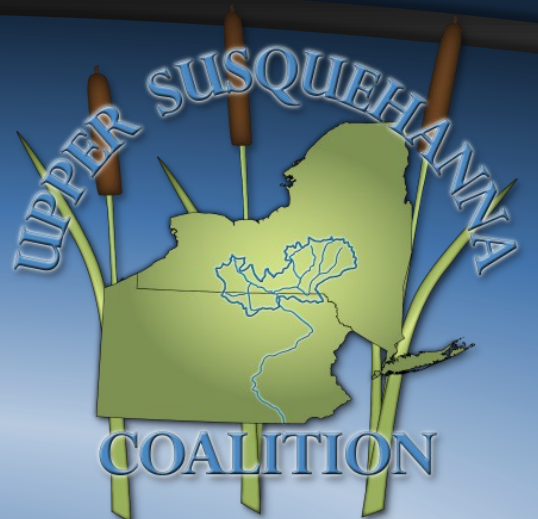




© DRONES OVER BROOME

2021 Annual Report



Upper Susquehanna Coalition

We are committed to protecting and improving water quality and natural resources in the Upper Susquehanna River Basin in New York and Pennsylvania.

2021 USC Board of Directors



Chair
Jeff Parker



Vice-Chair
Jennifer Kelly



Member at Large
Steve Lorraine



Member at Large
Amanda Barber



Member at Large
Wendy Walsh



USC Board Member Retirement

Chip McElwee, an active USC Member, Broome County SWCD District Manager, and Vice-Chair of the USC Board of Directors retired in 2021. As part of the Upper Susquehanna Coalition since our early years, Chip was instrumental in growing our organization to include the diverse level of programming we currently offer. His insight, effective communication and camaraderie will be sorely missed as we continue our tasks, but we wish him all the best in his future endeavors which will probably include enjoying the fruits of his efforts to improve water quality in the region!

Watershed
Coordinator:
Wendy Walsh

USC Stream Team Leader Retirement

Mike has been a key member of the USC and has been with us since the start. Making connections across state lines and assisting the USC in building capacity in our stream team were his focus for years. Mike brought a lot to the USC as District Manager of the Bradford County Conservation District and then USC Stream Team Leader, these will be hard shoes to fill, lucky for us he still plans to be involved and support USC stream trainings as needed.



USC Staff

Lydia Brinkley
Chris Brogdale
Emily Dekar
Thomas Flynn
Mike Jura
Ranier Lucas
Jeremy Waddell
Melissa Yearick



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A Note from USC's Coordinator

So here we are providing another edition of the USC annual report. Once again, the USC staff, members and partners were able to implement projects thru a very challenging year. We continued to meet virtually to discuss priorities, brainstorm ideas for new funding opportunities and communicate to everyone what the USC was up to. Outside of our regular meetings, our teams continued to meet, we published a quarterly newsletter, and held several Watershed Wednesday sessions! If you need to catch up on all that was done, please check out the USC website (www.u-s-c.org), join our email distribution list and attend our meetings. I hope that everyone takes a few minutes to look through our 2021 annual report and reflect on all the work that was accomplished and energize yourself for the work that is still to come!

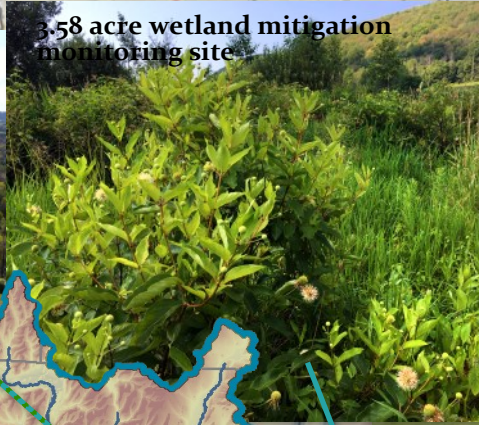
Wendy Walsh

just a few 2021 USC Highlights

Acquisition property with wetland, buffer and stream restoration opportunities



3.58 acre wetland mitigation monitoring site



Peas & Oats Mix cover crops



9.5 acres of riparian forest buffer, stream stabilization and grazing



11.4 acres of buffer maintenance

USC designed and engineered Streambank stabilization and barbs



Photo: Chris Ray

5 acres of invasive species management and riparian forest buffer



2021 USC Activity Snapshot

Ag



157 Farms with Whole Farm Verification and 407,110 acres of conservation practice documented for the Chesapeake Bay



18,303 acres of Cover Crops Installed

Buffer



46,326 plants planted in the watershed



236.5 acres of Riparian Area Planted and 698 acres of Buffer Monitored

Stream



103,530 feet of stream exclusion fence installed in the watershed

Development of Online Emergency Stream Intervention Training Video Series



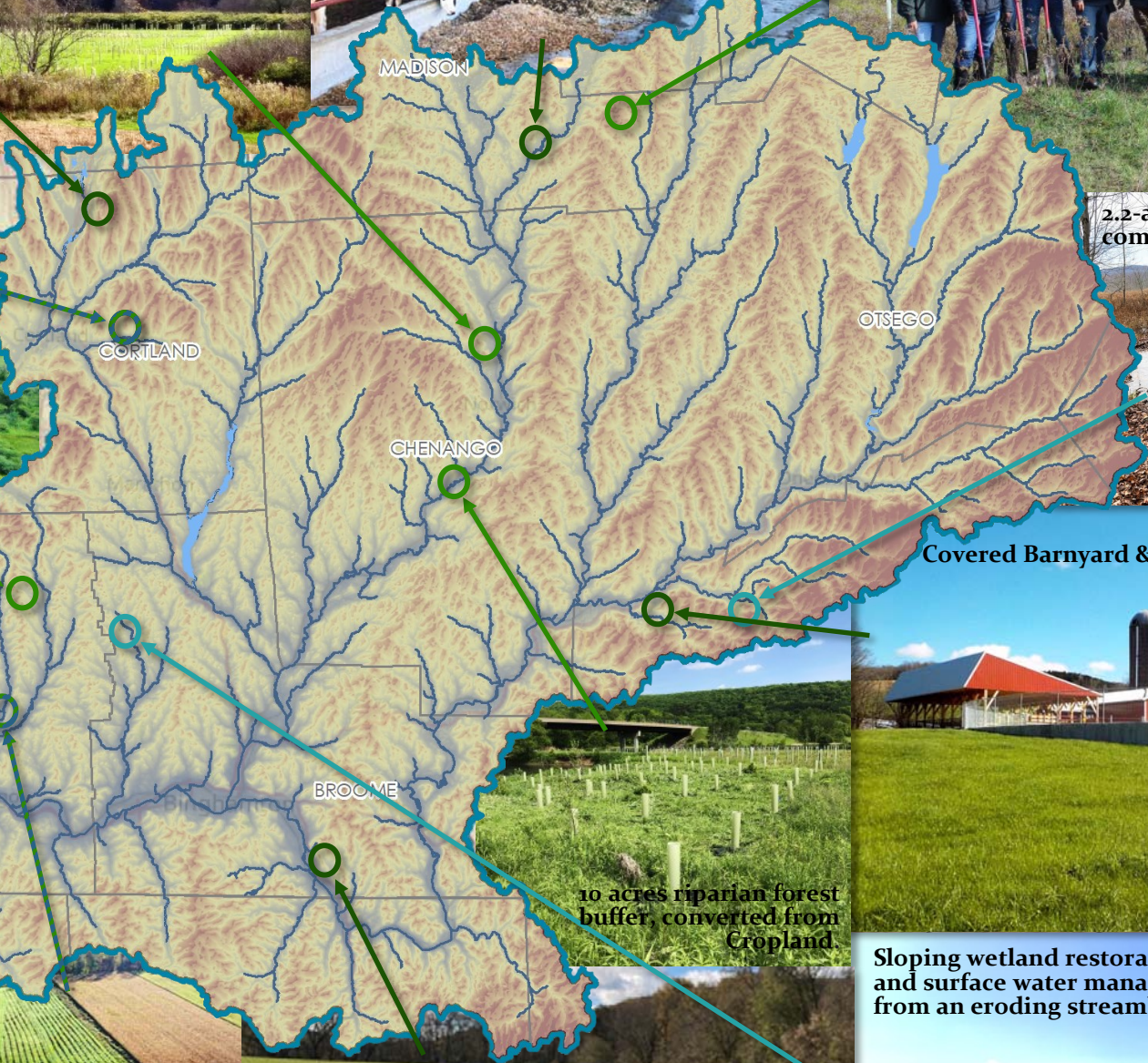
5 acres of Riparian Forest



Covered Barnyard Project



Madison County Buffer Planting - a team effort



2.2-acre headwater wetland complex



Covered Barnyard & Manure Storage Project



10 acres riparian forest buffer, converted from Cropland



Sloping wetland restoration coupled with pothole and surface water management, directing runoff from an eroding streambank

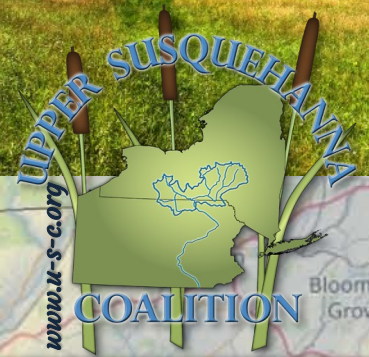


Wetland



2,377 acres of watershed evaluated for wetland restoration opportunities

Planning and construction of 64.6 acres of wetland restoration sites

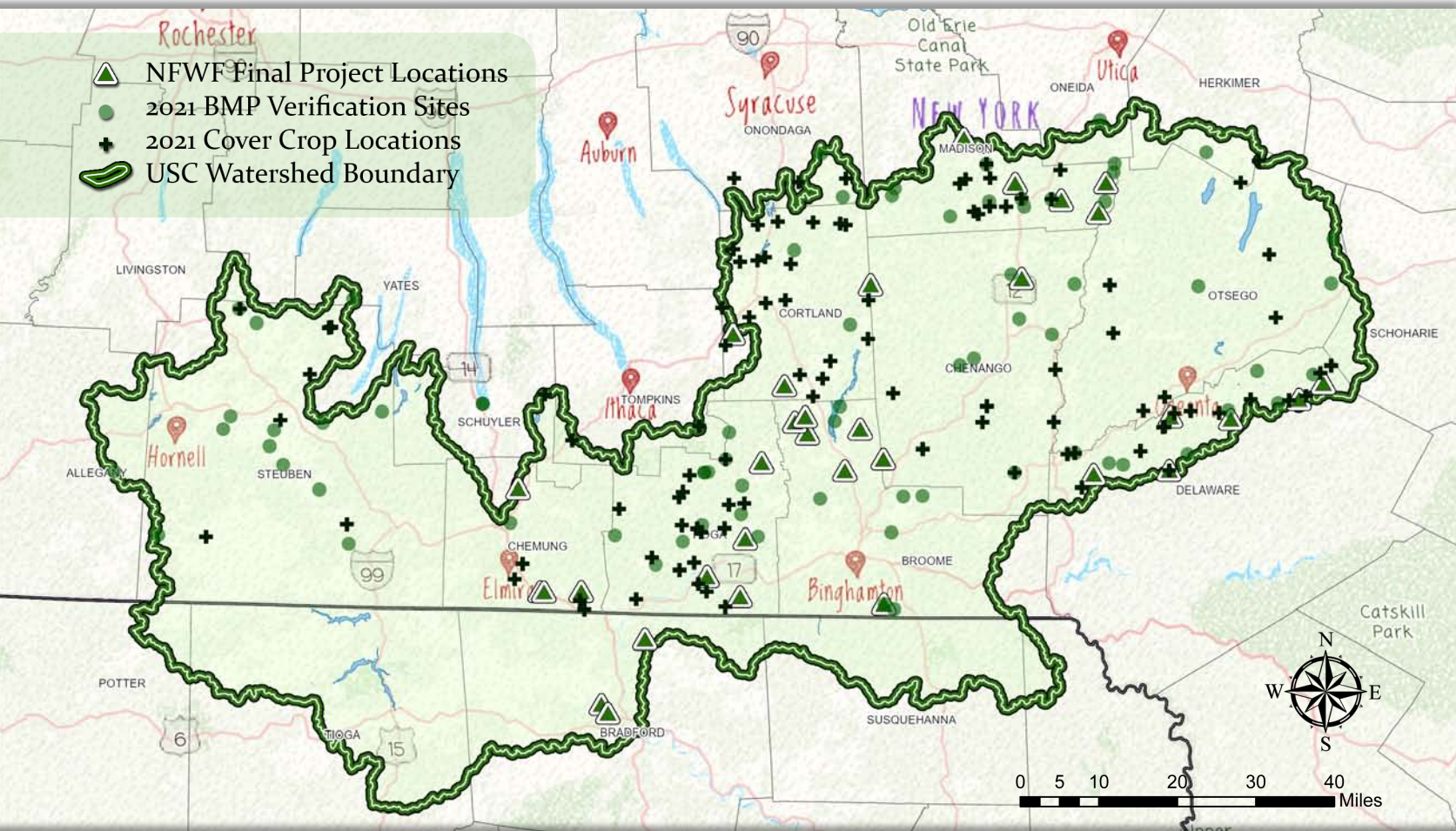


2021 Ag Team Activities

The USC Ag Team consists of SWCD technical staff from multiple counties and our USC Ag Coordinator working together to support and assist agricultural operations within the Upper Susquehanna Watershed. Together we work to improve water quality both locally and ultimately in the Chesapeake Bay. The USC Ag Team is also responsible for verifying, tracking and reporting all of the nutrient and sediment reducing projects implemented across the watershed in NY, demonstrating our efforts to meet load reduction goals for the Chesapeake Bay.

2021 Cover Crop Implementation Project

2021 was the 5th year that the USC received funding through NYS Department of Environmental Conservation to increase Cover Crop implementation acres in the NY portion of the Upper Susquehanna Watershed. Cover Crops are reported to the Chesapeake Bay Model as an annual practice, meaning that they only receive credit for the progress year that they are implemented. Each year, our goal is to increase “new” implementation by a minimum of 2,000 acres, while maintaining continued or previous implementation acres; ultimately increasing our acreage reported to the Chesapeake Bay Model on an annual basis. 106 farms across 13 counties took part in this funding opportunity, implementing approximately 2,642 new acres, and 9,444 continued acres in the fall of 2021. Of those acres implemented, roughly 663 of those acres were implemented utilizing a High Boy Inter-Seeder, allowing for the seed to be planted while the primary crop is still growing.



Regional Conservation Partnership Program

The Regional Conservation Partnership Program is a federal program that promotes coordination of resources between the Natural Resource Conservation



Services (NRCS) and partners such as the Upper Susquehanna Coalition. At the end of 2020, the USC received 13 applications for Water Quality Improvement projects on farmsteads. These applications resulted in 4 contracts with landowners totaling just under 1.2 million dollars. These projects are contracted to be designed and implemented in the next 2-5 years. With the RCPP project coming to a close at the end of 2021, the overall accomplishments of this program include: 14 contracts with landowners across 6 counties, to implement large scale water quality improvement projects on farmsteads and pastureland; total funding allocated to these projects was just under 3 million dollars.

2021 Progress Reporting

- ◆ 114,884 acres of Nutrient Management
- ◆ 18,303 acres of Cover Crops
- ◆ 24,876 acres of Tillage Practices
- ◆ 37,287 acres of Prescribed Grazing
- ◆ 189,076 acres of Conservation Planning
- ◆ 22,479 acres of Manure Incorporation
- ◆ 251 Manure Storage
- ◆ 73 Farms with Precision Feed Management
- ◆ 103,530 feet of stream exclusion fence
- ◆ 205 acres of Ag Tree Planting

BMP Verification Reimbursement Program

In 2021, reimbursement funding totaling \$156,000 was contracted to counties to assist with the costs and time associated with the USC's BMP Verification Program. Through this program, BMP Whole Farm verification was completed on 111 farms that were identified through a random sampling process, 46 additional farms that were selected by counties for whole farm verification, 10 stream project sites, 57 resource improvement practices, 14 practices that had been previously verified and marked as re-inspections, as well as whole farm verification on 34 CAFO farms.

1.18m

Contracted through RCPP

\$350k

Spent on Cover Crop Implementation

157

Farms with Whole Farm Verification

\$156k

Reimbursed for BMP Verification

7

Applications for AgNPS Pilot Project

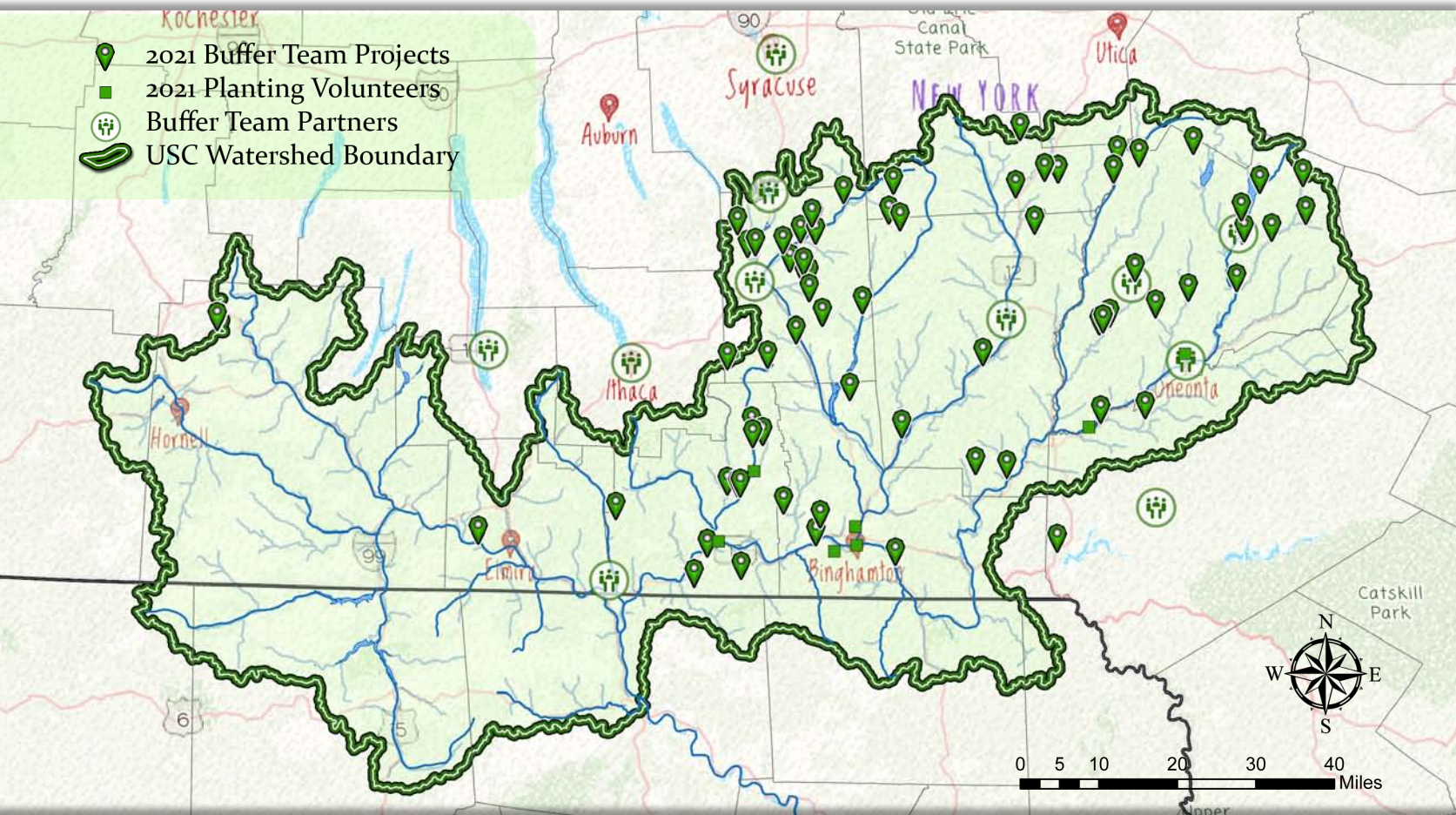
\$192k

AgNPS Pilot Program Funds Distributed

2021 Buffer Team Activities

2021 was a busy year for us with large riparian buffer workloads in both spring and fall. We were able to hire a few stewards earlier this year to help with replanting and maintenance, getting us off to a great start with project stewardship. This year was the first year we offered a Trees for Tributaries fall version, which was met with success in getting 2,000 containerized stock planted. A lot came together for the buffer team this year in big part to the diversity of funding we have been able to obtain to support a comprehensive program. We were able to support buffer planning for all programs, provide project implementation funding support, and project stewardship mainly through our state agreement, that we refer to as the "State Buffer Program." Two of our National Fish and Wildlife Foundation Small Watershed Grants expired this year that had helped us to take our buffer program to another level. These grants offered support for the development of the Buffer Steward Program and helped to create a program for rural landowners to reforest their riparian area aside from traditional federal programs.

Other highlights include getting some professional photos taken of a planting, partnered with One Tree Planted for outreach events, and received Arbor Day Foundation funds for 2022! All Otsego newspapers picked up a story about riparian restoration efforts in the Butternut Creek that has led to several new landowners signing up for the Trees for Tributaries Program. We've tried adapting the Buffer Steward Program to fit more needs by hosting steward workdays. Finally, outreach event swag and food were provided at several events throughout the year, making for a great volunteer experience.



Sustainable Streamside Buffer Establishment in the Upper Susquehanna:

This NFWF project further developed our Buffer Steward Program by providing funds to hire stewards and to perform establishment activities. Through this grant, we performed plant survival assessments on 1,418.14 acres and performed establishment activities on 1,117.45 acres. This project laid the framework for delivering buffer stewardship at a larger scale than it was previously. While this project also included a lot of outreach, education, and implementation, it has helped to gain attention of state and federal agencies as to what stewardship may look like within their programs. Stewardship of buffers took place in 8 counties, on 212 sites, helped to re-enroll nearly 25 acres of CREP CP-22, and newly implemented 15.9 acres of riparian forest buffer.

Expanding Engagement in the Upper Susquehanna Coalition Buffer Program:

The purpose of this NFWF grant was to expand and engage new partnerships and populations in riparian restoration activities aside from traditional federal programs. The grant's goals were to implement 10 acres of grass buffer, 25 acres of forest buffer and engage with 20 volunteers. While several subwatersheds were prioritized because of their I-4 Watershed Assessment status, projects with strong partnerships, land protection, and habitat restoration were funded.

Through this grant we spent \$200,000 to support 45.65 acres of riparian forest buffer implementation, 4,500' of stream rehabilitation, 15 acres of grazing, and 4 acres of upland tree planting. Close to 95 acres of land was placed in conservation easements with 43 of those acres in specially created "special use zones" within the riparian area to further limit disturbance. For those projects this funding supported transaction costs for easement placement. Furthermore, 167 volunteers helped with planting projects and through all of the newsletters, presentations, and other advertisements we reached 12,152 people.



698

Acres of Buffer
Monitored for
Survival

162

Volunteers
Participating
in Planting

236.5

Acres of
Riparian Area
Planted

9

Watershed
Stewards

74

Planting
Projects

46,326

Plants Planted

2021 Stream Team Activities

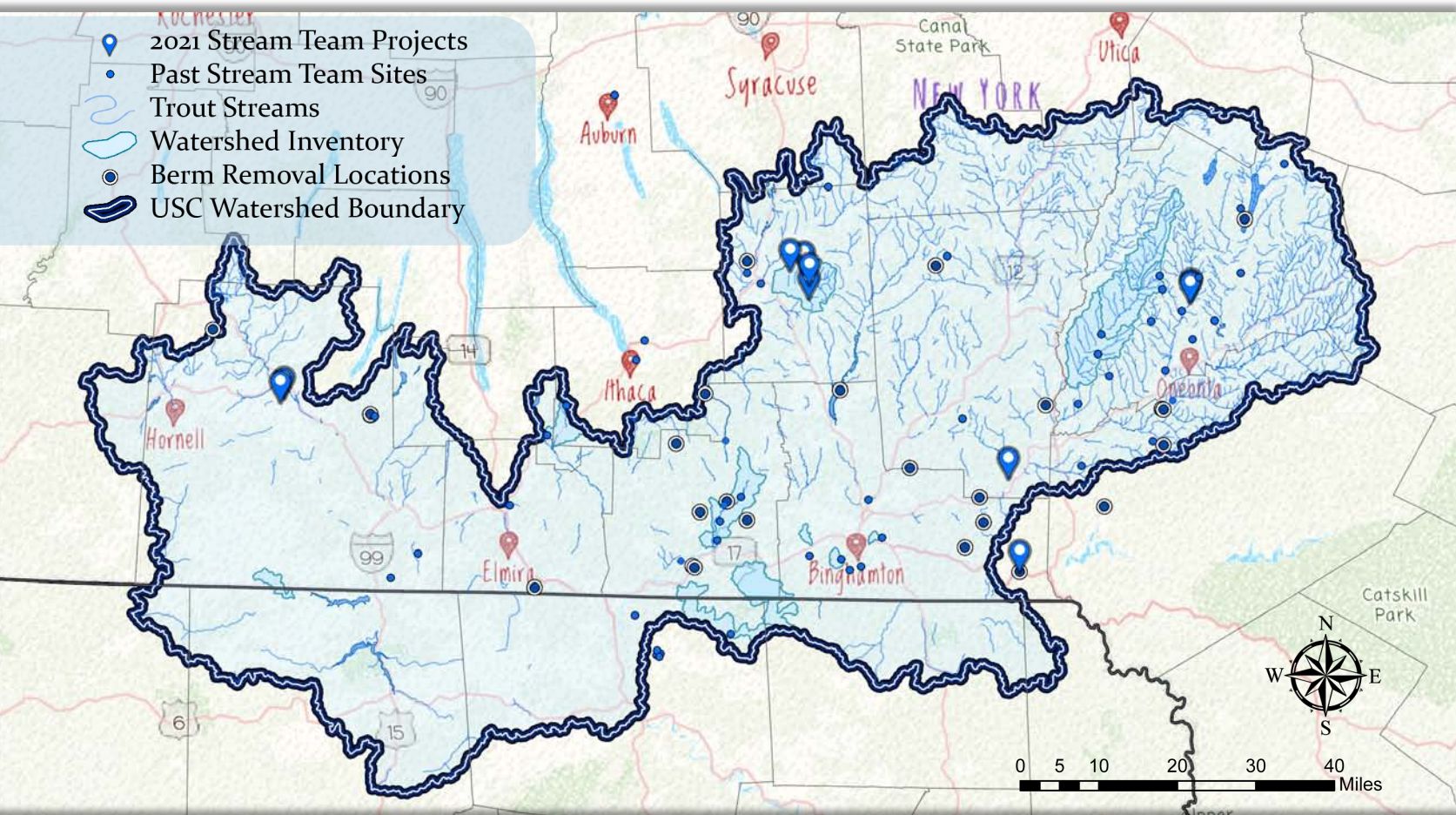
The Upper Susquehanna Coalition's Stream Team is a representative characteristic of the membership of the USC. Each member SWCD identifies, plans and implements stream corridor related projects individually or with the educational, technical, planning or financial support from the collective USC. As graphically depicted on the map of projects, over 10 projects were implemented throughout the USC portion of the basin.

Even with the restrictions of the COVID pandemic, the USC, through the dedication of members willing to share their expertise, accomplished a number of projects aimed at increasing the technical capacity of its member and the communities it serves. These include:

- Development of the virtual training of the successful and valuable Emergency Stream Intervention Program. The ESI Virtual Training is divided into 7 segments that can be accessed at the trainee timeframe, allowing participants to work through the material and presentations, answering questions at the end of each to assure comprehension.



Stream bars and willow plantings



- Development of a stream assessment data app that allows surveyors the ability to download real time information about the site visited and upload valuable photos and survey info. The app was developed through the Tioga IT department and extensively tested by the Tompkins SWCD.
- An easily accessed electronic reporting system was refined by the USC to track and report accomplishments in stream corridor projects that directly feed into the Bay tracking system.
- A comprehensive 2 day training on the components that go into a successful stream project permit application was conducted at the 2021 Conservation Skills workshop that was led by a number of USC Stream Team Member, the DEC and Army Corp of Engineers. The training included a day of class overview with a day in the field.
- A number of stream related projects were featured through the successful "Watershed Wednesdays"
- The USC is exploring the need and potential of providing a centralized system of engineering support for stream related projects.
- The Stream Team members continue to support the representation of the USC on relevant forums such as the National Fish and Wildlife Foundation, the Chesapeake Bay Program's Stream Health Workgroup and many other local, regional and State initiatives.
- Watershed Assessment, Planning and Implementation continue to be a critical focus of the USC and are exemplified by such projects as the NY Rising Initiative in Tioga and Broome Counties



Shared roots -
barbs,
bioengineering,
Riparian Forest
Buffer Planting

1

Development
of a Stream
Assessment
Data App

10

Stream
Restoration
Projects

49.1

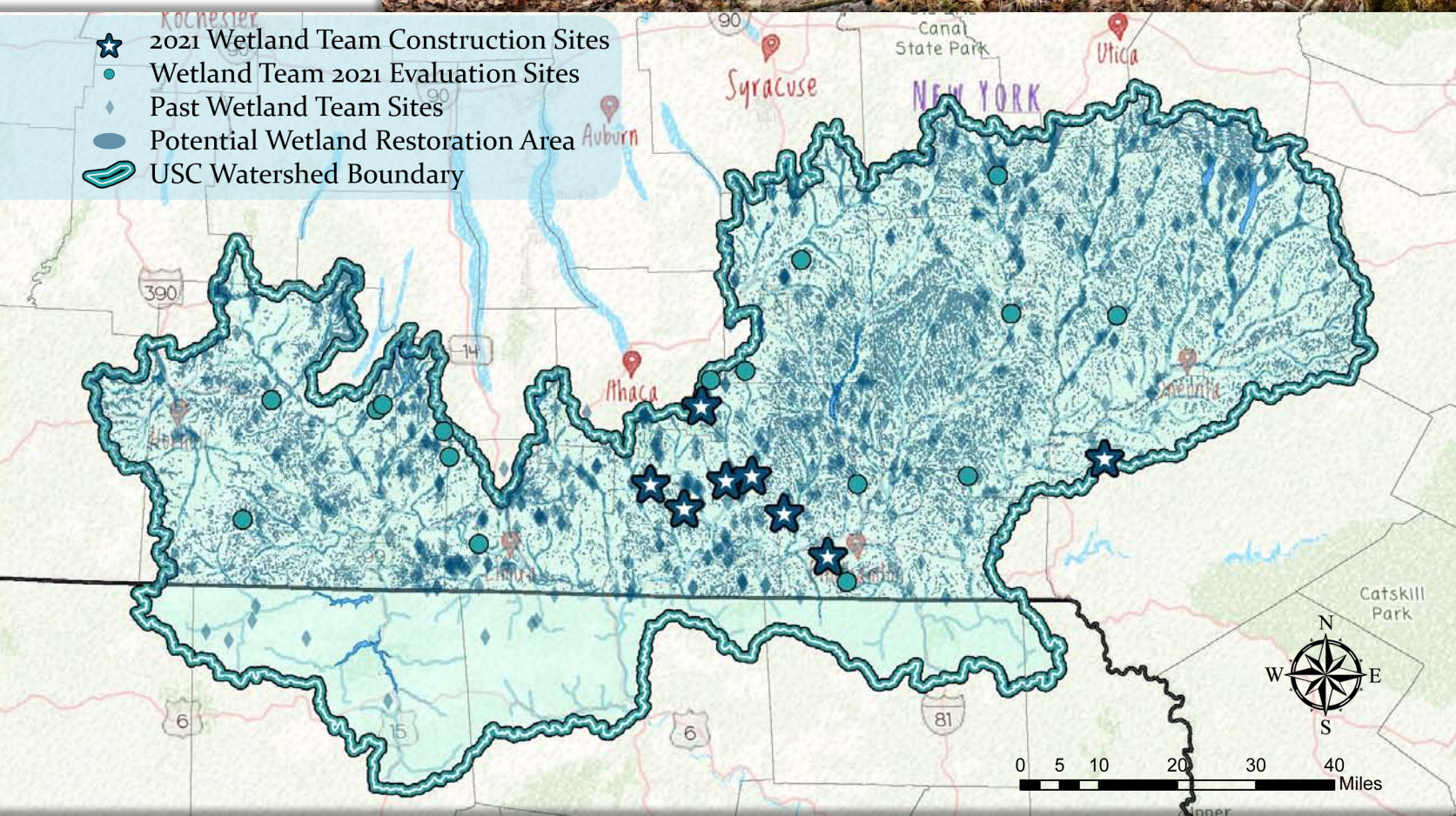
miles² of
Watershed
Assessed
through the
NY Rising
Initiative

6

Counties
participate
in the USC
Stream Team

2021 Wetland Team Activities

In 2021 our Wetland Team prioritized wetland restoration in the watershed, restoring sites using two sources of funding, and pursuing wetland restoration funds by submitting four proposals. We actively engaged in wetland outreach, contacting individual landowners and land-owning organizations alike to discuss restoration opportunities across the watershed. We pursued restoration opportunities on municipal land, reviewing tax parcel databases for protected properties that were not actively being managed for other uses. We also identified wetland restoration opportunities that were outside of the typical definitions for wetland restoration. Targeting sloping wetland restoration opportunities and sites with road ditch runoff.



New Opportunity Funds Restoration

With wetland restoration acreage a top priority for 2021, we expanded our search for implementation funds and found some great opportunities. In 2021 we submitted proposals to national organizations, the US EPA, the US congress, and the Susquehanna River Basin Commission (SRBC) who was developing a new funding program to address water management in the watershed. We received funding to restore 61 acres of wetland, 16 of which came from funding from the SRBC to restore and protect a 98-acre property in Steuben County. This property will be the first of its kind for our team, where we target a property for acquisition, to then restore a diverse suite of ecosystem services. We expect this project will result in 26.4 acres of Wetland and Buffer Restoration, 65.2 acres of Riparian Area Preservation, 5.6 acres of Upland Preservation, management of road ditch runoff, and a to be determined amount of Stream Restoration.



Restoration and Partnerships

While our wetland team has always pursued restoration sites on the recommendations of our SWCD Member staff, in 2021 we had some of our best opportunities yet for restoration sites come from district staff. As we ramp up our wetland restoration activities, it is more important that ever for our partners to discuss wetlands and restoration with landowners, and spread the word. In 2021 we developed a wetland benefits flyer for districts to share and help us in our efforts.



WETLAND RESTORATION BENEFITS OUR WATERSHED

Wetlands, those transition areas between deep water and dry land, are important parts of our landscape. They come in many forms, and occur throughout our watershed, providing a variety of benefits.

Wetland benefits range, from absorbing flooding river flows, to holding rain in headwater areas, decreasing flooding downstream; from providing habitat to animals and recreational opportunities to people, to slowly releasing water into the ground, maintaining groundwater levels for streams during low flow periods; from cleaning surface water, to fixing carbon and mitigating climate change, and many more.

Unfortunately, wetlands often occur in areas that appear suitable for other landuses, areas along rivers and in flats where development is desirable. This conflict between wetlands and other uses has resulted in the removal of thousands of acres of wetlands from our watershed, resulting in the loss of all of the benefits those wetlands provided.

Researchers believe New York has lost more than 60% of our wetlands since the 1900s.

The Upper Susquehanna Coalition's Wetland Program is actively searching for opportunities to restore wetlands of all shapes and sizes, to return those benefits and to improve water quality, both locally and downstream in the Chesapeake Bay.

Wetlands can be restored through the plugging of drainage ditches, the removal of drain tile line, the construction of low berms, or the excavation of potholes, all of which serve to keep water on the land longer, slowing the pace by which it reaches our streams and rivers.

The highest priority wetland restoration sites are large, flat fields, with ditching throughout and heavy soils. But wetlands can be restored in many areas. If you are interested in being a wetland steward, and in having wetlands restored on your property contact our team at wetland@amc-us-c.org or visit our website for more information www.us-c.org/Wetlands.

Wetlands in high altitudes can contain cold biota

Wetlands are primary source of fish/water

Revised wetland plans are necessary for food, fuel and fiber

Fish from wetlands is a major source of animal protein

Wetlands are key biodiversity habitats

Wetlands help store carbon and help in reducing climate change

Wetlands help filter wastewater

Wetlands provide open for recreation and cultural activities

Wetlands help store carbon and help in reducing climate change

Wetlands help filter wastewater

Wetlands provide open for recreation and cultural activities

Services provided by wetlands to people and nature © Wetlands International

2,377
Acres of
Wetland
Property
Evaluation
and Planning

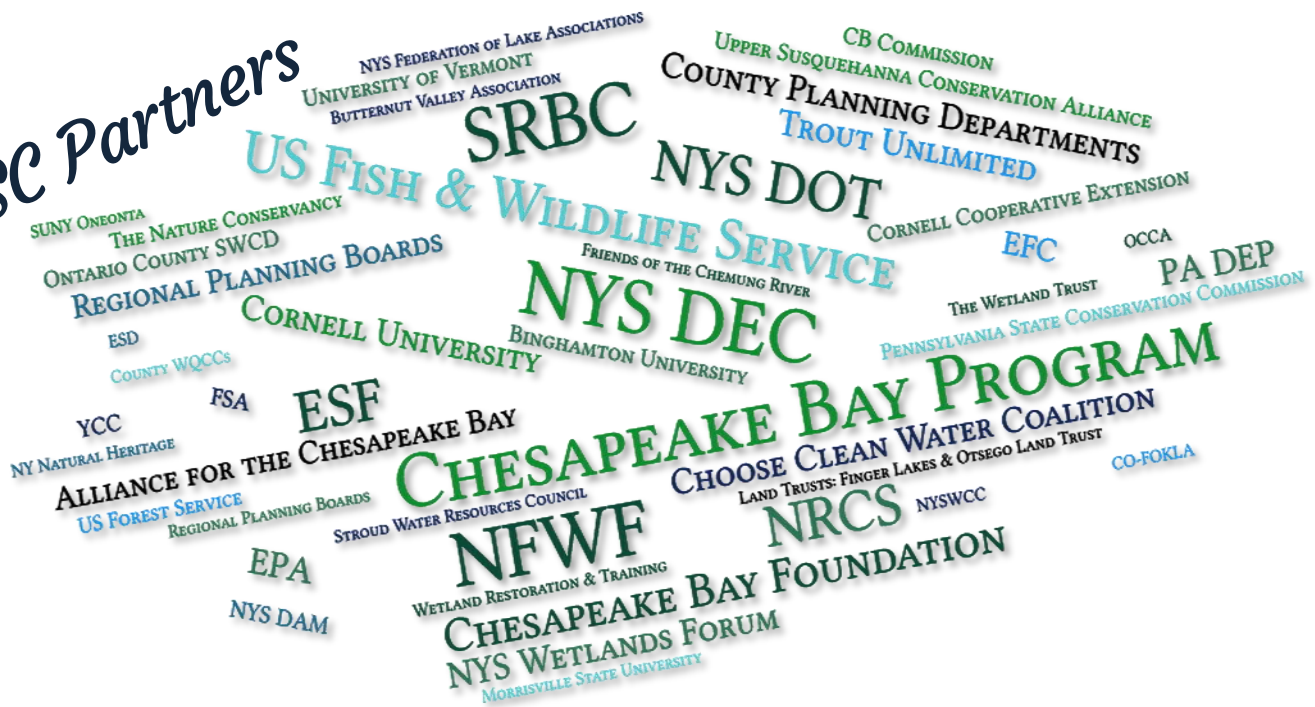
38
Wetland Sites
visited and
evaluated for
restoration
opportunities

Funding
received for
61
Acres of
Wetland
Restoration

18.1
Acres of
Wetland
Restoration
Projects in
2021

392k
Acres of
Potential
Wetland
Restoration
Mapped in
the NY USC
Watershed

USC Partners



USC Outreach Committee Activity Snapshot



In 2021 we developed YouTube content including project spotlight videos, planting time lapse videos, Stream Training Videos and Webinar Videos, all of which are included on our YouTube page:

www.u-s-c.org/YouTube

We also partnered in hosting our second year of Watershed Wednesdays, weekly webinars with presentations focused on information sharing about watershed issues and resources.




309
Webinar
Participants


352
Minutes of
YouTube Videos

13
Webinars

13
Presenters


312
Online Video
Views

Ag Team

- Increase Nutrient Management Planning Efforts through NFWF Funding
- Develop a Baseline Nutrient Management Plan for NY
- Increase BMP Implementation to improve water quality
- Continue to improve verification and reporting programs
- Develop and Pilot an Online Record Keeping Application for landowners to utilize
- Coordinate 1st round of RCPP Renewal Funding

Riparian Forest Buffer Team

- Seek out another agreement with the state to comprehensively support our buffer program.
- Continue with a T4T fall program.
- Further develop and make more robust the Buffer Steward program.

looking forward to 2022

Stream Team

- Accelerate implementation of stream restoration projects in partnership with a diversity of landowners.
- Secure funding to support stream restoration efforts in the watershed
- Host virtual ESI Training Session and continue to expand our online training resources
- Build capacity of stream team with a stream design training

Wetland Team

- Accelerate wetland restoration and enhancement implementation projects in partnership with a diverse group of landowners.
- Engage with our partners to secure restoration opportunities on lands with conservation easements.
- Secure and provide funding for wetland restoration and education activities in the watershed.



@UpperSusquehanna



Photo Credits:
All photos courtesy of USC Teams, Member and Partners unless otherwise noted

