BE RESPONSIBLE for your trees and shrubs after they leave our distribution center. We cannot offer refunds or replacements. All trees and shrubs sold are to be used for effective conservation practices and will not be planted for ornamental purposes. Trees and shrubs sold will not be removed with roots attached for resale. This is in compliance with NYS Sale and Use Tax Regulations, 20 NYCRR, Section 529.2(c).

EVERGREENS

Cedar, Red (Juniperus virginiana)

This medium, slow growing native can reach 50' under adverse conditions in any soil type. Green needles turn rusty brown in winter. Its blue, waxy seed cones are beneficial food for birds, small mammals, and deer. Wood used for posts and archery bows. Aromatic heartwood used for closets and chests.

Cedar, White (Thuja occidentalis)

Pyramidal shape. Lacy, feathery, light green needles on flat branches. Grows to 60' in loamy, moist soils. Slow grower used for windbreaks, hedges, and wildlife food and cover. This native is also known as American Arborvitae.

Fir, Balsam (Abies balsamea)

A favored Christmas tree due to its aromatic fragrance. Has soft, 1" flat, deep green needles. Native tree with medium growth rate to 75' in cool, moist locations. Also excellent for wildlife food and shelter.

Fir, Concolor (Abies concolor)

Also known as "White Fir". Has silver trunk and dense, silver-blue needles with bluish band. Likes rich, loamy soils. Grows to 100'. Easy-to-care for native that makes a great ornamental specimen.

Fir, Douglas (Psudotsuga menziesii)

Very popular native fir used as Christmas trees, lumber, windbreaks and ornamentals. Grows to 100' in well-drained soils. Holds small, soft, green needles for a long time and shears well. Good resistance to disease.

Fir, Fraser (*Abies fraseri*)

Premier Christmas tree. Grows to 40'. Needs well-drained soils. Intolerant of hot, dry places. Horizontal branches of shiny 1" green needles and gray bark. Slow growing native with a wonderful fragrance.

Pine, Austrian (*Pinus nigra*)

Fastest growing pine. Grows to 60' in heavy clay to light sand soils. Has long, dark green 5" needles in bundles of two. Pollution and salt tolerant. Makes a good Christmas tree and a hardy windbreak.

Pine, Red (Pinus resinosa)

Long, soft, dark green needles. Grows to 75'. Very tolerant of sandy, dry exposed sites. Native tree valued for lumber and windbreaks. Excellent for reforestation. Very hardy.

Pine, White (*Pinus strobus*)

Shade tolerant native, grows well in variety of soils, except wet, clay. Fast growth to 100'. Long, soft, green needles in bundles of five. Graceful, plume-like crown. Good for timber and x-mas trees. Sensitive to salt and windburn.

Spruce, Colorado Blue (Picea pungens)

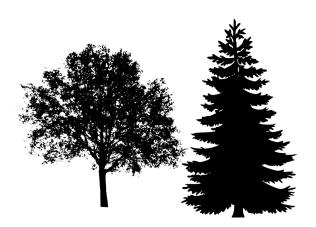
Most popular of all spruces. Stiff, 1³⁷ needles range from dark green to silverblue, depending on soil conditions and age. Grows best on moist, rich soils and will not tolerate drier conditions. Prefers full sun. Slow starting native, reaching 100' at maturity.

Spruce, Norway (Picea abies)

Fastest growing spruce. Has extremely attractive, strong, sweeping branches. Shiny 1" flat needles. Prefers well-drained, moist soils. Grows to 100'. Recommended for windbreaks and screens.

Spruce, White (*Picea glauca*)

Very hardy native, does well on variety of soils. Endures heat, drought, and crowding conditions. Grows to 60'. Dense, stiff, light green 1" needles. Good for windbreaks, pulpwood, and Christmas trees.



Birch, Canoe(Betula papyrifera)

Does well in cool, moist locations and can reach 80'. Oval green leaves turn bright yellow in fall and are a food source for butterflies. This native tree is also known as *Paper Birch* because its stunning snow-white bark peels off in paperthin layers and *Canoe Birch* since it was used by Native Americans to make canoes.

Cherry, Black (Prunus serotina)

Fast growth to 60' in various soil types. White flower clusters in May produce edible black fruits. Native tree used for furniture, firewood, jam, wine, wildlife food source. Easily identified by its thick burnt "cornflake" bark and when a young twig is scratched it has an almond-like scent.

Eastern Redbud (Cercis canadensis)

Rosy pink flowers appear in April. Reddish-purple leaves change to dark green, then to yellow. Forms a spreading, graceful crown. Full sun or light shade. Partial shade, performs best in soils with consistent moisture. Grows to 20' to 30', 30' spread.

Hazelnut, American (Corylus americana)

Also known as *Filbert* this large, multi-stemmed native prefers rich, well-drained soil and is pH adaptable. Growing to 8-15' tall, it is shade tolerant. Its long slender 8" catkins produce an acorn-like nut in late September that is enjoyed by humans, small mammals, deer, ruffed grouse and other large birds. Will create thickets from root sprouts.

Hickory, Shagbark (Carya ovata)

Plant a shagbark hickory in a large landscape for excellent shade. This Midwest native is named for its bark, which peels away in large, flat, curving plates, giving the tree a shaggy appearance. As a member of the walnut family, the hickory produces edible nuts. Enjoys moist, well drained soil. Matures to 60-80' tall.

Maple, Red (Acer rubrum)

Known for its bright red flowers in early spring. Green foliage turns a brilliant redorange in fall. Grows fast to 100'. Tolerates wet and swampy to rocky soils. Native widely used for wetland plantings. Great for wildlife habitat.

Oak, Red (*Quercus rubra*) Native that does well on sandy to rich, loamy soils. Grows fast to 90'. Lustrous canopy of green leaves turn reddish-brown in fall. And "ski track" appearance on mature bark. Has small red flowers in Spring. Produces 1" acorns. Tolerates city conditions. Excellent for lumber and wildlife.

Oak, White (Quercus alba)

A popular native shade tree that grows to 60-80' tall and is about the same in width as it is tall. It has irregular branching and attractive flaky, light gray bark. Rounded, grayish-green 4-8" long leaves become purple-red in the fall, dull leaf tips. Prefers full sun and acidic soil. Its small 1" acorns are popular with wildlife.

Pecan, Northern (Carya illinoensis)

Also known as Hardy Pecan, this native starts bearing nuts in 8-10 years. Best in rich, moist, well-drained soils in full sun, it typically grows 75-100'. Medium green leaves turn yellow in summer and brown in fall. Non-showy, greenish-yellow flowers in May give way to sweet, edible nuts in the fall. Each nut is encased in a thin husk which splits open in four sections when ripe, making a very decorative look. Like its cousin, the hickory, its hard wood is used for flooring, furniture and cabinets. A great urban shade tree. Acors attract wildlife.

Persimmon (Diospyros virginiana)

An Eastern US native that grows 30-60' tall and 35' wide, in moist, sandy soils and full sun to partial shade. Distinctive dark gray bark and rounded oval crown. White to greenish-yellow flowers in late spring. Ripe, soft orange fruits in fall, so sweet you can eat them straight off the tree, are used for syrups, jellies and pies. Leaves can be used for teas. Great for rain gardens. Tolerant of drought, clay soil and air pollution.

Sycamore (Plantanus occidentalis)

This native tree is fast growing to 75' with a massive trunk of coarse mottled bark. It prefers moist soil and full sun. Deep red flowers in late March, followed by fuzzy-looking rounded fruit and yellow-brown Autumn foliage. Good urban tree. Can be used on difficult sites.

Tuliptree (Liriodendron tulipifera)

This native likes full sun, moist slightly acidic soil and grows to over 70' tall. Its massive trunk boasts attractive gray bark and unique tulip-shaped leaves that turn golden in autumn. Beautiful flowers that bloom May to June resemble yellow - green tulips with reddish - orange centers.

Walnut, Black (Juglans nigra)

Grows well in deep, moist soils to 100'. Has a broad oval crown and compound leaves of 15-25 dark green leaflets. At 4 to 6 years old, it will produce flavorful, oil-rich sweet nuts in September to October. A native whose lumber is valued for furniture, cabinets, flooring and gun stocks.

DECIDUOUS SHRUBS

Butterfly Bush (Buddleia davidii)

Multi-stemmed, with fragrant 4-10" flowers summer thru fall. Grows very quickly in all types of soil to 8'. A little heavy pruning each spring will keep it under control. Plant near a garden to attract hummingbirds, butterflies and bees.

Cranberry, American (Viburnum trilobum)

Fast growing to 8-12' this native prefers well-drained to moist soils. White flower clusters in May. Yellow to red fall color. Sour edible red fruits present summer thru winter are rich in vitamin C and enjoyed by humans and wildlife.

Dogwood, Red Osier (Cornus sericea, syn. C stolonifera)

Dense, fast growing 7-9' native also known as *red twig* for its dark red bark. Does well in damp soil conditions and is frequently used for bank erosion control. Hardy and attractive, it produces white flowers and berries, and boasts a purplish red fall color. Brilliant red stems are very showy in winter.

Elderberry (Sambucus canadensis)

Vigorous grower to 12' in any type soil. Multi-stemmed, with clusters of purpleblack fruits in late summer, used for jams and wine. A great native wetland plant. Good food source for wildlife.

Lilac, Common (Syringa vulgaris)

Easy to grow, old-fashioned favorite. Masses of fragrant white to lavender flowers and bright green leaves in Spring. Will grow in well-drained soils to 15'. Makes beautiful natural screen spreading 6-10'.

Ninebark (Physocarpus opulifolius)

Easily grown deciduous native shrub, in full sun to part shade, and in a wide range of soil types. Noted for its reddish exfoliating bark and showy pinkishwhite five petal flower clusters May-June. Has drooping reddish seed capsules and bronzy fall coloring. Grows upright to 10'. Used for hedges and erosion control on streams and rocky banks. Great for borders and winter wildlife habitat. An attractive addition to pollinator gardens. Able to withstand harsh conditions.

Rose of Sharon (Hibiscus syriacus)

A member of the mallow family, this multi-stemmed, vase-shaped shrub grows 8-12' in various soil types and full to part sun. Has small green leaves and hibiscus type, bell-shaped flowers favored by hummingbirds and butterflies.

Serviceberry (Amelanchier alnifolia)

A native to North America, this 6-20' suckering multi-stemmed shrub thrives on moist, well-drained acidic soil and tolerates a wide pH range. White flowers in April produce dark purplish fruits in June. That is how it got its other recognized name of "Juneberry". This shrub is enjoyed by many types of birds. Prune regularly for best fruit production.

Winterberry (Ilex verticillata)

Slow growing deciduous holly, easily grown in average or acidic, medium to wet soils, in full sun to part shade. Native upright, rounded shrub that typically grows 3-12' tall. Greenish–white flowers in spring give way to showy, bright red berries in late summer to fall, which persist thru winter on bare branches. Has elliptic, toothed, dark green 2-3" leaves that turn shades of maroon in autumn. Important food source for birds, especially the American Robin.

****SPECIAL OFFERS****

American Chestnut (Castanea dentata)

The American Chestnuts were once one of the most plentiful, versatile and valuable forest trees in the eastern United States, until a blight in the early 1900s virtually eliminated most natural stands. This 100' tall hardwood was an important component of forestland that covered millions of acres. Its' straight, beautiful wood was widely used for railroad ties, fence posts, construction lumber, and furniture. It was also very important for wildlife, providing a prolific amount of nuts for white-tailed deer, wild turkey, black bears, and others. American Chestnuts do best in full sun on porous soils of moderate depth and fertility, such as rocky hillsides and gravelly or sandy soils. For pollination, plant all seedlings less than 100 yards from each other where their roots will not be disturbed. Rapid growers, they will produce nuts within 7-10 years.

Apple Trees:

All trees are 4-6' tall, 1/2"to 5/8" caliper, bare-root. The Nursery supplier will select and pack an assortment of various types for quality pollination. **Starter Package (5 trees)**

Hardy, easy to grow varieties preferred for blight resistance and persistence. Wildlife Package (5 trees)

Excess or misshapen trees not adequate for orchards, these are still suitable to enhance a backyard wildlife area and provide food for people, birds, deer, and other wildlife.

**CONSERVATION PACS **

Each pac contains 10 seedlings total - 2 of each variety

Edible Pac: Blackberry, Raspberry, Strawberry,

Blueberry- Blue Ray & Jersey Plant in sandy, well drained soil. Full sun. Use trellises for blackberry and raspberry. Water strawberry more frequently while fruit is forming (1-2"/wk). Space blueberry 4-6' apart with both types in close proximity for pollination.

Nut Tree Pac: Five Oaks– White, Swamp White, Red, Pin, Sawtooth All selections grow 50-80' and require at least 6 hours of sun daily. Acorns provide food for not only humans, but a variety of birds and other wildlife.

Perennial Pac: Daylily- Dream Baby, Frances Fay, Stella De Oro Iris- Blue King, Snow Queen Plant in full sun to partial shade. Will flower year after year.

Wetland Habitat Pac: River Birch, Willow, Sycamore, Buttonbush, Red Osier Dogwood These attractive trees and shrubs like the moisture and will provide hal

These attractive trees and shrubs like the moisture and will provide habitat for birds and other wildlife in the wetter areas.

OTHER ITEMS

Pachysandra (Pachysandra terminalis)

A carpeting plant with an interesting leaf pattern and inconspicuous white spike flowers. Grows 6-12" high in well-drained soil. Excellent for heavy shade.

Milkweed Seed

Monarch butterflies cannot survive without this host plant. Females only lay their eggs on native milkweed because their young caterpillars need it to grow and develop. Milkweed is disappearing from our landscapes. Planting it will not only help the Monarch, but the nectar is enjoyed by many other pollinators and hummingbirds as well. Plant in full sun to part shade, 1/2" deep in well-drained soils. Blooms sweet-scented light purplish 2-6' tall flowers in summer. Named for its milky white sap, it produces pod-like fruits that split to release new seed attached to fluffy, silky hairs that aid in wind dispersal. NOTE: Seeds need cold stratification. Place them in refrigeration for 30 days prior to planting. ALSO: DO NOT SPRAY THIS PLANT! Pesticide use is toxic to monarchs and their offspring.

Wildflower Seed

A **100% pure seed** mix of balanced blends of annual and perennial native wildflowers. Good for renovating old pastures, commercial sites and unused portions of lawn. Can be planted on moderate slopes to stabilize soil. Will grow in all soil types, even poor. The better the site, the better the outcome.

Deer Plot Mix

Mix of annuals and perennials that will attract and maintain deer. Includes several ryes, clovers, wheat, alfalfa, timothy, proso millet, birdsfoot trefoil, sainfoin, lathco flatpea, cicer milkvetch, and much more. Also good for birds and rabbits. Annuals provide growth the first year and act as nurse crop for perennials. Plant generously in open fields, along trails, or the edge of woods.

Tall Mix

Contains 20 short and tall varieties of annuals, including sorghums, millets, beans, and sunflowers. Grows 4 to 8 feet tall. Excellent for planting along fence lines, edges of woods, and strips in fields. Attracts pheasant, dove, quail, and turkey.

Fertilizer Tablets

A slow-release pellet 20-10-5 (nitrogen-phosphorous-potash) made specifically for 1-2 year old seedlings. Safe, easy, convenient. Planting instructions included.

PICKUP INFORMATION Mark your calendars now!!

If you cannot pick up your order on the scheduled dates, please make arrangements with someone to pick it up for you. We do not have the space to keep the order past the pickup dates.

Pickup Days: Friday, April 22, 2022 8:00am to 4:00pm Saturday, April 23, 2022 9:00am to 12:00pm Location: Merchant Building – Niagara County Fairgrounds 4487 Lake Ave (RT 78), Lockport

Extra Trees:

Unsold seedlings will be available for sale on a cash and carry basis on the above pickup dates. We will not know until our prepaid orders are packed what the limited selection will be, so please come and browse!

Annual Fish Sale

Order Deadline: April 29, 2022

TENTATIVE Pickup Date: third/fourth week of May (We will call you the week before with time and date)

General Information: Stocking rates usually are 50-100 bass and a minimum of 1000 minnows/shiners per acre. NOTE* Do not skimp on stocking minnows, as game fish cannot grow without an adequate supply of natural food.

If your pond is relatively new, be sure there is vegetation for reproductive habitat and aquatic life for a food chain. Recommended time to establish a pond with minnows before stocking other game fish is one year.

You must obtain a stocking permit from the DEC prior to pickup. Applications are available in our office or on our website, www.niagaraswcd.com.

Pickup Information: Pickup will be at the SWCD office located at the northeast end of the Coop. Extension Administrative Building on the County Fairgrounds, Route 78, Lockport. At the time of pickup, you will need to bring a container with a lid filled 1/2 full with pond water. These fish are highly perishable and must be transported as quickly as possible. The hatchery personnel will be available for only 1/2 hour for delivery so PLEASE BE PROMPT!



Annual Grass Carp Sale

Order Deadline: April 29, 2022

TENTATIVE Pickup Date: third/fourth week of May (We will call you the week before with time and date)

General Information: The average size of the carp will be between 12-14". Stock triploid grass carp in ponds which have been properly protected so they are unable to escape through inlets and outlets into other NYS waters.

You **MUST** obtain a stocking permit from the NYS DEC <u>before submitting your order</u> because the issued permit tells you how many carp you are allowed. Permit applications are available in our office or on our website, www.niagaraswcd.com.

Pickup Information: Pickup will be at the SWCD office located at the northeast end of the Coop. Extension Administrative Building on the County Fairgrounds, Route 78, Lockport. At the time of pickup, you will need to bring a container with a lid filled 1/2 full with pond water (an 18-gal plastic tote holds 4 carp). These fish are highly perishable and must be transported as quickly as possible. The hatchery personnel will be available for only 1/2 hour for delivery so PLEASE BE PROMPT!

Call us for more information on how Grass Carp can benefit pond weed control.



Payment Information: Submit payment by check or money order with the bottom portions of these forms, payable to Niagara County SWCD. Keep the top portions as your delivery reminders and container/water needs for pickup.

	2021 Pond Stoo	cking			2021 (Grass Carp	Stocking	
Type of Fish	Cost	# of Fish	\$ Amount		Type of Fish	Cost	# of Fish	\$ Amount
Perch 3-4"	20/\$65			1	Grass Carp 12-14"	ea./\$22		
Bass 4-5"	20/\$65			1				
Catfish 4-5"	15/\$30						Subtotal	
Sunfish 2-4"	25/\$65			1			+ Delivery	\$4.00
Golden Shiners 2-3"	50/\$28			1			Total Due	
Fathead Minnows 1"+	100/\$20				(*NYS	sales tax <u>not</u>	required)	
Fathead Minnows 1"+	1000/\$150			1				
	•	Subtotal		1				
(*NYS sales tax include	ed as required)	+Delivery	\$4.00	Nam	ne:			
		Total Due		Addi	ress:			
Name:				City:	<u>.</u>	State:	Zip:	
Address:				Day	time Phone:			
City:	State:	Zip:						
Daytime Phone:					Mail with paymen GRASS CA		ORIGINAL D	<u>.E.C.</u>
Mail with payment to:					ara County			
Niagara County SWCD				4487 Lake Av	venue, Lock	port, NY 1409	94	
4487 Lake Av	venue, Lockpor	t, New York 14)94					

Types of Fish Available

Perch - The true perch of New York State include some of the best tasting and most popular freshwater fishes. As a family, they are widely distributed, adaptable to a wide range of habitats, and fun to catch on rod and reel. In addition, the less known members of the perch family, the darters, are probably the most colorful freshwater fish in North America. True perch are spiny-rayed fish which have one or more sharp spines on their fins. While they are quite variable in appearance, they all are slender in body shape, have two dorsal (back) fins, and one anal fin. True perch can be separated into two groups: larger perches and smaller perches.

Largemouth Bass - Found throughout NYS, they are considered one of the state's most important sport fish. These members of the Sunfish Family (Centrarchidae) prefer weedy, rocky areas to provide both protection and food supply. Usually weighing 3-5 lbs, they can get over 10 lbs and 2 feet in length. They are carnivorous; which means they'll eat small fish, crayfish, frogs, snakes, and some small mammals and birds if given the opportunity.

Channel Catfish - Catfish are characterized by scaleless skin and barbels, better known as whiskers, about their mouth. Channel catfish have a deeply forked tail and dark spots. The spotting, however, diminishes with age. Consequently, older channel cats are frequently mistaken as blue catfish. But the anal fin on blue cats has a flat outer edge and channels have a rounded edge. They can grow to be 4ft long and weigh up to 58lbs.

Sunfish - Sunfish include pumpkinseed and bluegill. They are small to medium-sized fish with a single anal fin (bottom rear) and a two-part dorsal fin (back). They are spiny-rayed, with one or more sharp spines found on their dorsal, pelvic (bottom front) and anal fins. These spines help protect them from being eaten by large fish and can prick the fingers of any angler who is not careful when removing the hook. Sunfish are green to brown on their backs and upper sides shading into brown, orange, or pink with traces of vertical bars along their bottom sides. The breast is yellow to copper-orange, and the sides of their heads have metallic blue and green overtones. The large, square-shaped, blue-black gill flap and conspicuous dark blotch on the back of the soft-rayed portion of their dorsal fins distinguishes bluegills from their close relatives, the pumpkinseed. Both fish average four to ten inches in length.

Golden Shiners - The golden shiner can be found throughout most of the US. These fish can be found in large schools around submerged structures where they primarily feed on zooplankton. The golden shiner spawns several times throughout summer while the water temps are 68-81 degrees. Spawning can be aided with the use of structures such as sunken evergreens or stacked pallets. The abundant reproduction of this fish makes it an excellent choice for stocking where predatory species are present. These fish are larger than fathead minnows (up to 6 inches in length) and are preferred by large predators.

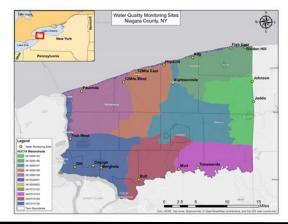
Fathead Minnows - Fathead minnows are small and seldom exceed 3 inches in length. They are sturdy, heavy-bodied fish with small mouths and a lateral line that stops under the dorsal fin. They are generally dull in color, with dark bodies and a slight brass tint on the sides. They prefer ponds and slow moving water in streams. Fatheads spawn every 21 days, attaching their eggs to the under-side of hard surfaces in the water, such as rocks, boards and PVC pipe, in warm waters of 65-85 degrees from April to September.

Triploid Grass Carp - The grass carp (Ctenopharyngodin idella) is one of the largest members of the minnow family, commonly reaching weights in excess of 25 ibs. They can live up to 10 years. Native to Asia, this carp lacks the barbells and spiny dorsal and anal fin rays characteristic of its North American relatives, bearing a closer resemblance to a large creek chub. It is called "triploid" since it has been bred to retain an extra chromosome, rendering it sterile. Grass carp feed strictly by grazing on aquatic vegetation and are effectively used as aquatic plant control agents in over 50 countries.



Niagara County Water Quality Monitoring

In 2020 the district restarted a county wide water quality monitoring program. The program involved visiting 17 creeks across the county to record weekly water levels and take monthly water samples to be tested for nutrients such as nitrogen, phosphorus, and ammonia. Our project partner, SUNY Brockport, summarized the data and recommended more extensive sampling on Keg Creek. While Keg Creek is a relatively small watershed there were high concentrations of nitrates. More intensive monitoring will help find sources of nutrients to make specific recommendations on how to improve the watershed. Water sample collection in the Keg Creek watershed started in November 2021. Sampling will continue through mid-2022 with a final report complete in late 2022.







THE 2021 JAPANESE KNOTWEED SEASON IS A WRAP

The Niagara County Soil and Water Conservation District has been working on eradicating the invasive Japanese Knotweed for seven years. To date we have treated over 400 sites and 55 acres. It takes a combination of injecting and spaying pesticide multiple times to kill the plants. A special thank you to WNY PRISM for their help this year. WNY PRISM works to rid Western New York of plant, bug, and aquatic invasive species. Please visit their website at www.wnyprism.org. If you think you have a patch of knotweed you would like treated please contact our office at 716-434-4949 ext. 4 and we will be happy to take a look!

Please contact the office with any questions

DISTRICT COMPLETES AEM YEAR 16 GRANT

The Niagara County Soil and Water Conservation District has been working on the Year 16 Agricultural Environmental Management (AEM) program since January 1, 2020. The AEM program recently started following a two-year project grant cycle which will end December 31, 2021.

The first part of this project involved farm planning with local landowners to document existing environmental stewardship and identify potential environmental concerns. To complete this part of the grant NCSWCD completed:

- 24 Tier 1 Questionaries
- 21 Tier 2 Assessments
- 20 Tier 3A Conservation Plans
- 12 Tier 5A Plan Updates
- 8 Tier 5B Plan Reviews
- 14 Tier 5B Best Management Practice (BMP) Reviews

This grant provided \$130,000 to the District for time spent on completing tier planning along with outreach, education, partnership and reporting for the grant.

The Year 16 AEM grant is the first grant to also provide funds for implementation of projects identified during our AEM planning with local landowners. Our first project completed was on the Strobel Farm in Newfane. The project took land planted in row crops and converted it to permanent pasture for raising beef cows, to sell locally on the farm and farm markets. This project reduced potential erosion by converting row crops to sod. It also helped with climate change by reducing the greenhouse gases from harvesting forage and spreading manure with equipment to the cattle harvesting their own feed and the manure going directly onto the pastureland. NCSWCD partnered with NRCS to complete fencing and laneways to move the cattle out to the pasture without creating heavy use concerns on our wet clay soils. Next year the remaining fence and watering system will be completed to get the cattle on the pasture. There are several additional projects in the works but they have been delayed due issues from Covid 19 over the last two years.



Non-Discrimination Statement

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity employer."

ADDRESS SERVICE REQUESTED



Niagara County Soil & Water Conservation District 4487 Lake Avenue Lockport, New York 14094

