Quarterly

NEWSLETTER

DATES TO REMEMBER

December:

- 8 - Trees 4 Tributaries Fall Information Due
- 14 - goCrop App overview call - 1:30 pm
- 15 - Tree/shrub planting contractor estimate and large stock requests due
- 18 - Buffer Steward Program Webinar

January:

- 8-12 - Buffer Steward Program Office Hours with Ava (10 - 11 am)
- 18 - Buffer Steward Requests Due
- 23 - USC Ag Team Call

February:

- 15 - RFB Task Force Meeting
- 27 - USC Ag Team Call

IN THIS ISSUE

Stay Tuned for Annual Retreat Information

We've begun planning our Annual Retreat and are currently requesting estimates for retreat locations in the February - March 2024 timeframe. We will be sharing save the dates as soon as this process is completed. We expect to continue with the 2-day format with partners invited for Day 1 and USC members and staff the focus of Day 2, though are open to format and topic suggestions.

Project Spotlight: Manure Storage

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

The Madison County SWCD worked with the Palmer Family Organic Dairy Farm (2015 Madison County Conservation Farm of the Year) to construct a 40’ x 40’ x 10’ deep concrete manure storage facility with an 80-foot ramp to capture nutrients from an adjacent covered barnyard and used to fertilize fields from their 60-cow herd. The conservation project was successfully implemented using the AEM planning and Manure Storage Screening Tool and with design and construction oversight provided by the Conservation District. Along with the farm’s cost-share, additional funding for the project was provided by the New York State Ag Non-Point Environmental Protection Fund and the Upper Susquehanna Coalition Ag Non-Point Pilot Project.

Completed Project

before

during

Getting closer

Buffer Team Staff Head to the Bay!

By: Lydia Brinkley, USC Buffer Coordinator

The Upper Susquehanna Coalition is actively engaged in many Chesapeake Bay Program workgroups, including the Forestry Workgroup (FWG). The FWG "coordinates, develops and implements plans and projects which focus on the contributions of forest lands and restoring the health and productivity of the Chesapeake Bay watershed and in retaining their economic potential" (Chesapeakebay.net). All states have representatives that sit on and participate in the 2-hour monthly calls, and for New York it is the USC and DEC. The FWG also hosts retreats to expose those of us who work in forestry to the brackish, shallow water ecosystem and also so we can meet each other in person. This year the Alliance for the Chesapeake Bay hosted the FWG at the Karen Noonan Center in Crocheron, Maryland. The USC Buffer Team staff was excited to be able to take advantage of this opportunity this year, especially in the middle of volunteer planting season!

The Karen Noonan Center, owned and operated by the Chesapeake Bay Foundation, was once a great Chesapeake hunting lodge. The center is located near the Blackwater National Wildlife Refuge, one the largest tidal wetlands on the East Coast. The facility itself is a "green building" with alternative energy sources and composting waste facilities. As a group we explored underwater grass beds, oyster reefs, went "proggin'" for souvenirs, and set crab pots! While we were there, we saw dolphin pods, sea birds, fish and an eel. The experience gave the crew a great perspective and provided a great opportunity to meet the rest of the workgroup in person. It was tough to get away in the middle of planting season, but very worth it. Check out the Karen Noonan Center here: https://www.cbf.org/about-cbf/locations/maryland/facilities/karen-noonan-memorial-environmental-education-center.html

Chesapeake Bay Forestry Workgroup, photo by Katie Brownson. USFS

Exploring Conservation Projects Through a Historical Lens

By Jennifer Kelly, Chenango SWCD District Manager

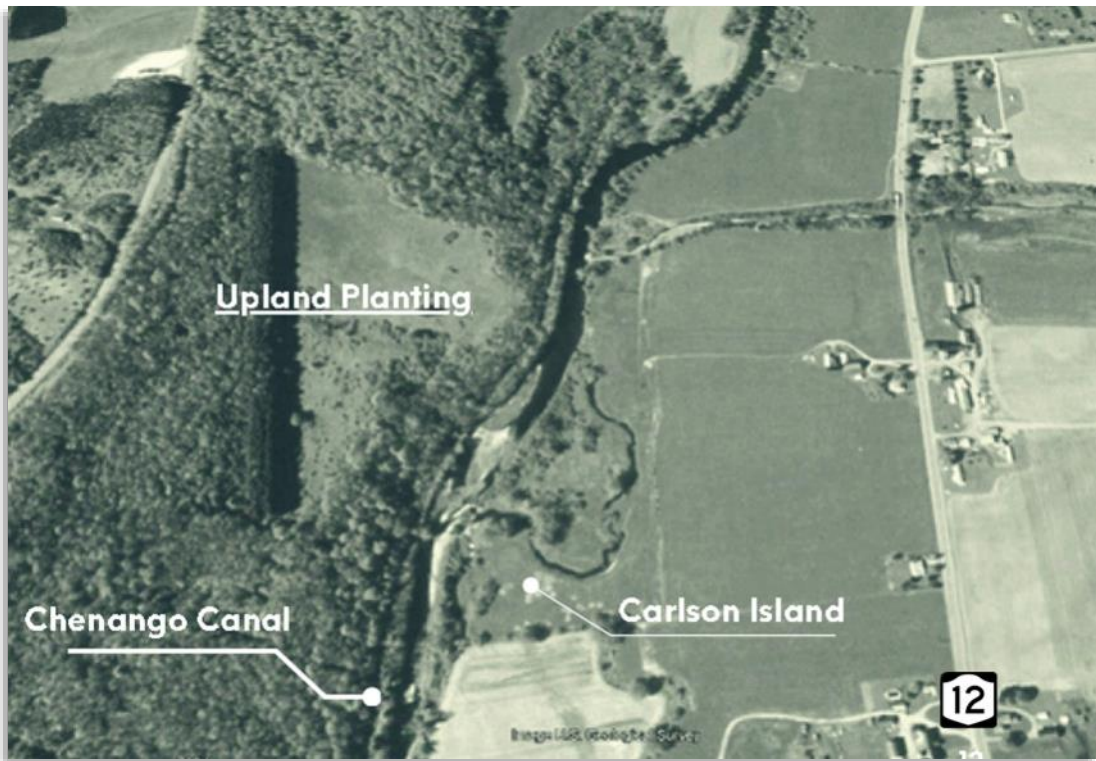
While working on conservation projects, it can be easy to overlook the historical significance of the sites we're working on. Most of the time, our projects are in places you cannot see from the road or are in remote areas, accessible only on foot and with permission. The opportunity to discover these tucked away places is a perk of working for the district. If you really surrender to the thought, it's as if you are an explorer with the job of mapping and photographing isolated areas that most people never knew existed.

After meeting with the landowner of our buffer and upland tree planting project, I finally understood that this idea is fantastical. Let's journey back in time to envision what a tiny corner of the world once called Carlson Island would have looked like throughout history.

Carlson Island is a 4.5-acre piece of land about two miles south of the Village of Sherburne on the Chenango River. Over time, and with the help of a few hurricanes, the Chenango River has gradually eroded around this piece to create a small island. After meeting the landowner, I began to read a Phase 1 cultural resource survey written by an archeologist in a similar area along the Chenango River Valley not far away to learn more about the history of the valley.

The survey describes that the Chenango River Valley was probably inhabited by humans shortly after the last glacial retreat, but only in small numbers. It wasn't until the Late Woodland Period began, around1,000AD, that historians see evidence of cultivation and projectile artifacts in the area. Humans subsequently adopted a diet primarily composed of corn, beans, and squash. Flat areas next to rivers and tributary confluences were prime areas for settlements. By the 15th century the Iroquois were well-established in the region and had a thriving agricultural system and large, fortified villages in the area. These villages were inhabited by members of the Oneida Indian Nation. European settlement began shortly after New York State Governor, George Clinton, purchased thousands of acres from the Oneida Nation in 1788 commonly known as the "Governor's Purchase." Settlers from New England came to the area and began to build log homes, saw and grist mills and churches. Sherburne was named after a popular hymn sung at church services. The soils in Sherburne are fertile and yield successful crops and because of this, Sherburne began to grow in both population and area. The forests were stripped of its pine, hemlock, maple, beach, elm, chestnut, butternut, oak, and hickory for its timber and to make way for more agricultural fields. Much of the croplands were planted with wheat, corn, and other grains. In the mid-19th century, one of the main agricultural products produced was wool, as the sheep population totaled nearly 22,000.

Change came again when the Chenango Canal was constructed in the 1830s. The economic success of the Erie Canal prompted the construction of the Chenango Canal as a means for the region to access larger markets in Utica and Binghamton. Interestingly, the idea of dredging the Chenango River was proposed as a speedier and more cost-effective option to building a canal but was quickly ruled out as an option.



At the beginning of the twentieth century, we learn the origin of Carlson Island's name. A man by the name of Andrew

Carlson emigrated to Sherburne from Sweden in 1892. He settled in Sherburne and began a dairy farm on the property. Under his ownership Carlson Island presents itself as a popular recreation spot for Sherburne residents. The Sherburne News, a local newspaper in the Village of Sherburne, published this on July 7, 1921 in the Church Notes section:

> Picnic Thursday, July 7, on Carlson Island. Autos will be at the church at 10:30 a. m. and ample transportation will be provided for all who wish to attend.,Let us have a full attendance from our Sunday School and the Church. Bring plates, cups, forks spoons and sandwiches for yourselves and the rest will be provided by the committee.

School picnic on "the island" September 12-19, 1914. 80 or more there.

Similarly, on July 27, 2021, the Sherburne News published:

> *"Carlson's Island is a very popular swimming resort these hot days. About four p.m. each day you will see several auto loads leaving town for an afternoon swim at this place."*

After Mr. Carlson died in the 1950s, two brothers took over the farm and used Carlson Island as pasture. The current owner took over the farm in the 1980s and sold the dairy herd just a few years ago. The agricultural fields are still in production, but Carlson Island is really of no use to anyone, except for the Conservation District.

The current owner took over the farm from his father and uncle and since then, the farm was split into pieces between one of his brothers and him. His brother happens to own a small construction company with whom we've worked with in the past to mow other riparian and upland planting sites. As it turns out, our mowing contractor was interested is an upland planting and managed to talk his brother into enrolling the riparian area into the Conservation Reserve Program. If you pass by today, either by kayaking the river, walking along the Canal or driving down Route 12, you'll see about 13 acres of tree tubes in the riparian area, including all of Carlson Island. It's our hope that with a little work, you'll see sycamores, willows, dogwoods and maples in the area once again.

As for the upland area, with the help of the USC's Water Quality program, a mixture of maples, cherry, and oaks were planted. With the help our new salesman, the district will continue to work in the valley. We have two sites more planting sites lined up for 2024.

Although our time in history is somewhat fleeting, the effects of our actions can last for generations. Our job is to uncover these secret spots with the intent to enhance and restore their natural function. This is truly the best perk of working for the district.

The information written in the article was obtained with the help of the Chenango County Historical Society and the book entitled, "Sherburne illustrated: a history of the village of Sherburne, New York, its scenery, development and business enterprises." by John Gomph, 1896.

Tioga SWCD News

By: Danielle Singer, Tioga SWCD

1. 2023 triticale cover crop planting in Berkshire, NY. Tioga County SWCD assisted 14 farms with cover crop payments on 1,415.5 acres through USC funds and AGNPS R26 this year.
2. Tioga SWCD AEM Specialist Heather Gulliford hanging out with some Kune Kune pigs on a site visit! This farm is working with the District on a project funded through AGNPS R27 with access road, exclusion fence, watering system, wetland restoration, riparian forest buffer and stream crossing components.
3. Tioga SWCD Stream Technician Mike Jura wrapping up construction on an AGNPS R28 project this fall. The project utilized riprap with rootballs, barbs and live willow plantings to stabilize the streambank. A riparian forest buffer planting will be added in the spring to finish the project.
4. Tioga SWCD completed construction on a small retention pond project funded through CRF R6 to mitigate erosion in a sugarbush, reduce peak stormflows from the property and add resiliency to the watershed. The project will receive a riparian forest buffer planting this spring along the active cropfield as the final component.

Cover Crops Tioga

Wrapping up a Stream Project

Retention Pond

Heather with KuneKune Pigs

Project Spotlight: Road Ditch Piloting from Madison County SWCD

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

Rock Lined Ditch After Construction

The Madison County SWCD designed and facilitated a rock-lined ditch replacement project on a 13% sloped, undersized, erosion -plagued ditch on a town road above the Sangerfield River tributary adjacent to a local dairy farm. The job consisted of impacting the farmer's pasture fields and fences to regrade, reshape and install right-sized culvert pipes, non-woven geotextile fabric and 240 tons of heavy rip-rap along a 1600 foot section of road to mitigate flooding and erosion issues on private land owners. A new high tensile fence was erected, and the project was seeded and mulched ahead of this summer's rainfall events.

Along with the farmer's cooperation and land access, the district utilized the Town of Hamilton Highway Department and Timberline Fence Company for construction and secured grant funding from Madison County's Flood Mitigation Program and the Upper Susquehanna Coalition's Road Ditch Pilot Project to complete the needed road upgrades.

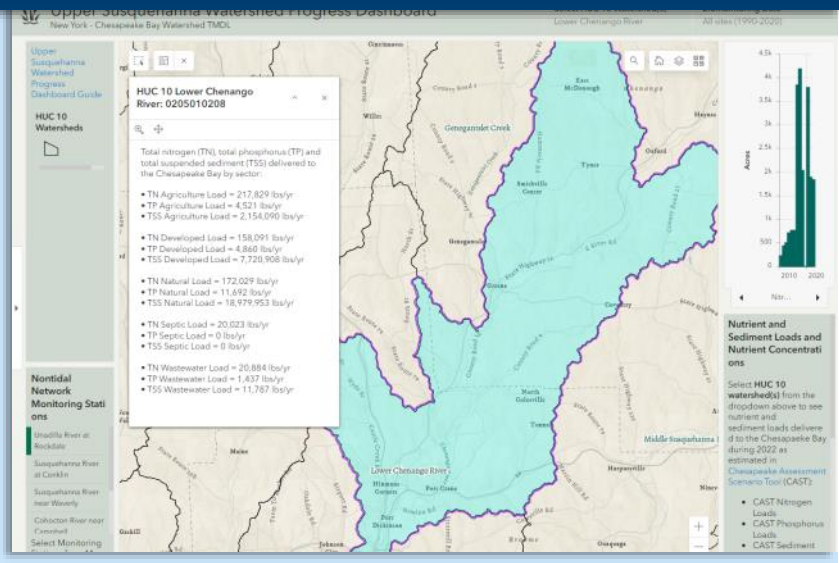
During Construction

Construction during wildfire smoke

After, with new fence

Digital Resource Updates

DEC's Upper Susquehanna Watershed Progress Dashboard



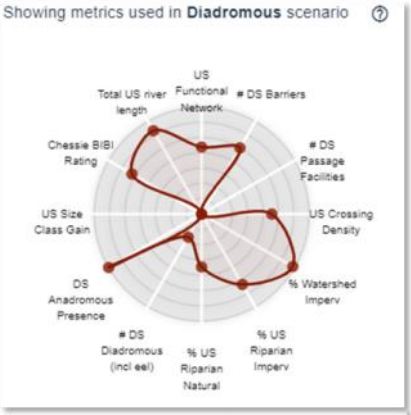
Our watershed progress dashboard includes an enormous amount of data on a HUC-10 watershed basis. The dashboard provides summary data on nutrient and sediment loads by watershed, then subdivides the load estimates between land use types. In addition to model generated data, the dashboard includes BMP graphs showing implementation progress from 2010 to 2022 by watershed, which can be useful in planning our efforts in the watershed. The online link for this tool is:

www.u-s-c.org/watershedprogress

Chesapeake Fish Passage Prioritization Tool

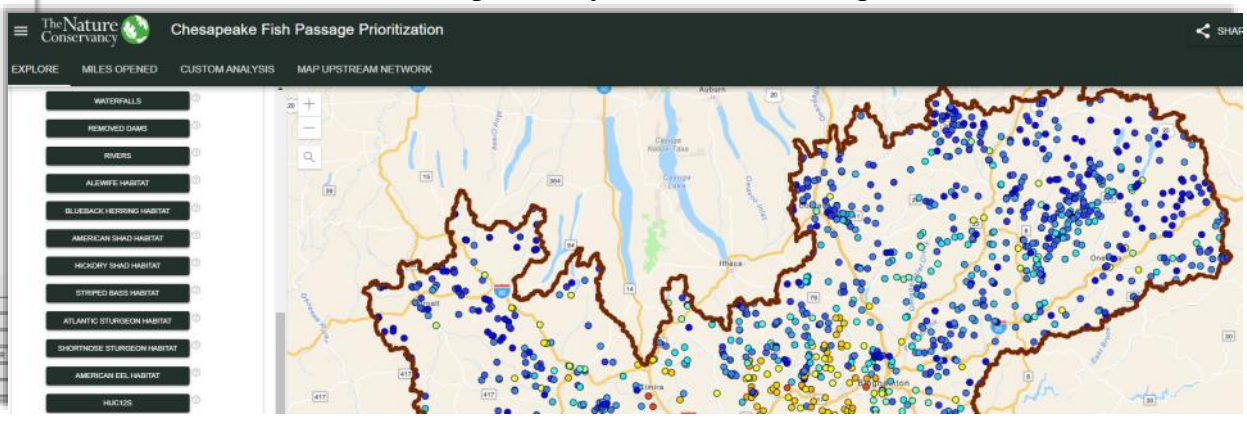
The Chesapeake Bay Fish Passage Habitat GIT has recently updated their Fish Passage Prioritization tool online here and pictured at the bottom of the page:

https://www.maps.tnc.org/chesfpp/#/explore



The purpose of the tool is to assist natural resource professionals in identifying barriers to aquatic movement to inform restoration prioritization. The online webmap and database evaluates and prioritizes dams and other in-stream barriers, then provides a visual representation of the value of the barrier removal for three scenarios; Brook Trout, Diadromous and Resident species. Information provided for each barrier includes a graph as shown to the left, with the metrics used in the prioritization, dam information (height, stream, dam materials) and a fact sheet teeming with watershed, ecological and landcover metrics (pictured bottom left) for each point.

Recent updates to this tool include the addition of NAACC data from culvert evaluations. A search feature will show only culvert data for rapid review. The tool also now includes environmental justice data for each barrier, indicating whether the tract is identified as disadvantaged or adjacent to disadvantaged.



Watershed Forum Shares Knowledge and Expands Partnerships

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

Binghamton University, NY - Suzanna Randall, Chief Resiliency Officer for NYS Department of Environmental Conservation, dropped the soundbite of the day when she said, “Resilience is about connection”. Very apropos messaging for the 2023 Upper Susquehanna Watershed Forum.

Since 2015, the forum has provided a space for natural resource professionals, academics, municipalities, government representatives, agriculturists, outdoor enthusiasts and private citizens to form relationships and address opportunities and challenges within the watershed. This year’s event boasted a capacity crowd of 165 passionate advocates and associated speakers, sponsors and exhibitors ready to brainstorm possibilities for water quality.

The plenary session was led by Ms. Randall, who detailed the historic 4.2 billion NYS Bond Act. In the “All things Bond Act” presentation, she described what the money is geared toward: *Climate Change Mitigation, Restoration & Flood Risk Reduction, Open Space Land Conservation and Recreation Water Quality Improvement & Resilient Infrastructure.* Bond Act priorities were shared as, *Updating Infrastructure, Protecting Natural Resources, Creating Jobs and Advancing Environmental Justice.* Along with the context came a practical description of where the connection is for the watershed and the impact for citizens and the service providers who help.

Guests then attended macro sessions throughout the morning and afternoon in the areas of Climate Resiliency and Sustainability, Regenerative Agriculture, Ecosystem Services from Wildlife to Fisheries and Community Engagement. Led by talented professionals, farmers, sustainability coordinators and professors, attendees were able to gain a cornucopia of knowledge and connection through mini presentations within each title. From restoring forests to implementing large scale regenerative farming practices or building a community of volunteers and engaging in a local conservation district program, there was plenty of diverse, hands-on information for all participants.

The forum culminated with a “Funding Opportunities in the Watershed” panel which featured professionals from NYSDAM, NYSDEC, USCA, NFWF and the Upper Susquehanna Coalition. Generous sponsors for the event include: Binghamton University Center for Integrated Watershed Studies, The Choose Clean Water Coalition, Southern Tier 8, American Dairy Association, Meadowview Nursery, Octoraro Native Plant Nursery and the teams at the Upper Susquehanna Coalition.

To access all the presentations and connect with the forum participants visit: https://www.u-s-c.org/watershedforum

Partners and USC Teams Collaborate for Successful Stream Corridor Restoration

By: Lydia Brinkley and Connor Hubbard

Stream corridor restoration projects take a while to complete, bottom line. In order to address the entire corridor, the bed, banks, and riparian area, many partners, teams, and programs are typically involved. And patience, there is a lot of that involved too! Three projects are worth highlighting this year that took all of the collaboration we could muster.

Two stream corridor restoration projects took place in Otsego County with funding from NRCS and the USC Water Quality Program. Jeanine Harter (NRCS) and Tony Capraro (NRCS) made navigating the changing Otego Creek projects somewhat painless and provided on site guidance whenever necessary. The USC Stream Engineering team (Connor Hubbard, Brian Reaser and Mike Jura) stepped in to provide streambank stabilization designs using the habitat creating toewood system. The team also facilitated getting the project going (bidding, showing, scheduling) and provided time consuming on-site construction inspections throughout the project. The third stream corridor restoration project took place along the Chenango River in northern Norwich using the Susquehanna River Basin Commission funding. The USC Stream Engineering Team worked to create designs for streambank restoration, while Chenango SWCD created planting plans for riparian and wetland areas. The partners worked together on construction inspections so as to provide project mentorship along the way. The Buffer and Wetland Teams stepped in once the bed and bank were addressed to install more habitat intense practices in the riparian area and beyond.

The first project along Otego Creek excluded livestock from where the stream corridor restoration was taking place and

Otego Creek Project 1 streambank erosion before work

Otego Creek Project 1 Tributary before Exclusion and Buffer

Landowner Family by their riparian forest buffer

Otego Creek stream corridor restoration after work is completed

Otego Project 2 USC Buffer Team and Family helping plant on a rainy Saturday

also along a nearby tributary. Both excluded areas were further planted into riparian forest buffers using the Trees for Tributaries Program (T4T). SUNY Oneonta Women's Rugby Team and Environmental Clubs joined for planting about 500 trees on a rainy morning. The landowner and family also planted right along with us! (see page 10 photos)

Otego Project 2 Before picture

The second Otego Creek project is just down the road from project 1. After stream work was completed, Trees for Tributaries was utilized to plant the riparian area into a young forest. This project removed cropland pressure on stream banks and enhanced riparian habitat. (Pictured Right and above)

Otego Project 2 complete with Riparian Forest Buffer

Work is still ongoing on the "Chenango Greenway" project while the USC wetland team finishes up restoring wetlands, returning hydrology to large areas. To finish that project up, Chenango SWCD will facilitate any remaining planting work on site. In addition to achieving large restoration deliverables with SRBC funding, the Chenango SWCD and the USC were able to help a local conservation organization obtain the property for permanent protection of the restored areas. (pictured below).

These projects took a lot of time and staff effort to complete, and there was smooth partnership and program coordination to help them along. In total, 1,380 feet of stream corridor has been restored throughout these three projects. Thank you to our NRCS, SWCD, and SRBC partners. When we work together, awesome conservation results!

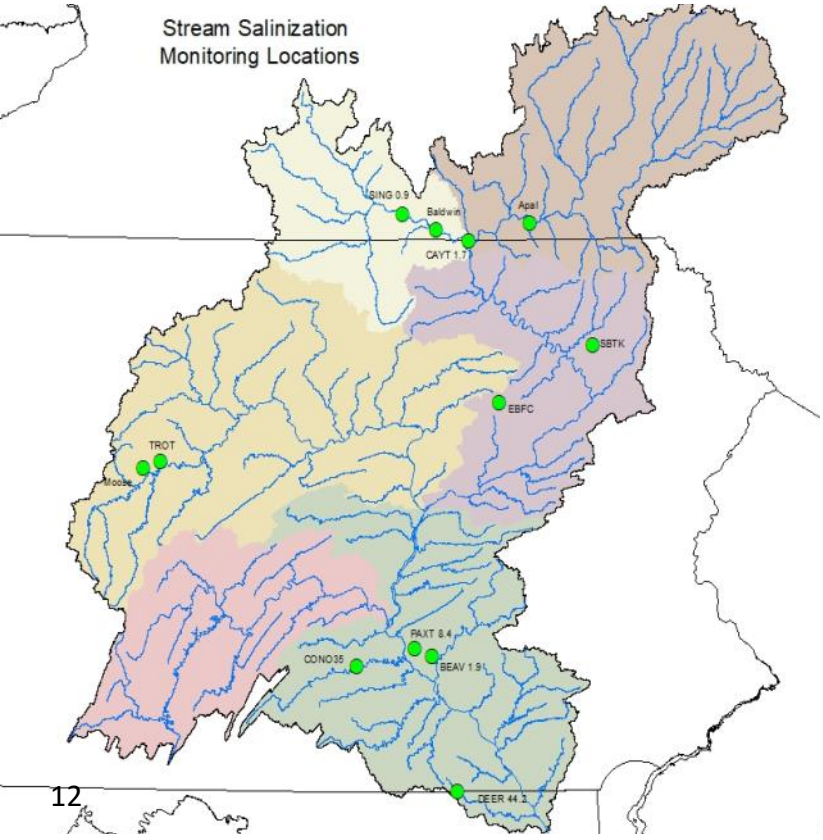
Chenango Greenway project before (below left) and after (below right)

Stream Salinization Study Updates from SRBC

By Luanne Steffy, Aquatic Ecologist, SRBC

Throughout the last year, SRBC staff have been examining the impacts of salinization in freshwater streams. A large majority of salt inputs to freshwater systems originates from road salt applied to streets and sidewalks for de-icing. During rain or snowmelt events, where roads were pre-treated to prevent ice formation, a portion of that salt runs off into local streams and rivers. After years and years of increased salt entering surface waters, scientists are beginning to notice long term impacts. In the Susquehanna River Basin, monthly sampling paired with continuous conductance sampling at 12 sites (see map) allowed staff to evaluate typical and peak chloride concentrations, duration of peaks, and chloride yield delivered downstream per square mile of drainage area.

Mean concentrations across all experimental sites range from 22-116 mg/L with a single sample maximum of 152 mg/L, while maximum yields (lbs/day/mi^2) across all experimental sites range from 132-2,737. Maximum yields occur consistently in winter/early spring at all sites. Moose Creek is a small, highly forested watershed that receives significant road runoff from Interstate 80, west of Clearfield, PA. Estimated calculations from continuous conductivity data show Moose Creek often has a chloride concentration hovering around 50 mg/L, which already falls in the 95th percentile across the basin, but can experience peaks of over 200 mg/L primarily in the winter. Peaks are lasting two to three days in streams after significant runoff events and can occur with high frequency during winter months. Occasionally, estimated concentrations of chloride briefly exceeded the Pennsylvania state drinking water standard of 250 mg/L after runoff events at some sites. Aquatic life criteria for chloride vary across states, but the current national guidelines recommend 230 mg/L as an aquatic life use threshold, while some literature suggest impacts at lower concentrations.



One of the goals of the project is to take a closer look at the macroinvertebrate data from the past two decades at both Deer Creek and Cayuta Creek to evaluate if any changes in the types of macroinvertebrates living in a stream could be attributed to increased salinization. This may be reflected in IBI scores (a measure of biological conditions), but more likely in the presence of sensitive taxa or abundance of taxa that are more salt tolerant. Initial results across all sites show lower IBI scores (poorer ecological conditions) at sites with higher chloride concentrations. Staff will continue to sample throughout the winter months with the intention of capturing runoff events after roads have been treated with salt. Remember when you salt your driveways and sidewalks – use as little salt as possible or move to alternative options such as sand, coffee grounds or beet juice!

Stone Mulch Pilot Project

By Ava Glasser, USC Buffer Team

This past August, the Upper Susquehanna Coalition funded a new pilot project in Chenango County to determine if stone mulch applied around trees & shrubs could be a functional alternative to herbicide application in our watershed. Research from Stroud Water Resource Center in Pennsylvania suggests that stone is a superior mulch material and that tree survival rates when mulched with stone are comparable to those of trees that receive herbicide application to eliminate surrounding vegetation. Compared to herbicide application, stone is semi-permanent, flood resistant, and rodent resistant. Herbicide application, while less expensive up front, can be costly if herbicide continues to be applied every year. With the hope that stone mulch could provide a long lasting and cost effective method of vegetation and rodent control, the USC set out to find out if this method will work in our region.

With the help of a local contractor, Epic Landscapes Inc., the USC installed 11 ½ tons of 2A modified stone at an existing riparian buffer along the Unadilla River in Chenango County. Over 1,000 trees and shrubs received 2 heaping shovels full (20 to 25 pounds) of 2A modified stone around each tube out to a diameter of 12 to 15 inches and a depth of 2 to 3 inches. With continued monitoring, in a few years we will be able to determine if stone mulch positively impacts survival by suppressing competing vegetation and eliminating rodent habitat. If the project is successful and stone positively impacts survival, stone mulch could be a great alternative to herbicide in areas where application is not possible or preferred due to landowner preference, cost, or environmental constraints.

New Staff in the Watershed

Welcome to Chemung SWCD's New District Manager: Jim Deiderich

My name is Jim Diederich and I am the new District Manager for the Chemung County Soil and Water Conservation District. I received my bachelor's degree from the University of Connecticut in Natural Resource Management. My first position after graduation was with the Tioga County (PA) district as an Erosion and Sediment technician. After that, I have worked for the USDA-NRCS for 3 years as a Soil Conservation Technician and 5 years as a Civil Engineering Technician. I am retired from the Air Force where I served as the Superintendent of the 103d Civil Engineering Squadron. I look forward to working with the USC and putting conservation on the ground in Chemung County.

Welcome Craig Johnson to Chemung SWCD

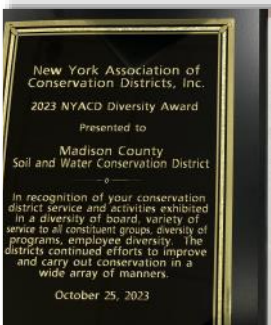
My name is Craig Johnson, and I am a new Technician with Chemung County Soil and Water. I am originally from Steuben County. I graduated from Finger Lakes Community College with an Associate's degree in Natural Resource Conservation: Law Enforcement, and then from Paul Smiths College with a Bachelor's degree in Fisheries.

Congratulations to these Award Winners!!

Congratulations to Wendy Walsh on receiving this year's

NYACD Commendation Award!

And congratulations to Troy Bishopp and Madison SWCD on being awarded the NYACD's **Diversity Award**, and **3 media story awards**!!



Powering Partnerships Overhead

By: Ranier Lucas, USC Buffer Team

This fall the Upper Susquehanna Coalition was able to create multifaceted partnership through our Trees for Tributaries program. In Spring, 2023 the Department of Public Works (DPW) approached Tioga SWCD about planting a section of trees at their new fishing access along Owego Creek. After inspection of the site there was a substantial amount of open planting area but a limited amount of vertical growing space due to high overhead transmission lines. As we normally stay away from any low overhead lines we figured there was not much that could be done in this area. But after much consideration on the planting area we decided to reach out to the utility provider for guidance on where we could plant. Over the summer with a few emails, a couple of calls and some changes to the planting plan we were able to turn a 0.1 acre prospective planting into a 3.5 acre riparian shrub planting. This of course would not have been possible without the wonderful partnerships we were able to create! From the DPW removing invasive species present and mowing the site. To NYSEG working with us to create a low canopy buffer under high overhead transmission lines with new potential sites to come. And most of all our wonderful volunteers from Owego Appalachian Central School District (OFA) helping us plant over 3 acres.