

# WINTER 2021-2022

## Seneca-Keuka Watershed Partnership

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### *Note from the lake specialists:*

They say this time of year is one for reflection and as we look back on 2021 we think of how different it was from 2020. Of course, in some obvious ways 2021 looks very much like 2020. From a watershed ecosystem perspective though it is amazing how much can change in just a year. If 2020 can be described as dry – no water in the streams, no water for the crops, no money for projects – then we think the most appropriate word for 2021 would have to be flush. In July it seemed like it would never stop raining. In August road crews were out in full force repairing roads and replacing culverts. Water in both lakes still remains high to this day. But along with an overabundance of water, returned the availability of funding to help communities address these recurring challenges. Things are kicking back into high gear now and as always we look forward to sharing the work we and many others are doing throughout the coming year. In the meantime, we hope you enjoy our final newsletter of 2021. Happy Holidays!



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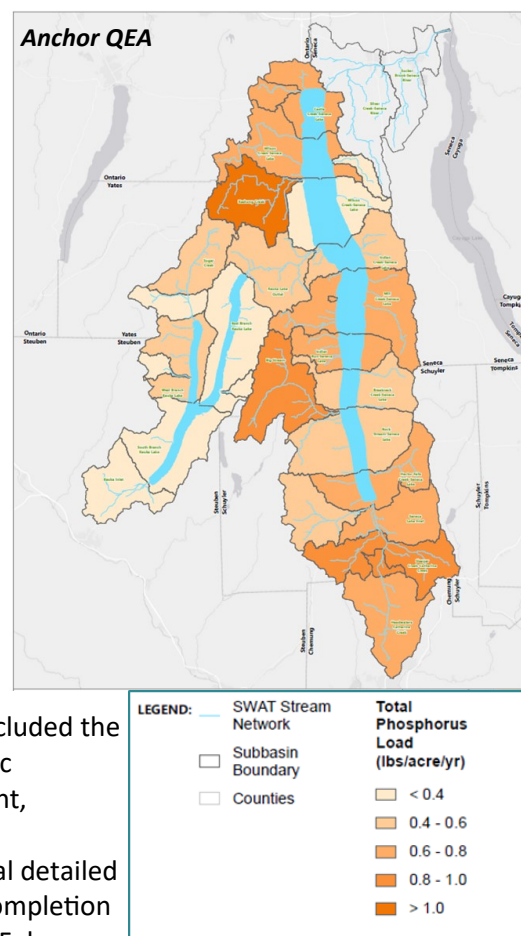
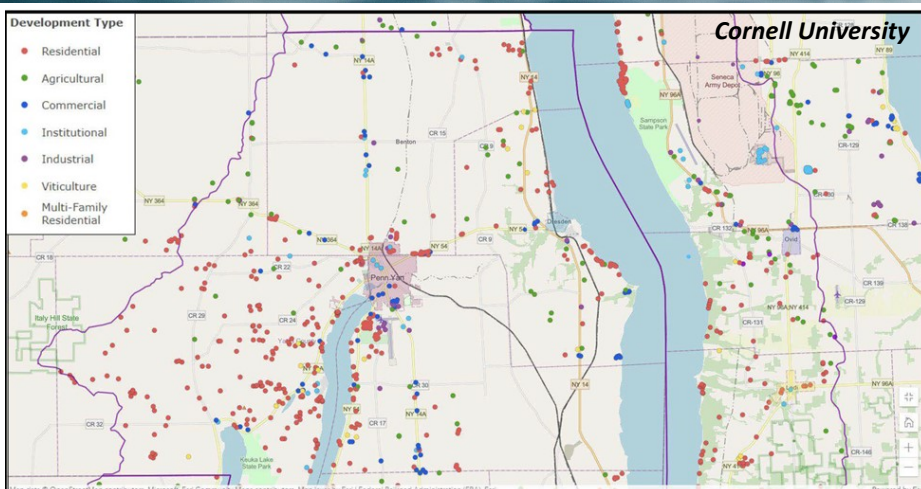


# Watershed Planning

In order to sustain our watershed, much of it will depend on planning and applying actions to maintain and continue to improve, protect, and preserve our watershed.

## Draft Nine Element Plan Nears Completion

On October 7<sup>th</sup>, Seneca-Keuka watershed representatives Ian Smith and Colby Petersen presented alongside representatives from EcoLogic LLC, Cornell University and Anchor QEA on the Seneca-Keuka Watershed Nine Element Plan (9E) project. Topics covered included the 9E framework, results concerning existing local laws pertaining to water quality, model simulation results on nutrient and sediment loading, and a broad overview of recommendations to address water quality challenges. To quantify the sources of pollution, a partnership of lake organizations working with consultant EcoLogic LLC and others are studying historic and current situations, including development trends and local municipal ordinances. Cornell University Associate Professor George Frantz and a group of students compiled data showing zoning laws, comprehensive plan adoption, erosion or sediment control laws and wastewater management laws. Frantz and his team also analyzed development between 1994 and 2000, documenting 1,788 new residential structures (accounting for 69 percent of all new construction in the watershed) and, in a development that could be unique in the nation, 254 new farmsteads, each including houses and agriculture-related buildings (10 percent of all new construction). Anchor QEA and EcoLogic LLC used additional data on precipitation, water quality, and land use to develop a model that quantifies sediment and nutrient runoff into downstream tributaries and lakes as a function of land use. Results are consistent with the composition of the landscape itself, with croplands, the most common land use type in the watershed, associated with the highest proportion of total phosphorous loading to the lakes. Croplands were followed by, in descending order, hay and pasture, forest and wetlands, developed land, and viticulture. Additional quantified sources included the 4,308 septic systems within 250 feet of a delineated waterbody, and regulated point sources such as wastewater treatment plants. Recommendations proposed for improvements included a variety of best management practices for agricultural sources, such as cover crops, erosion control, manure storage, riparian buffers, educational workshops, and economic incentives. Other recommendations included the use of conservation easements, stream restoration, water retention, economic incentives, green infrastructure, ditch management, septic system replacement, expansion of public wastewater systems, and universal watershed rules and regulations, among other things. Members of the public contributed additional detailed recommendations to be incorporated into the draft plan which has a target completion date of spring 2022. A third public outreach session will be held at 10 a.m. on February 3<sup>rd</sup>, 2022 focusing on the final elements of the 9E Plan framework: implementation, milestones, evaluation and monitoring. This session will be virtual. Further information on this event will be posted on the 9E project website (<https://senecawatershedio.wordpress.com/9e/>) as available. Alternatively you can contact [Ian Smith](#) to be placed on the project mailing list to receive direct communications.



# Finger Lakes Land Trust

Learn about what the Finger Lakes Land Trust has been working on to protect our natural resources throughout the watershed.

## ***Bishop Nature Preserve***

### ***Town of Fayette, Seneca County***

The Bishop Nature Preserve has a rich mosaic of brushland, forest, and wetland. Interestingly, most of the shrubs and trees are non-native, many of them invasive. However, the numerous birds and other creatures attracted to this wildlife oasis find here food, water, shelter, and nesting places—all the necessities of life. The structure of a habitat can be more important, at least to birds, than the exact plant species found there. Native species such as white pine, walnut, black cherry, basswood, hickory, maple, oak, flowering dogwood and shadbush are moving in, providing an additional element of diversity.

This low-lying preserve adjoins state land, and can be used as your access point for the Cayuga-Seneca Canal Trail, which runs for several miles along the canal that connects Cayuga and Seneca Lakes. Several seasonal streams traverse the preserve, emptying into wetlands. These, too, help meet the needs of wildlife.

Some sunny winter day when the snow lies deep, check out the animal tracks and birds at this diverse 30-acre wildlife haven in the town of Fayette, Seneca County. Maybe you'll even spot an owl roosting in the evergreens.

Directions and more information can be found at [fltl.org/bishop](http://fltl.org/bishop).



*Flowering dogwood*  
Photo Credit: Roger Hopkins



Photo Credit: Finger Lakes Land Trust

Want to discover more places to get outside? [Go Finger Lakes](http://GoFingerLakes) is the free website created by the Finger Lakes Land Trust to promote recreation and conservation. Use the interactive map of 50+ hiking, biking, paddling, skiing, and outdoor adventure destinations across the region!



# Lake Monitoring

Monitoring lake conditions is crucial to identifying the problems and figuring out a solution. Keeping up to date with the science of our water quality is essential.

## ***Viticulture and Water Quality: An Unexplored Interaction in the Finger Lakes***

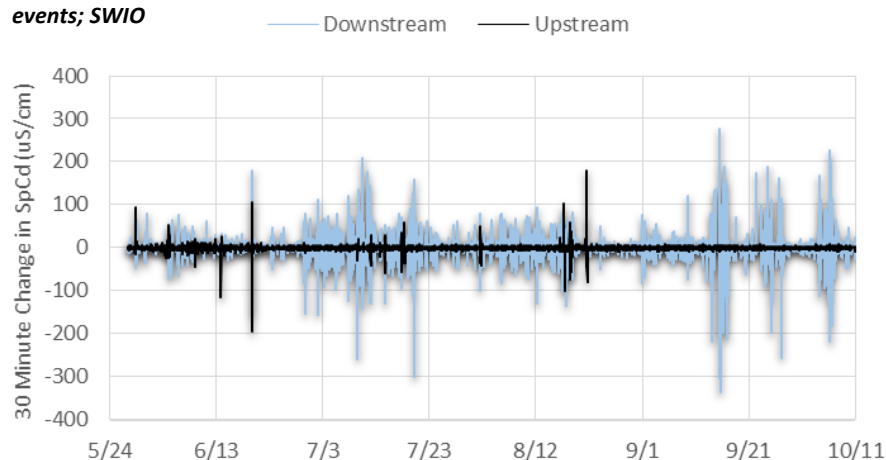
Over the past decade or more, the Finger Lakes Region, and the Seneca-Keuka watershed in particular, has become world renown as a growing and popular wine region. As such, viticulture is continuing to play an increasingly important role not only in our area economy and culture, but also our water quality. Given this, New York State (NYS) Department of Environmental Conservation (DEC) required treating viticulture as a unique land use type within the Soil and Water Assessment Tool (SWAT) model developed for the Seneca-Keuka Watershed Nine Element Plan. This of course raises the obvious question: **what are the water quality impacts associated with grape growing?** Well, it turns out we don't really know. The majority of the world's most recognized wine regions are found in places like California, Spain, Italy and Australia where Mediterranean climates are present. Unsurprisingly, the majority of research on grape growing also comes from work done in these areas... hardly representative of the Finger Lakes. For the purposes of building the SWAT model, the modeling team consulted with Yates County Soil & Water Conservation District, Cornell Cooperative Extension of Yates County and NYS Department of Agriculture and Markets to establish a reasonable approximation of the impact for the Nine Element Plan project. Ultimately the question remained though and as luck would have it, development of the NYS Wine Sustainability Initiative (more to come on this in a future edition) offered an opportunity to explore this further through monitoring research. In 2021, Seneca Watershed Intermunicipal Organization (SWIO) and the Finger Lakes Institute at Hobart and William Smith Colleges, in partnership with the NYS Wine and Grape Foundation began working with growers in Schuyler, Seneca and Yates counties. We identified three vineyards with the appropriate conditions for establishing a monitoring program; namely a stream downslope from an adjacent vineyard with enough length and limited size to be able to detect any potential changes in water quality above and below the vineyard. Working in very small streams presently many challenges, so for 2021 we simply began exploring whether these locations would work or not. In April of 2021 we installed pressure transducers and/or conductivity sensors above and below each vineyard; the former records stage depth while the latter is a measure of the specific conductance in water which ultimately is a general measure of all the "stuff" in it. Throughout the year we conducted streamflow transects that could be paired with the depth measurements to calculate stream discharge. One of the major challenges with small streams is their inherent instability and indeed one of the sites proved to be just so. On multiple occasions water loss was severe



**Monitoring station in the forested headwaters above a vineyard; SWIO**

**Changes in conductivity in response to rain events; SWIO**

## Site 2 : Conductivity



enough that the downstream sensor was out of the water while stormwater events buried the upstream sensor under inches of sediment. Despite one of the wettest years on record, the other sites proved remarkably stable... even after a July rain event that bent over our 2 pieces of rebar and sunk them into the streambed! For 2022 we'll be redeploying and refining our methodology, and pairing this field data with nutrient lab analysis and computer watershed analysis work to hopefully provide far greater insight into the role viticulture can play in protection and management of our water resources. Check back in with us next year for our findings!



# Water Treatment

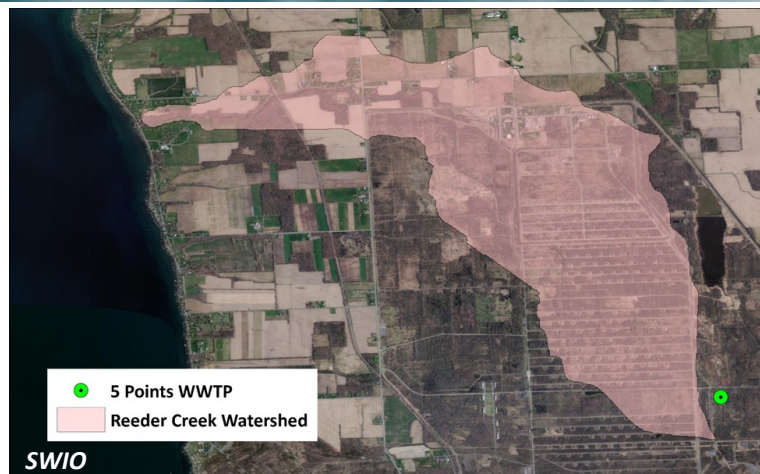
Focusing on how we can treat the water prior to it entering the lake is essential for the future quality of our waterways.

## Five Points Wastewater Treatment Plant

After initial consideration and deliberation in October, Seneca County Board of Supervisors held a special public hearing on November 18<sup>th</sup> concerning proposed improvements to Seneca County Sewer Districts No. 2. The work proposes significant improvements to the Five Points Wastewater Treatment Plant (WWTP) and decommissioning of the Hillside WWTP. The work is estimated at a maximum cost of \$12,767,746 and is proposed to be financed through the issuance of bonds by Seneca County. The annual cost to the typical property, including debt service and maintenance of the Five Points WWTP is estimated not to exceed \$850. District No. 2 was established in 2000 upon decommissioning of the Seneca Army Depot. The district consists of the two previously mentioned WWTPs. Five Points WWTP has a daily capacity of 0.55 million gallons and is owned by NYS Department of Corrections and operated by Seneca County. The plant serves resident and commercial properties within the towns of Romulus and Varick. Hillside WWTP had a capacity of 0.107 million gallons per day but ceased operating with the closure of the Hillside Children's Center in 2019. In an October 2021 report titled *Seneca County Sewer District 2 Improvements*, engineering firm Barton & Loguidice proposed extensive upgrades to the Five Points WWTP. This work includes improvements to the headworks, including upgrades to grit removal and screening, sludge dewatering, digesters and effluent aeration and construction of a new rectangular 2-basin sequencing batch reactor and tertiary filtration/chemical addition building. The cost of this work was estimated at \$11,990,000 with decommissioning of Hillside accounting for the remaining \$777,764. From a watershed management perspective, the proposed work is extremely welcomed news.

Reeder Creek, the receiving waterbody for both facilities, is the only waterbody in the Seneca-Keuka watershed identified as impaired and its improvement is of high priority both locally and at the State level. Results from the Soil and Water Assessment Tool (SWAT) model developed as part of the Seneca-Keuka Watershed Nine

Element Plan project indicate that phosphorous loading in Reeder Creek currently averages 1,800 kilograms per year (kg/yr). Of this, 1,100 kg/yr and 100 kg/yr are associated with discharge from Five Points WWTP and Hillside WWTP, respectively. Therefore, significant improvements to Five Points WWTP have the potential to reduce phosphorous levels in Reeder Creek by more than 50% while decommissioning of Willard will immediately eliminate over 100 kilograms per year. With any luck it may even be possible to de-list Reeder Creek and remove the specter of federal regulatory action. You can expect much more on this exciting project in future editions as work progresses.



# Agricultural Projects

Ag in the Seneca-Keuka Lake Watershed is extremely diverse and active. Ag Best Management Practices continue to evolve throughout the watershed.

## Multi-barrier Approach to Conservation

The Schuyler County Soil and Water Conservation District (SWCD) focuses on implementation of common sense cost effective conservation projects to preserve and enhance our area's pristine water quality while working to protect and



James Barrett (left), & Michael Manwaring (right) Schuyler County SWCD Equipment Operators

enhance millions of dollars of public and private infrastructure annually. The Schuyler County SWCD builds 50 to 75 projects every May to November with its own equipment and highly

qualified equipment operators. The Schuyler County SWCD has two equipment operators from May to November. James Barrett and Michael Manwaring have a combined 75 years experience in operating equipment. The Schuyler County SWCD only has one full time permanent employee. All conservation projects implemented are paid for through highly

competitive grant funding obtained by the SWCD each year. Each year the Schuyler County SWCD implements over 2 million dollars in conservation projects. These projects have a documented \$7 multiplier effect on our regions economy, giving the Schuyler County SWCD a \$14 million dollar impact on its County and the surrounding region. The efficiency of the Schuyler County SWCD starts with its equipment operators and persists at high level due to its extensive shared services efforts with its municipal highway departments.

The Schuyler County SWCD works on a multitude of various conservation efforts annually but their focus remains the same each year. They focus on a multi-barrier approach to conservation. The SWCD first works to retain water on the land through several concerted efforts, including



the construction of retention ponds in the upper sub reaches of flood prone watersheds. The community has seen the impacts of more frequent high intensity, short duration storm events that have devastated the region and the country. Retention ponds help to store that intense stormwater runoff reducing peak curve numbers during these storm events and elongating time of concentration overall. These ponds have a primary spillway constructed of an inline control



# Agricultural Projects Continued...

structure that allows the SWCD to build permanent free board into the pond creating significant volumes of storage.

The second focus of their retention/infiltration efforts is to create as much permanent cover as possible through the implementation of cover crops. Cover crops aid in the reduction of compaction and allow increased infiltration. They improve soil health, reduce erosion, build organic matter and reduce the need for commercial fertilizers. Cover crops are one of the best bang for your buck conservation practices across a

broad landscape. Annually the Schuyler County SWCD implements and helps to cost share over 2,000 acres of cover crops. This project alone aids in the reduction of nearly 6,000 tons of sediment from reaching our surface waterbodies. This effort would not be possible without the buy-in and belief of the area's farmers. They are the backbone of this program each year.

The next step in the multi-barrier approach is to upsize and replace failing and undersized infrastructure. Much of the nation, like Schuyler County, is facing a need for upsized infrastructure to handle the short duration, high intensity storm events. What should not be overlooked is how this need is increased exponentially as the impervious surfaces increase in small sub watershed areas. The SWCD works with the municipalities to upsize smaller culverts into larger culverts and larger undersized or failing culverts into substantial box culverts. They complete dozens of these annually.

The final focus is on stabilization. This can occur in many forms, from the implementation of buffers, to stream



*Interseeded cover crop growing well after corn harvest*



*Road ditch stabilization using Flexamat by Schuyler County SWCD*



*Stream stabilization project by Schuyler County SWCD*

stabilization with rock rip rap. We also work to stabilize road ditches utilizing hydroseeding, Flexamat, and rock rip rap. Stabilization of erosion can also be accomplished by breaking up slope length. As slope length increases so does velocity and overall volume of flow. A simple conservation project like a diversion to break up the slope can help to alleviate severe head cutting issues that may occur with a longer slope. Installing more cross culverts to not allow a longer flow path also aids in the reduction of erosion. The Schuyler County SWCD implements thousands of feet of road ditch, and stream stabilization annually.



# Soil & Water Highlights

Each quarterly newsletter will feature local Soil & Water Conservation Districts and some of their projects that are helping to improve our watershed.

## ***Watershed Collaboration Yields New Opportunity***

In October, Yates County Soil & Water Conservation District (SWCD), in partnership with the Seneca Watershed Intermunicipal Organization, and Ontario, Schuyler and Seneca County SWCDs, was awarded \$195K through the Great Lakes Commission (GLC) *Great Lakes Sediment and Nutrient Reduction Program*. As the name suggests, the principal focus of the program is to install erosion and sediment control practices throughout the Great Lakes Basin. You can find more information on this program, including previously completed projects, by visiting the program website (<https://www.glc.org/work/sediment>).



Yates County SWCD

The partnership group was able to leverage over \$170K in local and state dollars to access these GLC funds and will be seeking to implement multiple agricultural best management practices (BMPs) throughout the Seneca-Keuka Lake watershed. These include cover crops, diversions, riparian buffers, grassed waterways, lined waterways, mulching, and water and sediment control basins. In totality, these BMPs are projected to result in an annual reduction of 2,770 pounds of phosphorous, 5,537 pounds of nitrogen, and 2,051 tons of sediment for the life of the system.

Work will start in spring of 2022 and carry on through the fall of 2024. In some cases, agreements are already in place between landowners and SWCDs to implement projects, but additional participants are also to be recruited. Ongoing communication efforts such as this publication and soil health workshops will seek to aid in this recruitment while simultaneously keeping inquisitive individuals aware of ongoing work. To that end and as part of this project, we are also seeking to develop an online mapping tool that people can use to visualize and access information on projects as they are implemented for both this project and many others.

GLC represents a new funding source for our watershed and highlights the importance of watershed planning in being able to access such funds. Funding agencies are increasingly requiring quantitative assessments in order to assess need and impact of proposed projects and it was only through deliberation with GLC

## ***Ontario County SWCD***



representatives on preliminary modeling results from the Seneca-Keuka Lake Watershed Nine Element Plan (9E), coupled with previous watershed planning work, that the partnership group was even able to qualify for consideration. Completion of the 9E will only enhance our ability to access new and additional dollars to ultimately implement additional improvements moving forward.





# Community Outreach

Each and every person can make an impact on our waterways. Learn how local organizations are working with our communities to improve our watershed.

## 3<sup>rd</sup> Bi-Annual Clean-Up Crew Event

Clean-Up Crew, Assemble! Ok, maybe not as catchy as “Avengers”, but on October 2<sup>nd</sup>, volunteers from around the watershed (and some from our neighbors to the east) gathered at Lucky Hare Brewing in Hector for another day of community service. For once, weather cooperated and over 25 volunteers assembled in the sun to give a little back to our shared public lands.

Trail work remains an ever popular activity and many volunteers worked to finalize a stretch of elevated boardwalk along the popular Interloken Trail. The Finger Lakes National Forest was also a recent recipient of over a dozen ADA accessible picnic tables, which volunteers helped assemble and paint. However, what really proved exciting to those of us with a water quality improvement bias was the opportunity to plant some trees!

Earlier this year, Forest Service staff installed exclusionary fencing along 500 feet of an un-named tributary to Mill Creek just off of Wilkens Road. The land surrounding the stream is actively managed for grazing and prior to installation of the fencing, cows were able to directly access the stream channel thereby contributing to its degradation. With access restricted, a source of nutrients and bank erosion is eliminated but additional bank erosion and flooding remained a problem. Enter trees...

Whether due to simplicity or commonality, trees are an often overlooked yet remarkably effective means of reducing runoff, sequestering nutrients, and stabilizing streambanks. A mature tree can “consume” over 100 gallons of water in a given day and trees located within a riparian corridor can have a profound impact on



water quality in adjacent streams due to their ability to draw water out of the stream. During leaf out – the period when leaves start to emerge during spring – you can actually observe the water level dropping in deciduous forest streams due to this effect!

For these reasons and more, planting trees within this now isolated riparian corridor offered an opportunity to mitigate flooding and nutrient loading to Mill Creek. Thanks to the generosity of a private donor who provided the seedlings, volunteers were able to plant over 150 trees along the stream, which thanks to the presence of the exclusionary fencing,

will be protected from grazing by their bovine neighbors. Plans are to extend the exclusionary fencing south all the way to the tree line and you can expect more trees will be finding a new home on the Finger Lakes National Forest when that time comes.

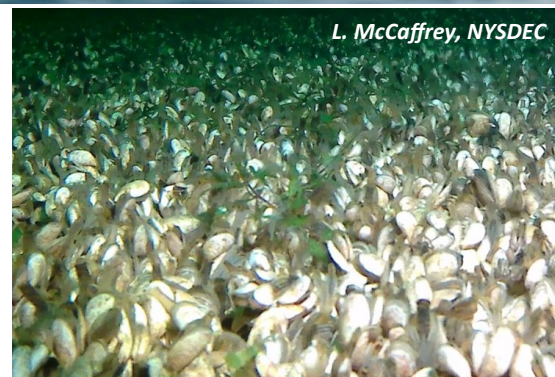


# Did You Know?

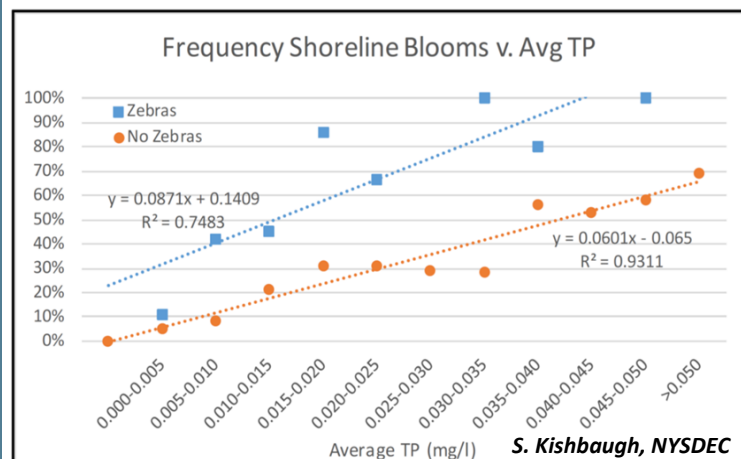
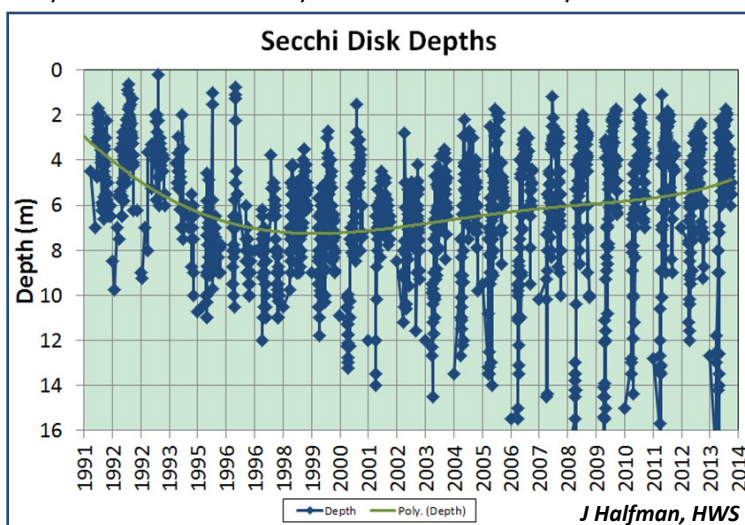
Learn more about aquatic pests that are affecting the watershed.

## Mollusk Mayhem

Located east of Detroit Michigan, Lake St. Clair lies within the river system connecting Lake Huron to Lake Michigan. In the 1960's the U.S. Army Corp of Engineers carved a 30-foot deep channel down the middle of St. Clair to allow oceangoing freight ships to travel between Lake Huron and Lake Michigan. However, when water levels were low or sediment accumulation severe, these ships were forced to dump water – water taken onboard from outside the Great Lakes – from ship-steadying ballast tanks. In June of 1988, Sonya Santavy, a recently graduated researcher with the University of Windsor, was surveying for sediment dwelling organisms in Lake St. Clair. In a seemingly innocuous sample of pebbles, she found a pair of small dime-sized mussels stuck together. An international mussel expert at the University of Guelph identified it as *Dreissena polymorpha* or zebra mussel, the first documented record of one in the Great Lakes. The diminutive but destructive mollusk spread quickly from there. By 1992 it was documented in Seneca Lake and found its way to Keuka Lake shortly thereafter. In the early 2000's the zebra mussel was joined by its cousin, *Dreissena bugensis* or quagga mussel. Observations from Lake Ontario have shown that quagga mussels are able to survive in far deeper water and influence the food web to a greater extent than zebra mussels; to such an extent that quagga mussels are now estimated to make up 80-95% of the living mussel population in Seneca Lake. The impact of these invaders was felt immediately. If you were a frequent visitor to the lake you likely would have noticed a steady increase in water clarity between 1992 and 1997 as the new and massive population of mussels voraciously grazed on phytoplankton. If you were a utility operator whose facility withdrew water from the lake you may have been cursing them as they clogged your intake pipe over and over again. Impacts such as these are well documented but more recent research is linking them to nutrient availability; and by extension algal blooms. In January of this year, researchers from the University of Minnesota and the Hong Kong University of Science and Technology published a paper through *Proceedings of the National Academy of Sciences* with the ominous title of "Benthic invaders control the phosphorus cycle in the world's largest freshwater ecosystem." Based on their findings, quagga mussels are preventing phosphorous from being buried in lake bed sediment and as a result have become the dominate regulator of phosphorus cycling in the lower four Great Lakes. If applicable to Seneca and Keuka Lakes, this could have profound consequences on watershed management in coming decades. Along a similar line of enquiry, Scott Kishbaugh and his colleagues at NYS Department of Environmental Conservation (DEC) have been analyzing 35 years of Citizens Statewide Lake Assessment



L. McCaffrey, NYSDEC



Program research and information from the DEC Harmful Algal Bloom (HAB) monitoring program in an effort to better understand the drivers behind harmful HABs. One of those observations includes a link between the presence of zebra mussels and the occurrence of HABs; when present they increase the likelihood of shoreline blooms occurring at a given phosphorous level making watershed management that much harder. An equilibrium may ultimately emerge as lake ecosystems become fully adapted to the presence of these invaders but will it resemble an ecosystem we desire... or recognize? Questions remain but based on observations so far, it's not hyperbole to suggest the future of the Finger Lakes lies with the mussels.



# Industry Input

Many of the businesses within the watershed are here because of the lakes. Each newsletter will feature a local industry that is impacted by our lakes.

## *Finger Lakes Economic Development Center*

The Finger Lakes Economic Development Center (FLEDC), legal entity name is Yates County Industrial Development Agency, is the sole economic development agency dedicated to the promotion and growth of Yates County.



**FINGER LAKES**  
ECONOMIC DEVELOPMENT CENTER  
*of Yates County*

## *Ontario County SWCD*



The FLEDC focuses on creating programs that help businesses of all shapes and sizes in numerous industries. Believing that “activity breeds activity” we have worked on creating an atmosphere of excitement around new business creation, attraction and expansion. The results of this focus have been phenomenal. Among the awards and recognition we are most proud of was having the International Economic Development Council recognize the FLEDC as one of seven most highly performing organizations in the world!

There is no shortage of data that proves Yates County is experiencing tremendous economic development success. In the past 10 years, the FLEDC has directly supported over 300

projects resulting in \$306,000,000 in company capital expenditures and over 800 jobs created.

Those projects have helped Yates County lead the 9-county Greater Rochester/Finger Lakes area (Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, Yates) in nearly all major economic growth categories including:

- 14% increase in total business establishments since 2001
- 46% increase in manufacturing jobs since 2001. The region, state and nation all lost at least 20% of their manufacturing jobs over the same time period.
- 58% increase in financial services since 2001
- 23% increase in construction jobs since 2001
- 16% increase in agricultural jobs since 2001
- 77% increase in tourism spending per capita since 2005 (2x the regional average)
- According to NYS Office of Comptroller, had the largest year over year quarterly increase in sales tax revenue in NYS multiple times
- 6% increase in salaries since 2001
- 4% increase in median household income since 2014– the ONLY county in the region to have an increase



*Ontario County SWCD*



# Industry Input Continued...

- Decreased our poverty rate by nearly 2% since 2014 while the region (+4%) and state (+2%) both saw increases in their poverty rates
- Lowest unemployment rate in NYS according to NYS Department of Labor

*\* Data analysis provided by Center for Governmental Research on behalf of ACT Rochester unless otherwise noted*

Currently our biggest challenge is finding available labor, across all skill sets and business sectors, to fill the open jobs in Yates County. Of date, there are approximately 500 job openings in Yates County. This does not include planned job openings of recently announced projects. As such, our main focus is helping our companies fill these openings by attracting new employees. Yates County is experiencing the same high demand for housing the rest of the region is seeing. Our challenge is heightened with what has always been a low supply of available housing stock.

Clearly our location in the true heart of the Finger Lakes having shoreline on Canandaigua, Keuka and Seneca Lakes, is a major

attraction! The attraction of the lakes brings their own challenges. Increased demand for houses in and around the lakes put added pressure on the housing market putting further demands on the already limited supply and thereby increasing sale prices. This makes it more difficult for families looking for available, permanent housing options. We are working with multiple developers on housing projects including multi-tenant apartments, townhomes, condominiums and single-family housing.

However, that additional demand for waterfront or water view housing obviously has its advantages too. One of the biggest benefits we are seeing is an increase in individuals moving to Yates County from the West Coast where they are experiencing severe water shortages and wildfires. The Finger Lakes offer an extremely attractive and climate safe area for those on the West Coast to “escape” to. Many of these new residents have vast business experience and bring with them new perspectives and ideas that are invaluable to economic and community development efforts.

So we will continue to focus on driving new programs to continue the significant momentum we have in Yates County and find creative ways to bring together new and long time residents to create an increasingly vibrant economic community!



**Governor Kathy Hochul walking on Main Street in Penn Yan**  
**Photo Credit: John Christensen of the Chronicle-Express**



# Municipal Voices

This section focuses on different municipalities and their role in protecting the water quality of the Seneca-Keuka Watershed. Learn what Geneva is doing to make this goal a reality.

## Conservation Kick

Conservation Kick is the name of a program of the Great Lakes Commission (GLC) that provides matching funds for water quality projects; the funds flow from a grant to the GLC from the US Environmental Protection Agency. The GLC, acting as broker and verifier, is seeking to test the potential market for water quality credits that support and track projects over time.

Here's how it works. The program matches a Seller of water quality credits with a Buyer. The Seller is a landowner that implements conservation or best management practices (BMPs), like cover crops or no-till, that reduce pollutant loading into nearby receiving waters over a period of time. The Buyer is an entity like a municipality that is willing to purchase the

water quality credits generated by the Seller's BMP. For example the Buyer pays the Seller a certain sum each year to offset the expense of the BMP to the Seller, encouraging and sustaining a BMP over time the Seller would otherwise be unable to afford.

To kick-off the program, the Great Lakes Commission has made available grants of up to \$10K that must be matched by the applicant, providing an initial \$20K for a project. The BMP that is proposed must have a measureable impact on water quality, be installed and maintained for the period set in the contract that is entered into by the parties, and these conditions must be verified by an independent agent annually. To use the \$20K project example, a farmer would be paid \$2K per year for ten years to implement and maintain a BMP for ten years that reduces nutrient loading in a local waterway of interest, like taking land bordering a stream out of production.

The Town of Geneva applied to the Great Lakes Commission for a Conservation Kick grant in early 2021 and was awarded \$10K, which the Town will match with \$10K, allowing for a \$20K project. The Town identified a



farm with large losses of soil and nutrients during rain events willing to install, with the help of these funds, a basin on the edge of the field that would capture run-off and slowly release cleaner water during a storm. The contract between the Seller farmer and the Buyer Town is being drafted. The basin will be installed in 2022. The Town is being assisted by Tucker Kautz of the Ontario County Soil & Water Conservation District and Seneca Watershed Steward Ian Smith, as well as representatives of the Great Lakes Commission. For more information on Conservation Kick contact Nicole Zacharda of the Great Lakes Commission at [nzacharda@glc.org](mailto:nzacharda@glc.org).



# Partnership Organizations

Learn about our partner organizations and how they are helping with the 9 Element Plan for the Seneca-Keuka Watershed.

## ***The Bridge to Best Practices***

Under President Abraham Lincoln a national land grant University system was founded.

Each land grant University

provides research, best practices in a variety of subject matters (ex. natural resources) and services as a bridge between the College and communities.

From 1911 to 1918 the Finger Lakes Region of New York State was first to establish county-based agriculture agents. These individuals helped match Cornell University resources with community needs. Each community's interests and needs varied widely: youth development, job creation, economic development, livestock management, lake water quality preservation. Each county Cornell Cooperative Extension (CCE) agent, with boards of directors and a cadres of volunteers provided focus on the ever-evolving needs of each respective community.

One of the areas that emerged as a concern for Yates County in the 1960's and 1970's was the water quality of Keuka and other neighboring Finger Lakes. Collaborations with lake associations, Soil & Water Conservation Districts and various intermunicipal organizations resulted in educational publications and resources on farmland management and best practices in recreational use of the Finger Lakes.

Over the years, Yates CCE has been involved in coordinating and co-hosting public forums on farmland protection planning, hydrofracking, aquatic invasive species and water quality. CCE offices are "uniquely positioned to tailor opportunities and resources to match the diverse and ever-evolving needs of communities."<sup>1</sup>

As the *bridge* between the research of Cornell University and villages, towns and counties, CCE looks for ways to find common vision and achievement of measurable objectives and outcomes to improve water quality for drinking, recreation, tourism, farming and animal habitats.

This can be the placement of student interns from Cornell University's various departments, hosting conferences/meetings on topics of interest, partnerships on research with university professors and principal investigators from other area colleges or the use of computer software and Cornell University technology to provide data, charts and graphs.

Currently the inclusion of "citizen scientists" has been an integral component to water quality management. Smart phones, tablets and the internet have created increased opportunities for community residents to have a more active role in water quality management. Seneca Lake Pure Waters Association was instrumental in the creation of a local cadre of trained volunteers in Yates, Ontario, Seneca and Schuyler Counties to establish water sampling for Harmful Algal Blooms (HABs) along privately owned lake front properties. Through collaboration with the Finger Lakes Partnership for Invasive Species Management (FL-PRISM) and Hobart and Williams Smith Colleges, CCE of Yates County was able to serve as a "bridge" to replicate this HAB model on Keuka Lake. In cooperation with Yates County Soil & Water Conservation District and the Keuka Lake Association, curricula, training and work zones were organized; water quality testing kits were provided. Seneca Lake has over 150 volunteer water quality monitors; in its second year, Keuka Lake now has over 60 trained volunteers. Potential HAB sightings are reported to coordinating agencies and public health officials. These best practices are to help ensure public health and safety for residents, visitors, pets, families, businesses and communities. Partnerships are a key component to the future of water quality in the Seneca-Keuka watershed and the greater Finger Lakes Region. CCE of Yates County will continue its commitment to be a part of the solution.

<sup>1</sup> CCE Impacts. Retrieved September 21, 2021, from [cals.cornell.edu/cornell-cooperative-extension/about-cornell-cooperative-extension](https://cals.cornell.edu/cornell-cooperative-extension/about-cornell-cooperative-extension)



## **Cornell Cooperative Extension Yates County**

# Thank you to the contributing authors:

**Gwen Chamberlain** was the editor of *The Chronicle-Express* in Penn Yan, *The Observer* in Dundee and *Review & Express* in Watkins Glen. Gwen grew up on a dairy farm near Himrod. She and her husband live in Dundee and they enjoy spending time at the family cottage.

**The Finger Lakes Land Trust (FLLT)** is a nonprofit conservation organization that protects over 25,000 acres of our region's beloved natural areas and working landscapes. Their mission is to conserve forever the lands and waters of the Finger Lakes region, ensuring scenic vistas, clean water, local foods, and wild places for everyone.

**Ian Smith** is the Seneca Watershed Steward for the Seneca Watershed Intermunicipal Organization. He works at the Finger Lakes Institute office at Hobart and William Smith Colleges. The Seneca Watershed Intermunicipal Organization – SWIO for short – was formed in 2015 to preserve, protect and remediate ecological and water quality concerns in Seneca Lake and its surrounding watershed.

**Jerry Verrigni** is the Schuyler County Soil & Water Conservation District Manager, Certified Crop Advisor, Certified Nutrient Management Planner, and Agricultural Environmental Management Planner. Jerry has been with Soil and Water for 21 years. The Schuyler SWCD's focus is the implementation of common sense, cost effective conservation.



## SAVE THE DATE

**February 3<sup>rd</sup> 2022**

**10:00 AM**



Please join us for a special Outreach & Education event on the Seneca-Keuka Watershed Nine Element Plan. This presentation will focus on the final elements of the Nine Element Plan framework: implementation, milestones, evaluation, and monitoring. As always feedback is welcomed and appreciated. This event will be held digitally in light of current conditions. Further information to follow and please feel free to share this announcement.

**Steve Griffin** is the CEO of the Finger Lakes Economic Development Center (FLEDC) of Yates County. The FLEDC uses a broad spectrum of natural resources and targeted development programs to sustain the high level of growth Yates County is experiencing. Their programs are designed to help businesses of all sizes and all industries.

**Mark Venuti** is the supervisor of the Town of Geneva, the chair of the Seneca Watershed Intermunicipal Organization, and a partner in the Geneva and Penn Yan law firm Heaton & Venuti, LLP.

**Arlene Wilson** is the Executive Director of Cornell Cooperative Extension of Yates County. She also serves as a volunteer for the Keuka Lake stream monitoring project.



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Seneca County

Schuyler County

Ontario County

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***Alaina Robarge (Ontario County Soil & Water Conservation District)***

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