

March 2018

Tioga County SWCD



2017 in Review

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In 2017, a lot of work was accomplished by the District and its staff. We hired a new employee to assist with our growing Agricultural Environmental Management Program. We were able to meet all of our performance deliverables from the state allowing us to secure additional funding for streambank rehabilitation, and agricultural Best Management Practice (BMP) implementation on four farms. We secured new grant funding for several of our programs including streams and ag along with purchasing of a new hydroseeder to assist municipalities with stabilization of road ditches.

District Board of Directors:

- Dale Weston, Chairman, County Legislator
- Tracy Monell, Vice Chairman, County Legislator Representative
- Ronald Dougherty, Treasurer, Member At Large
- Mark Kwiatkowski, Grange Representative
- Robert Aman, Farm Bureau Representative

District Staff:

- Wendy Walsh, District Manager
- Lisbeth Monell, Administrative Assistant
- Miranda Palmer, Administrative Assistant
- Mike Jura, Technician
- Alex Marks, Technician
- Brian Reaser, AEM Specialist
- Rick Neuman, Nutrient Management Specialist
- Danielle Singer, Water Quality & Nutrient Management Specialist

Special points of interest:

- SWCD received NYACD Diversity award for offering an array of programs and services.
- SWCD was awarded funds under the NYSDEC WQIP grant to build wetlands and lower Spencer Lake dam.
- SWCD received an office remodel to accommodate for our growing staff!
- SWCD secured \$602,900 through Ag Nonpoint Source grants to assist two farmers

New York State Soil & Water Conservation Committee—Part B & Part C Funding

Through the New York State Soil and Water Conservation Committee, soil and water conservation districts are eligible to receive additional funding to complete implementation projects that further our mission and goals. In 2017, Tioga SWCD applied for and received \$6,000 to assist farms with the implementation of their Nutrient Management Plans as well as implement practices called out for in these plans including cover crops. We provided manure and soil sampling for two Tioga County Dairy Farms, and supported the implementation 49.9 acres of cover crops on 3 different farms. The funds also supported 36.7 acres of pasture improvements on 3 beef operations in the county. Along with agricultural work there was enough funding to support the repair of two different Emergency Watershed Protection projects that sustained damages during heavy rains in late July/early August. Funding was used to reinstall 100 feet of rock rip rap on a stream site and repair a lower rock cross vane on two different EWP projects. Additionally, Part C funding was made available to districts by meeting a criteria of performance measures established by the state. This funding is awarded competitively, Tioga County Soil and Water Conservation district was awarded \$92,447.21, qualifying for the highest award amount because we met all established performance measures! This funding must be used for any projects or activities that have a tangible and measurable income. This year the Part C funding was used to complete three streambank stabilization/streambank rehabilitation projects, install 4 milk house waste systems, repair a covered barnyard roof, and contribute towards the purchase of a new skid steer. In addition to utilizing the Part C funds, an additional \$65,270.56 was leveraged via landowner match, SWCD Match, funding from NYSDHES, and FEMA. A total of \$157,717.77 was contributed from all funding sources to complete these projects.



Milkhouse Waste Project Installation

Left: (Before) Milk house waste project located in Newark Valley. Previously, the Milk House Waste flowed into a field approximately 200 feet from an unnamed tributary.

Right: (After) Milk house waste water now flows from barn and into an underground tank, the tank had a 2,000 gallon capacity. The waste water that is held in the tank can then be pumped to a discharge pipe that allows for it to be pumped into a manure spreader and spread in conjunction with manure onto fields.



Sackett Creek EWP Project Emergency Repair

Left: (Before) Exposed geotextile and washed out bed key.

Right: (After) Final key replaced, rock installed with gravel sprinkled over top for additional chinking.



AEM Program—Funding Conservation on our Farms

Through our voluntary AEM program, the District focuses on providing sound environmental planning and implementation on our farms, while constantly focusing on maintaining farm sustainability and protection of our natural resources. This year we assisted 32 farms with conservation planning, survey & design work, and implementation of grazing & livestock waste practices. Below are photos of a completed project in Berkshire. Funding for AEM projects were completed through a combination of funds including NRCS EQIP, NYS Ag Non-point Source funds, DEC WQIP, NYS Ag & Markets, and



Left (Before):
Undersized culvert at a farm crossing in Berkshire.

Right (After):
Installation of correctly sized box culvert.



AEM Award— Recognizing Conservation Efforts of Local Producers

King Dairy Farm—Spencer, New York—Catonk Creek Watershed

King Dairy Farm is a 173+ acre dairy farm on Ithaca Road in the Town of Spencer. The farm consists of 75 adult cows and 60 young stock. At this time the farm has no immediate plans for expansion. This is a three generation family farm beginning with John and Joyce King, their son David King and his wife Michelle (current owners), and they are assisted by their children Ashley and Michael. The farm has a current Certified Nutrient Management Plan that was completed in August of 2015 and has been updated by our office on an annual basis. The King's hosted Sundaes at the Farm in 2016, where over 700 visitors attended. In 2017 the Kings installed a Heavy Use Protection Area with a manure stacking pad through the Southern Tier Agricultural Industry Enhancement Program Funding. Pictured right, Dave and Michelle King with their AEM sign award, Brian Reaser and Rick Neuman Tioga SWCD Staff.



Lawton Jersey Farm—Newark Valley, New York—Owego Creek Watershed



Lawton's Jersey Farm is a 218+ Acre dairy Farm on Bridge Street in the Town of Newark Valley. The farm is a registered Jersey Dairy, consisting of 85 adult cows and 85 young stock cows. The Lawton's Jersey Cattle are marketed around the country for their champion genetics. Maple products are also produced and sold on the farm. The farm is a three generation farm beginning with parents Merle and Margaret Lawton. The farm is currently ran by their son Tim Lawton and his wife Debbie, and their children Nathan, Ryan, and Chelsie. The farm has a current Certified Nutrient Management Plan that was completed in June of 2016 and it is updated on an annual basis. The Lawton's hosted Sundaes at the Farm in 2015 and had over 600 visitors attend. They implemented a barn renovation in 2017 through the Southern Tier Agricultural Industry Enhancement Program funding, and installed a new milk house waste system through Part C Funding. Pictured left, Merle, Margaret, Tim & Debbie Lawton with their AEM sign award, and Brian Reaser & Rick Neuman, Tioga SWCD Staff.

STAIEP — Southern Tier Agricultural Industry Enhancement Program

On March 12, 2015, Governor Andrew M. Cuomo announced plans to boost the agricultural economy in the Southern Tier—one of the most diverse agricultural regions of the state with a large potential for growth. Under this initiative, \$25 million would help farmers increase agricultural production on farms and improve profitability. Projects had to be critical to increasing production, enhancing profitability and/or increasing the environmental compatibility of the farm operation and be a farm business or environmental plan. Tioga County was awarded \$1.5 million in funding to complete projects. Round 1 was awarded in the summer of 2016, using \$1,237,013.00, to fund 14 farms through out the county. As of 2017, there has been 11 farms that have completed construction and utilized \$871,243.06 in state funds, with \$345,411.69 in contributed match. Projects ranged from barn renovations to silage bunks. Round 2 award announcements were made in 2017, for 3 farms, totaling \$198,712.00 in state funds. This program does have a cost match requirement for all participating farms, and Tioga County Soil and Water Conservation is eligible for a 10% administrative fund for administering the grant and technical assistance provided to the farms, up to \$150,000. Below shows before (top) and after (below) of a newly constructed heavy use area in the Town of Spencer and a newly constructed heifer barn in the Town of Newark Valley.



Outreach & Education Events

Sundaes At The Farm

The Tioga County Agriculture Resource Group (TC ARG) has been holding this event for the last 10 years. The goal of the event is educating both rural and urban landowners in the county by giving them an opportunity to spend a few hours on a working dairy farm. This year there were over 700 people that attended the 3 hour event held at Tri- Kay Dairy Farm in Owego on July 30th. The 2018 event will be held at the Mead Farm located in South Owego, on Sunday July 29th!



Regional Envirothon Competition—Broome, Chemung, Schuyler, Tioga, & Tompkins County

The Envirothon is a hands on environmental problem solving competition for high school aged students in the United States and Canada. Participating teams complete training and testing in five natural resource categories including soils/land use, aquatic ecology, forestry, wildlife, and current environmental issues. The Envirothon works in partnership with local conservation districts, forestry associations, educators and cooperating natural resource agencies to organize and conduct competitions on the local, regional, state and or provincial level. Winning teams from each state and province advance to the North American Envirothon for an opportunity to compete for recognition scholarships and prizes. Last year there was representation from three different school districts in Tioga County; three teams from Tioga Central High School, two teams from Candor High School, and two teams from Newark Valley High School. A total of 34 students participated on behalf of Tioga County. On a county level, Candor’s teams took 1st and 3rd place, and one of the Newark Valley teams took 2nd place in the competition. On a regional level, there were 29 teams that competed, and one of the Candor teams took overall 1st place, and one of the Newark Valley teams also fell in the top ten, at 6th place.



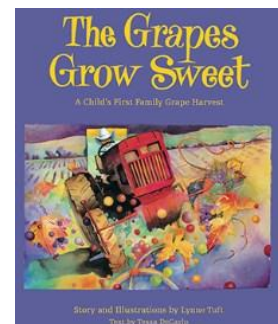
Left: Newark Valley’s “Enviro Studs” work together as a team to answer testing questions.

Right: Candor’s “Candor 400’s” team holds their awards for their 1st place county win and 1st place regional win.



Ag Literacy Week

The Tioga County Soil and Conservation District participated in Ag Literacy week in 2017. In celebration of New York Agriculture, staff read “The Grapes Grow Sweet” by Lynne Tuft and Illustrated by Tessa DeCarlo. Following the reading, staff conducted a lesson on the differences in red and white grape juice. New York ranks third nationally in grape production, with 75% of the grapes being produced into juice, and the other 25% into wine and used in the craft beverage industry. Our staff read to three second grade classrooms at Nathan T .Hall and three second grade classrooms at Apalachin Elementary.



Hydroseeding Program

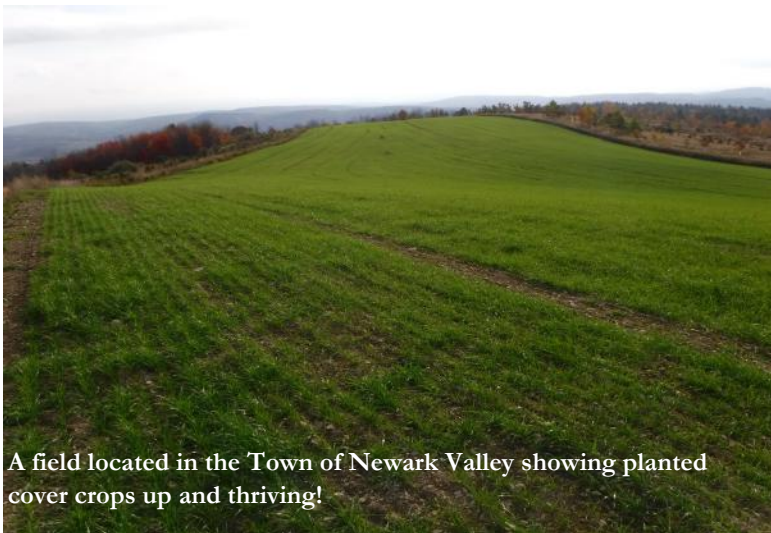
In 2017, the District completed 11 hydroseeding projects, for a total of 3.75 acres. Hydroseeding offers a degree of built in erosion control, making it ideal for municipalities to utilize along freshly exposed road banks and ditches. Homeowners also find hydroseeding a better alternative to seeding and mulching on exposed ground. This is because it is applied at an even rate with a great mulch and fertilizer mix, which then allows it to grow into a beautiful healthy lawn. Hydroseeding work for municipalities was funded through a combination of funds from the District, DEC WQIP Funding, and municipal cost share. Private landowners pay for their entire projects.

Above (Before): Application of hydroseeding on exposed ground.

Below (After): Result of hydroseeding, 52 days after the application!



No Till Drill - Conservation Tillage & Cover Crop Planting



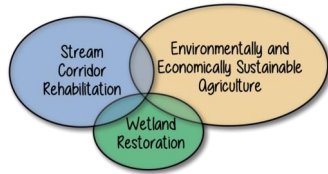
A field located in the Town of Newark Valley showing planted cover crops up and thriving!

No-till farming is a way of growing crops or pasture from year to year without disturbing the soil through tillage. It is an agricultural technique which increases the amount of water that infiltrates into the soil and increases organic matter retention and cycling of nutrients in the soil. In many agricultural regions it can reduce or eliminate soil erosion. It also increases the amount and variety of life in and on the soil, including disease-causing organisms and disease suppression organisms. In 2017 there were 677.1 acres of cover crops planted and 325.6 acres of conservation tillage acres planted through our office. Tioga County SWCD was able to secure funding for all of the cover crop acres to be planted through DEC and AgNon Point Source.

The Soil and Water Conservation District offers No-Till Drill rental to local farmers who are enrolled in the AEM program and have up to a Tier 3A cropland plan. There is a Truax 8 ft No-Till Drill and an ESCH 12 Ft No-Till Drill available for rent by contacting the office.



Upper Susquehanna Coalition



USC Staff:

- Wendy Walsh, Watershed Coordinator
- Melissa Yearick, Wetlands Coordinator
- Jeremy Waddell, Wetlands Biologist
- Ryan Ceruti, Technician
- Chris Brogdale, Technician
- Mike Lovegreen, Stream Team Leader
- Lydia Brinkley, Buffer Coordinator
- Laura Grant, Buffer Technician
- Emily Dekar, Ag Coordinator
- Chris Yearick, GIS Specialist

The Upper Susquehanna Coalition (USC) is a network of 21 Conservation Districts in NY and PA. The mission of the USC is to protect and improve water quality and natural resources in the Upper Susquehanna River Basin with the involvement of citizens and agencies through education, partnerships, planning, implementation and advocating for our water resources. This year the USC celebrated its 25th anniversary, in honor an event was held at Binghamton University. The USC's administered by the Tioga County SWCD through a signed Memorandum of Understanding with all members. The USC utilizes a multiple barrier approach on a watershed basis and focus on 3 key areas—Agriculture, Streams, and Wetlands.

Ag Team

- ⇒ Completed 14,172 acres of Nutrient Management Plans.
- ⇒ Received and distributed \$200,000 in cover crop funding from DEC to member districts.
- ⇒ More than 100 Farms in the Chesapeake Bay Watershed received financial assistance through the Ag Team.



Buffer Team

- ⇒ Through USFS Forester funding, we were able to add a buffer technician to our staff.
- ⇒ Received \$670,000 in funding through DEC for riparian buffer restoration and streambank stabilization on protected lands.
- ⇒ Funded 77 acres of riparian buffer planning and 440 acres of prescribed grazing through the USC Buffer Pilot Program!



See Description →

Wetland Team

- ⇒ Awarded \$315,000 in funding from DEC to build wetlands on private property.
- ⇒ Constructed 15 wetland features.
- ⇒ Removed 3,500 lineal feet of streamside berms.

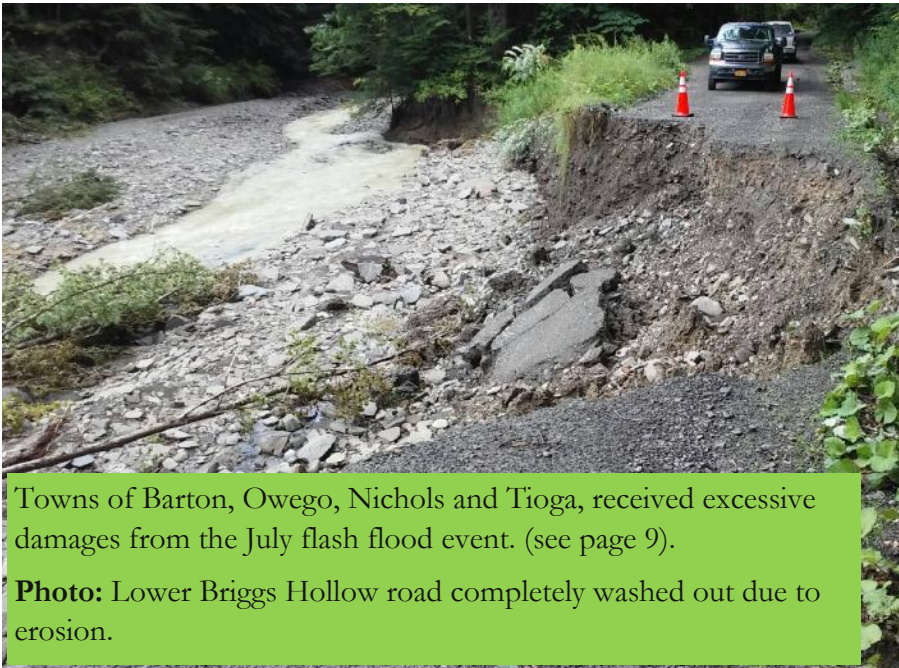
Stream Team

- ⇒ Held 6 training events through out the USC Watershed and published the Stream Corridor Assessment Guide.
- ⇒ Completed 7 watershed assessments through out Chesapeake Bay Watershed, two were in Tioga County.

Left: The USC planted a 2 acre buffer, 212 trees and shrubs, on John Howland's Property in the Town of Owego on the East Branch of Owego Creek.

Tioga County SWCD Stream Program

In 2017, the District assisted landowners and municipalities with several stream stabilization and rehabilitation projects. Funding came from a variety of sources including: municipal highway funds (flash flood recovery), landowner match, WQIP grant, Dire States grant, Part C funding, and NRCS EQIP. Design and construction oversight was provided and permits were secured by the District, reducing the burden on landowners and municipalities. A total of 24 projects were completed; 4,780 feet of streambank was stabilized with an estimated total cost of \$488,000.00.



Towns of Barton, Owego, Nichols and Tioga, received excessive damages from the July flash flood event. (see page 9).

Photo: Lower Briggs Hollow road completely washed out due to erosion.



Photo: State Line Road culvert completely plugged with gravel up to the road surface elevation (8-10 ft. of deposition).

Highlights:

- Assisted towns with flash flood recovery: permits, tech advice and oversight.
- 24 Stream projects completed
- 4,780 linear feet of stream bank protection
- Work with NRCS to oversee 4 EQIP stream projects
- Conducted culvert/ESI training with highway departments, demonstrated on a live flood recovery site in Nichols.
- 13 stream permits for municipalities
- 8 stream permits for landowners
- Cost shared some projects with Landowners and Towns through grant sources and Part C funding.

The district continues to be the leader on post disaster recovery through ESI (Emergency Stream Intervention training and protocol); pre-disaster resiliency work (through the Hazard Mitigation Plan), and continues to work with private citizens and municipalities through public education, training, technical assistance, grant writing and coordination, project design, hiring and oversight.

Tioga County SWCD Stream Program

Flash Flood July 2017:

The rain events occurring between Sunday July 23rd and Tuesday morning July 25 caused excessive erosion, debris and sediment deposition, and multiple culvert and road washouts in the towns of Barton, Owego, Nichols and Tioga in Tioga County.

These severe flash flooding type storm events are becoming more frequent in our area, causing large amounts of damage to both private property and municipal infrastructure. After an event such as this, the Tioga County SWCD stream program specialists, immediately shift the workload and focus on helping landowners and municipal leaders to recover from the damages. We do this through monitoring past projects to check for any damages, technical advice, permit assistance, construction oversight, coordinating with other agencies; and equipment and funding assistance if available.



State Line Road Nichols: culvert became completely plugged during the July flash flood, backing up sediment approximately 8-10 ft. high for 300-500 ft upstream. Many factors contribute to this type of damage occurring, including: climate/weather patterns, unstable upstream reaches, and undersized culverts. In this case, the culvert under State Line road should be re-sized to a larger span, which will allow high flows, sediment and tree debris to pass through rather than getting caught and plugging the culvert. A larger span will greatly reduce the occurrences of plugging and overtopping. This is both an issue for public safety (when the road washes out), and high costs for the municipality (more maintenance required to remove sediment and debris). The SWCD continues to work with municipalities to assess current culvert conditions for stability and environmental value, capacity, public safety and costs. This will allow a prioritization of sites to seek additional funding to rectify the problem areas. The photos above show the before and after from the recovery work that was completed. This was also used as a training site to demonstrate both the costs of undersized culverts and the best way to complete recovery work after a major event.

Tioga County SWCD Stream Program Continued

Ag Stream Project Photos funded through NRCS EQIP



Above: Eroding stream bank threatening pasture land on Lyon Farm, Town of Candor. Before and After.



Above: Eroding stream bank threatening Barnyard on Moyer Farm, Town of Owego. Before and After.



Above: Eroding stream bank and bed threatening field on Moyer Farm, Town of Owego. Before and After.

Tioga County SWCD Stream Program Continued

Culvert Replacement Project

Town of Berkshire: Rejmer Rd. The old culvert was undersized and beginning to be undermined by erosive flows, in addition to not allowing aquatic life passage. The project was funded through numerous sources including: WQIP grant, Dire States equipment rental grant, and Town Highway department labor. This served both as a needed replacement bringing the crossing up to flow volume and safety standards, but also brining it into complete environmental regulatory compliance, and the installation served as a hands on training for the SWCD and Upper Susquehanna Coalition crew, as well as, the highway department staff.



Stream Program Cost Share Pilot Project:

This log yard on Apalachin Creek was severely damaged due to the erosive flows during the July flash flood event. Both land and high value timber products were lost. SWCD provided permitting, technical assistance and oversight of contracting to install two in-stream rock structures and re-build a portion of the lost bank. Cost sharing with landowners is an effective method to implement projects that might not otherwise be completed due to high costs and financial restraints. In addition, cost sharing is an effective way for the SWCD to ensure the work is done in the most environmentally sensitive way, with the highest likelihood of long term stability that is both acceptable to environmental regulators and tax paying property owners.



By the Numbers.....

- Tioga County SWCD has been in existence for 74 Years assisting residents of the County.
- The District's total 2017 operating expenses were \$507,167.00.
- Our 2017 funding allocation from Tioga County was \$189,234. The remainder of District budget came from competitive grants, project income, and some reimbursement from NYS.
- In 2017, Tioga Count. SWCD leveraged the County's annual appropriation, and recieved additional funding to support staff and programs through, State Reimbursement (\$60,000), AEM Base (\$85,000), Special Project funding (\$98,447.21).
- Stormwater: Trained 200 contractors at 5 different 4-hour Erosion and Sediment Control Courses.
- Agriculture Assessments: Completed 43 worksheets, and 1,925 acres.
- Completed and assisted with 24 stream permit applications.
- The District sold 29,000 bare root tree/shrub seedling during the 2017 sale and 14 wildlife houses.

Looking Ahead.....

- The District continues to assists rural and urban landowners, contractors, towns and business in the county with stormwater and stream permits.
- District staff will coordinate implementation of the Hazard Mitigation Plan for the year, as well as, continue to provide staffing support with the NY Rising Community Program and lead the Regional River Initiative proposal.
- District will move forward with Ag Non Point Source Round 23 awards for two Tioga County farms to address environmental concerns. This funding will cover the implementation of best management practices in two high priority watersheds for both natural resources and water quality improvements as stated in our AEM strategic plan
- District will work to identify implementation sites based upon assessments completed in Apalachin Creek and Monkey Run Watershed.
- The District will continue to administer the Upper Susquehanna Coalition including numerous federal, state and local grants.
- In 2017, the District will work along side NYSDEC along with the assistance of USC member SWCDs and partners to revise and submit phase III of the Watershed Implementation Plan (WIP) to meet load allocations set under the Total Maximum Daily Load (TMDL) for the Chesapeake Bay Watershed. Nutrients such as nitrogen and phosphorous, as well as, sediment are the pollutants of concern. Best management practices continue to be installed on local farms, by local businesses and municipal sewage treatment plants in order to meet these load allocations. If the TMDL load allocations are not met by 2025, it will result in additional regulations that will be felt by our agricultural community and municipalities.