March 2024

Quarterly NEWSLETTER

DATES TO REMEMBER

April:

- 2 - Community Options presentation, Broome County
- 18 - Fly Fishing Group Outreach, Endicott, NY
- 20 - Earthfest @ Milford Central School
- 23 - Water and Aquatic Insect Sampling @ Morris Central School

May:

- 2 - CREP Training in Schenevus
- 9 - CREP Training in Spencer
- 11 - BVA Workday at Mussel Flats, Otsego County / Salt Springs State Park Planting, Susquehanna County, PA
- 16/17 - OFA Riparian Planting
- 18 - South Otselic Fishing Day
- 22 - Virtual Steward Training
- 23 - Steward Workday in Tioga County
- 29 - Steward Workday in Broome County

June:

- 4 - Steward Workday in Otsego County
- 5 - RFB Task Force Meeting, Binghamton
- 6 - Steward Workday at Kehoe Nature Preserve, Big Flats, NY
- 8/9 - On the Trail of Art, Texas School house State Forest, Otsego County
- 12 - Steward Workday in Madison County
- 18 - Steward Workday in Delaware County
- 26 - Steward Workday in Bradford County

IN THIS ISSUE

Project Spotlight:
Madison County Covered Barnyard

By: Troy Bishopp , USC Grass Whisperer & Madison SWCD Grazing Specialist

The Madison SWCD partnered with an organic and two conventional, local dairy farms to construct 3 covered barnyard systems for milk cows and dairy replacements in 2023. These extensive projects addressed uncontrolled barnyard runoff and nutrient management concerns identified in the farm's AEM & CNMP plan as well as animal health and labor management goals. District staff provided planning, designs, construction help, countless hours of construction oversight and project certification working with Professional Engineer, Don Lynch. The farms provided labor and financial resources to the projects and utilized funding from the NYS Environmental Protection Fund, the USC Landowner Cost Share Program and the USC/NRCS Regional Conservation Partnership Program to complete the work

Organic covered stacked manure pad

Organic covered barnyard

Covered barnyard for dairy replacements

Covered barnyard for dairy heifers

Virtual USC Buffer Steward Training - SAVE THE DATE!

By: Ava Glasser , Upper Susquehanna Coalition

The annual virtual training for newly hired USC buffer stewards will be held on Wednesday, May 22nd from 9:00 am-1:00 pm. The training will cover many topics related to riparian forest buffer implementation and establishment, including survival assessment, invasive and native plant ID, field safety, data management, and more! All district staff are welcome to attend as well- it will be a great opportunity to meet our newest staff members and learn about developments in buffer stewardship in the watershed.

Register for the training here: www.u-s-c.org/stewardtraining and please reach out to Ava Glasser at glassera@tiogacountyny.gov with any questions about the training. Sign-ups for the in-field training steward workdays will be available soon as well- stay posted!

USC BUFFER STEWARD VIRTUAL TRAINING

May 22nd, 2024
9am-1:00pm

Learn the basics of buffer stewardship, from field safety to survey and assessment protocols. Contact Ava Glasser at GlasserA@tiogacountyny.gov with questions.

Register here:
www.u-s-c.org/stewardtraining

Mariposa Heights Farm Awarded Madison County Conservation Farm of the Year

By: Troy Bishopp , USC Grass Whisperer & Madison SWCD Grazing Specialist

DeRuyter, NY--When Central New York Meteorologists reference the wild weather extremes in the hills of Madison County, they often talk about Brookfield, Lebanon, Cazenovia and a patch of hill country in DeRuyter that don't reflect "normal" weather predictions.

For those who farm in those areas, they regularly laugh, a defiant laugh, as they see the valley blanketed with precipitation knowing full well the temperature change can bring them copious amounts of snow, sleet or a heavier, colder rain. It makes for a hearty, resilient farmer. One such man and his family is Ted Fuller.

For generations, Mariposa Heights Farm founded by the Fuller family has milked cows, made crops, produced beef and raised equally hearty children on land resources that rise up to 1800 feet of elevation and feed communities downstream. It wasn't an easy journey for Ted and Becky; whose life's journey was cut short by cancer in 2020.

The legacy of dairy farming started in 1974 down Mariposa Road in Chenango County and in 1983, the former Richard Moyer dairy farm was annexed higher up the road into Madison County. Running both properties and making a profit in a challenging dairy market came to a difficult conclusion in 2003 when the milk cows were sold with the home farm being sold in 2004.

Part of living in a harsh environment is adapting to change. Like many dairy families of that era, working off the farm became a reality for the Fuller family, with Ted driving school bus fulltime since 1996 (28 years) and Becky having a teaching assistant career in area schools. And since farming was in their blood, they called their smaller, Madison County 60-acre sod farm with its abundant water resources and rolling topography, home.

In 2012, the Madison County couple caught the passion for raising hearty, registered Red Angus cattle to complement their work schedules, sell breeding stock and freezer beef and teach the next generations the nuances of beef production while filling the family's freezer with homegrown meat. With over 40 head of cattle on the ground, Becky knew improving soil health would be paramount for their resiliency and slowing runoff atop the Tioughnioga River Watershed.

She worked extensively with Jessica Heim, Madison County Soil and Water Conservation District's, CCA-accredited, Nutrient Management Planner to get soil sampling done and lay the groundwork in decision-

making for applying manures and fertilizers to enhance the hay and pastureland and in turn the health of the animals and water holding capacity of the soil.

Becky's legacy of learning started a 6-year journey of improvement for the land and farmstead.

Ted worked with district staff using the Agriculture Environmental Management (AEM) planning framework to build common-sense conservation measures in a smaller farm context. The first projects focused on establishing and constructing a rotational grazing system geared towards Ted's daily workload off the farm with a secure perimeter high tensile fence and complimentary paddock subdivisions attached to a laneway for ease of people and cattle movement. To facilitate the nutrient management goals on pasture, an above ground water system was piped throughout the system to keep the cattle happy in the paddocks and secondary hay fields nourishing the microbes.

The farm's soil health systems and watershed were further enhanced by a 5-acre, district-planted riparian forest buffer and stream/pond exclusion fence for the resident wildlife population. Recognizing the importance of cattle manure for the land, a new barnyard with associated stoned walkway, reinforced stream crossing and vegetated treatment area was built in 2022/23 to ensure proper collection of valuable nutrients and land applied at the right time.

Funding to implement these soil health projects were provided by the farm, the Upper Susquehanna Coalition's Water Quality Program, NYS Trees for Tributaries Program and the NYS Environmental Protection Fund.

"I appreciate the labor savings, healthier cattle, improved forage quality, the longer growing season up here, and less mud to deal with, said Fuller. Working with the district to improve our operation has been easy while also contributing to water quality coming off our "mountain" delivered to my watershed".

"It's important to work together and have a level of trust that gets the job done for our community. It's a story that resonates well with my beef customers and downstream neighbors."

"As the cows begin to calve for another season and the trees mature, receiving the Madison County SWCD Conservation Farm of the Year is a kind of testament for local folks working together on behalf of our children and grandchildren's environment. It's something I feel good about as a farmer", said Fuller.

"We appreciate working with the Fuller family to enhance the natural resources for all Madison County residents to enjoy while supporting the farm's endeavors for a sustainable future, said Steve Lorraine, Madison County SWCD District Manager. We love seeing all the grandchildren connected to the farm. It brings us pride in helping another farm family."

"As the District's 43rd awardee, we appreciate Ted's commitment and Becky's legacy in supporting our mission of enhancing wise use of county soil and water resources," said SWCD District Board Chairman, Rick Barnes.

To learn more about the positive attributes of conservation planning and implementation, give the Madison County Soil and Water Conservation District a call at 315-824-9849 or visit madcoswcd.com.

Narrative and Pictures that Garnered NACD Photo Contest Winner

By: Troy Bishopp , USC Grass Whisperer & Madison SWCD Grazing Specialist

In July of 2023, the South Dakota based, Ecdysis Foundation and their National Soil Health "1000 Farms Initiative" led by Dr. Jonathan Lundgren and his team spent a week in Central New York sampling 15 farms in and out of the watershed. Madison County hosted a Regenerative Ag Field Day where the scientists shared their context, lessons learned and took 60 farmers into the fields to show their diverse, hands-on sampling methodologies & techniques to gauge ecosystem processes and look for cool bugs and plant communities. Their visit generated copious amounts of photo ops for the "Grass Whisperer" over a week's time. One picture, in particular, of Dr. Lundgren showing off a healthy pasture root system was submitted to the National Association of Conservation Districts photo contest and became a winner for Grazing Specialist, Troy Bishopp in the "close-up conservation" category.

Practicing Gratitude

By: Troy Bishopp , USC Grass Whisperer & Madison SWCD Grazing Specialist

Morrisville, N.Y.--- Psychology Professor and Gratitude Researcher, Robert Emmons, from the University of California-Davis, says practicing gratitude "affirms the good things we've received while acknowledging the role other people play in providing our lives with goodness". The sentiment is apropos in the relationship business of putting conservation on the ground.

For the 13th year of practicing gratitude, The Madison County Soil and Water Conservation District, its Board of Directors, and staff, held their annual customer appreciation luncheon at the Madison County CCE Event Center in Morrisville, New York. With over 70 guests in attendance, the casual get-together showcased an extensive slideshow of projects implemented. The day serves to appreciate the families of farmers, contractors, local businesses, county highway staff, county supervisors, engineering support, area legislators, state and federal conservation partners and funding organizations who partner to support local conservation practices, initiatives and projects.

The many hands help the district initiate its mission to promote voluntary, economically viable and environmentally conscience agriculture through the continual implementation of diverse projects with planning from a locally led Agricultural Environmental Management Program (AEM).

The effort in 2023 was still challenging due to unpredictable weather, construction material delays, untimely concrete deliveries and finding available contractors who were extremely busy. District Manager, Steve Lorraine and his staff of 8 secured funding opportunities for the design and construction of grade stabilization projects, municipal culvert projects, stream remediation, manure storage projects, pasture systems, fencing, laneways, spring developments, milk-house waste systems, heavy use areas, mortality composting facility, riparian buffers, conservation tillage and planting over 800 acres of cover crops locally.

"The timely work of the district and our partners has shown, after the recent flooding events, to help mitigate damage to critical infrastructure on roads and farms," empathized Lorraine.

Additionally, the district staff managed the construction projects, planted trees, installed fence on stream buffers, consulted on grazing management, developed, and applied nutrient management plans, took soil samples, delineated watersheds for culvert sizing, secured stream and lake permits, led educational training events and held the popular annual tree sale within their busy work schedule. The district also worked with the Upper Susquehanna Coalition, NYSDEC, NYS Environmental Protection Fund, and the Finger Lakes - Lake Ontario Watershed Protection Alliance (FL-LOWPA) to secure funding resources through year-round, extensive grant writing.

Groundbreaking Groundwater Recharge Study Released

By: Stacey Hanrahan, SRBC Communications & Outreach Specialist

Scientists in our Planning & Operations program recently published an innovative study focused on assessing groundwater recharge potential in our basin. The study – *Identifying Optimal Groundwater Recharge Locations and Critical Aquifer Recharge Areas within the Susquehanna River Basin* – was authored by Hydrogeologist Pierre MaCoy, P.G. and Hydrologist Graham Markowitz, P.G.

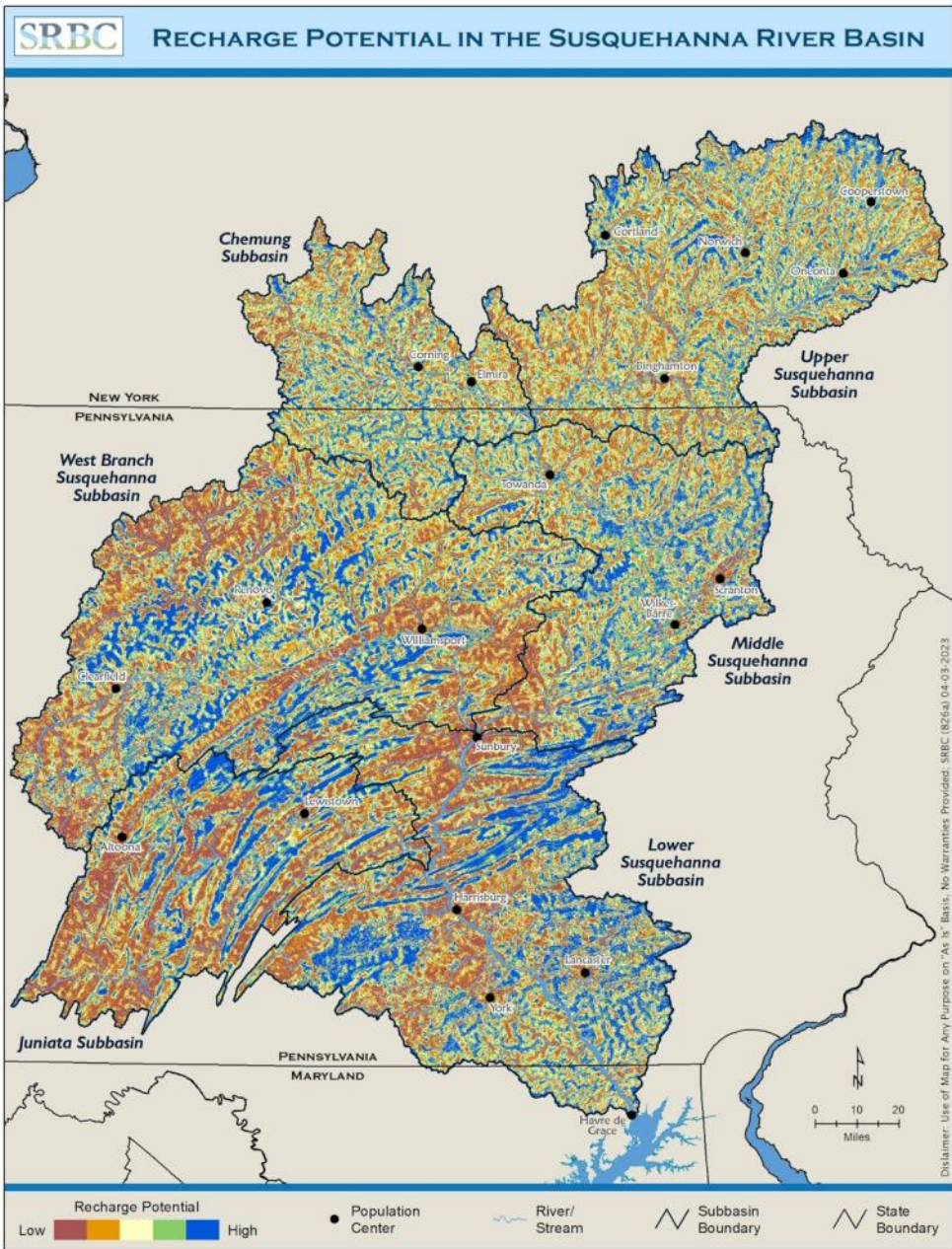
One SRBC objective is to identify open spaces and other land uses that provide for beneficial or increased aquifer replenishment. The Geographic Information Systems (GIS) tool developed for this study incorporates factors influencing recharge (for example, surface slope and underlying soils and bedrock) to locate areas of the basin with the best/highest capacity for sustained or enhanced recharge.

Additionally, the GIS framework can determine Critical Aquifer Recharge Areas (CARAs) where water supplies are in high demand or have become more limited amid development and increasing impervious cover. With the identification of CARAs, our staff and stakeholders can select and/or prioritize actions to ensure the sustainability of water resources during periods of drought, particularly in areas that could have the most potential for impact.

"Preserving and enhancing CARAs will assist with drought resiliency, improve or maintain water quality, and help sustain water supplies for future use," explained John Balay, SRBC Manager of Planning & Operations. "With this tool, we can inform agricultural and forested land preservation activities, aquifer/ stormwater recharge enhancement projects, and even abandoned mine land reclamation efforts."

All recharge datasets were compiled and stored in an ArcGIS Geodatabase and are available for download on the Pennsylvania Spatial Data Access (PASDA) geospatial data portal. If a local assessment of recharge potential in any region, county, watershed, or other scale is desired, a request can be made with the Commission through our website.

More information including the full report, an easy-to-read fact sheet, and maps displaying recharge potential throughout the basin can also be found on our website.



The recent NYS CDEA Water Quality Symposium featured many of the USC district family providing training and receiving awards for their work.

District Director Award- Larry Lewis, Yates County SWCD Board Chairman (left)

Partner Appreciation Award- Matt Swayze, NYS DEC Forester (bottom, left)

Division 4 Merit Award- Brian Danforth, Delaware County SWCD Civil Engineering Technician (right)

President's Award- Shawn Murphy, Cortland SWCD Natural Resource Conservationist (bottom, right)

The Silvi-Corner: *NYSSA SYLVATICA*

By: Ava Glasser, Upper Susquehanna Coalition

Nyssa sylvatica, also known as black gum or black tupelo, is a medium-sized deciduous tree native to eastern North America from the coastal Northeastern United States and southern Ontario south to central Florida and eastern Texas, as well as Mexico. The binomial name translates to “water nymph of the woods”, as is fitting for a tree found often in wooded creek bottoms and swamp margins. One of the common names, tupelo, is of Native American origin, coming from the Creek words *ito* "tree" and *opilwa* "swamp". While black gum can also be found growing in the uplands on well-drained, light-textured soils, it grows best on the moist loams of lower slopes and coves. Black gum is one of the longest living tree species in North America, capable of reaching over 650 years of age! On average, mature height for a black gum ranges from 40-70 feet, though they have been observed to grow up to 120 feet tall in the most favorable site conditions.

Black gum trees can be identified by a few key traits. The bark is grayish brown and deeply furrowed with rectangular or square scales. Trunks are typically very straight with branches growing outward perpendicular to the trunk, almost at a right angle. The leaves of black gum can vary in size and shape, from ovate to elliptical, but they always have a waxy surface with pale green undersides, and entire but somewhat wavy leaf margin. The fall color of the foliage is extremely vivid, and ranges from red to purple. Flowers and fruits are only found on female trees, since black gum is a dioecious species (staminate and pistillate flowers found on separate individuals). From late summer to fall, female trees produce green drupes that ripen to bluish-black in color, and are about 10 mm long. Fruits are edible, but very sour, and are a preferred and essential food resource for migratory birds. The greenish-white clustered flowers are also a rich source of nectar for bees, resulting in wild “tupelo honey” (Not just the name of a Van Morrison song!).

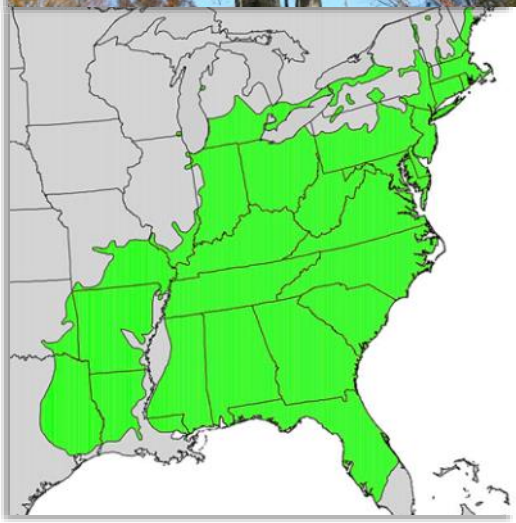
Since this tree can be found in such a variety of habitats throughout its native range, it has high value for wildlife and humans. Birds and mammals eat the fruits, insects use the nectar, and the natural hollows that form inside the trees due to decayed branches are a refuge for many animals that live inside them, including insects, birds, mammals, reptiles and amphibians. The hollow-forming habit of black gum trees has also been historically useful to humans; hollow sections of black gum trunks were formerly used as “bee gums” before modern beehives became common in North America. After European honeybees were introduced to North America, they became established in our forests, and feral colonies were often caught and housed in homemade makeshift hives made of hollow tree sections. Black gum trees were so popular for this use that the word “gum” became synonymous with “hive” throughout Appalachia, regardless of the source of the wood.

Black gum is a wonderful addition to most landscapes, and the USC is happy to offer this stock for free to qualifying landowners within the watershed as part of our Trees for Tributaries program this spring.

Flower and leaves details.
Photo credit: Jim Robbins.

Photo credit: eattheweeds.com

Photo credit: Delaware Forest Service.



Natural Range of Nyssa sylvatica. U.S. Geological Survey - Digital representation of "Atlas of United States Trees" by Elbert L. Little, Jr.