

Working with Nature

Inspiring stories from people and communities working to create a more sustainable and resilient Chautauqua County

A CHAUTAUQUA WATERSHED CONSERVANCY PUBLICATION



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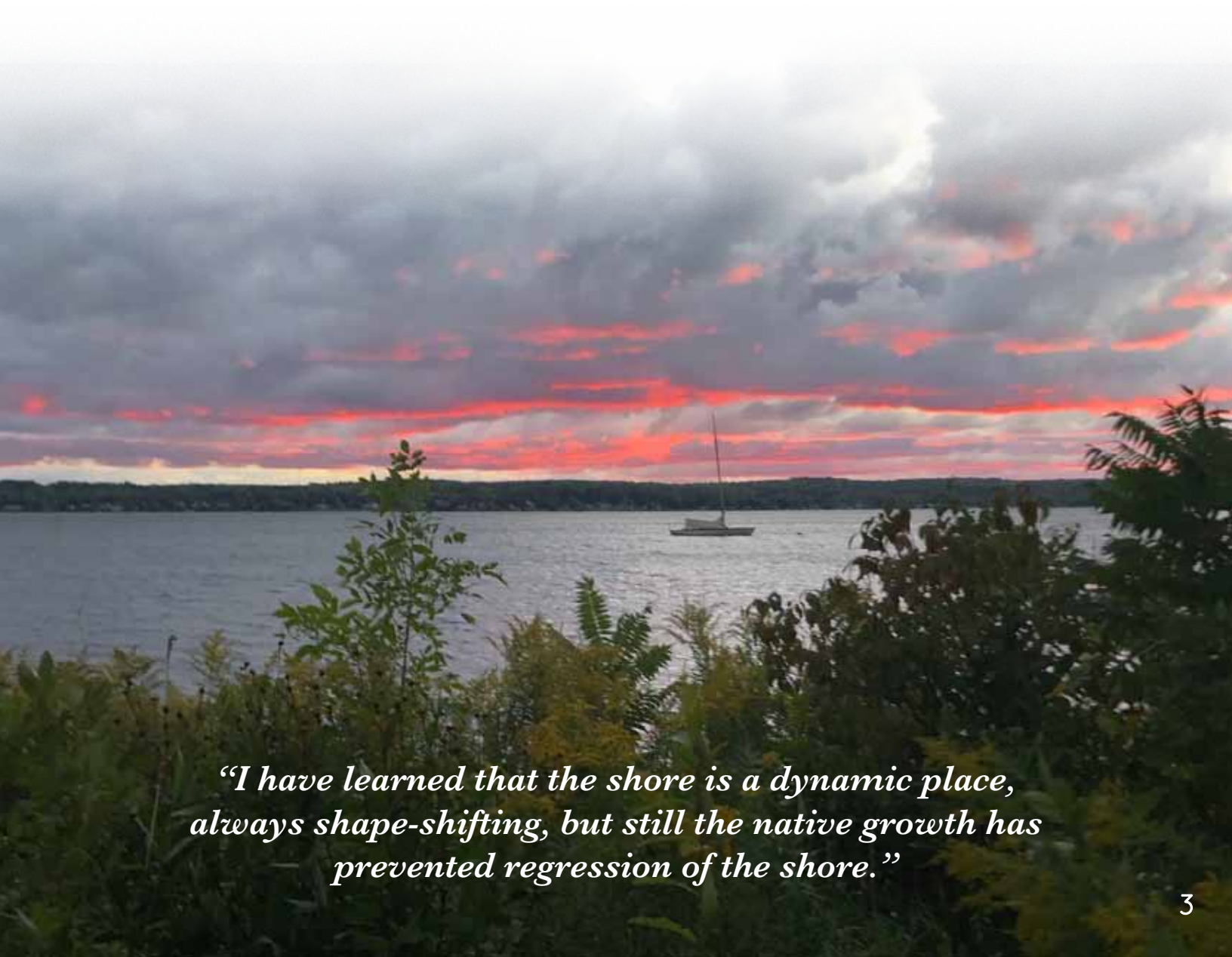
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The Beauty of Reclamation

When Pat Hubbell and her husband closed on their house in Dewittville in November of 1999, they knew they wanted to change some things. Their new property had 140 feet of lakefront that had been mowed down to its sandy shore. There was only a newly planted river birch and a struggling flowering

dogwood getting way too much sun in the yard to the south. Native ash and maples of all ages stood to the north. Pat and her husband had read some educational material about lakefront buffers and their benefits but didn't quite know where to begin.



“I have learned that the shore is a dynamic place, always shape-shifting, but still the native growth has prevented regression of the shore.”

Their first step was to stop mowing down to the water's edge. The following spring, they hired their 13-year-old neighbor to mow and instructed him to stop mowing a few feet short of the sand. He did precisely that, but later in the season, the shore started looking wild and scruffy. His parents, certain that the new people really did not want it to look like that, convinced him to mow it all while they were away. So their first year was a time of observing and learning and taking one step backward.

Pat removed as many invasive weeds as she could and planted three red maples and another birch close to the water, as well as a red oak closer to their home. They planted red-osier dogwood, chokeberry, and black willow on the shoreline. Goldenrod and milkweed quickly filled in and local gray dogwood volunteered after about 5 years.

Pat explained that her main obstacles included beaver and bindweed. "Beaver love to visit the willow, especially the black willow, so it was here today, gone tomorrow. Winter's ice can remodel the shoreline dramatically in the spring. One never knows what the shoreline will look like from one year to the next. I have learned that the shore is a dynamic place, always shape-shifting, but still the native growth has prevented regression of the shore. I look at the driftwood that comes down Dewittville Creek in the spring as a gift rather than a nuisance, and I add it to my buffer."



"We love our view framed by living native flora."



Gray dogwood

"I believe that a lakefront is too dynamic a place for formality."





Northern cardinal



With each passing season, the many dynamics of this buffer bring new life, food, and habitat to many birds, butterflies, and pollinators. Pat explains that it is now a breeding ground for song sparrows. Monarchs routinely visit her milkweed. She enjoys reading in the shade of her maples and oak or turning on the Merlin app and listening to the many birds that visit that her aging ears can't hear. Her biggest disappointment is her inability to get cardinal flower established...but she hasn't given up yet!

As the years passed, the neighborhood noted that the sandbar willow and dogwood on the Hubbell's shore retained the sand, despite the battering west winds. The neighbors are all-in on buffers now. The lakefront has been transformed, and all 750 shoreline feet of Pat's immediate neighborhood, which is the original Leon Johnson property purchased in the 1920s, is unmowed.



Cutleaf
coneflower



Cardinal flower, boneset,
waterwillow and cattail



Winterberry

When asked how people react to what she has done, Pat replied, “People are curious about such a casual approach to landscaping that also blocks a significant view of the water. We love our view framed by living native flora. We spend so much time on the water sailing that we don’t need an unobstructed view. Formal gardeners are probably appalled when they see my ‘garden’ which only qualifies as a garden because I weed it. I believe that a lakefront is too dynamic a place for formality. One would be setting oneself up for failure. Plant the roses by the house or the driveway, and give the lakefront to the birds and butterflies.”

TAKEAWAYS

- These projects take time. It may require more than one growing season before others recognize its beauty and benefit.
- A natural shore does not need to cover or distract from the lake view. Rather it becomes a part of it.
- A shoreline is a dynamic, ever-changing space that native plants have adapted to the best.
- A shoreline that is not mowed will last longer than one that is.



Brown thrasher

Harmonious Homeowners



Ruth Lundin and her husband Paul Hedberg had a vision - a vision of living and building their home and landscape in Busti, NY with a low to no impact on their property and surrounding land. Their main concern was water, and they concentrated on the fact that, prior to urban development and sprawl, half of all the rain that fell on North America had the opportunity

to percolate into the soil. Native plants wicked about 40% of this moisture back into the air. The remaining 10% slid across the landscape and ended up in a water-body. Now, that figure is almost totally reversed, and we are faced with flooding, erosion, and a depleted water supply.



The house helps conserve and maintain one of our most important and valuable resources...water.

Their vision included various water retention features - all extremely creative, beneficial, and connected to the idea of keeping water in and on their property. At the same time, these features offered native habitats where local wildlife, birds, and pollinators could live and thrive. After several years of thought and construction, their dream home that contains and controls water was complete. Their water-friendly home now consists of a living roof where plants absorb rainwater. Strategically placed rain barrels capture excess rainwater from the roof, and this water is then used to water plants around their yard. When rain is heavy and these barrels overflow, they are connected and flow into a rain garden in the middle of their driveway. A rain garden is a depression or hole that allows

rainwater from rooftops and other impervious surfaces to be absorbed and can cut down the amount of water and pollution running off. Because lawns absorb very little moisture, native plants and grasses surround their home, as do pollinator gardens that attract and feed local wildlife, birds, bees, and butterflies. In areas needed for walking and playing with their dog, no-mow grass has been planted, and a patio was built with permeable pavers with loose stone that actually can soak up water instead of creating runoff. All of this work and creativity was completed by local contractors, landscapers, and businesses.



It truly is incredible to witness and see with your own eyes a beautifully functioning home and landscape that does everything you need it to do but lives in harmony and peace with its surroundings. The house helps conserve and maintain one of our most important and valuable resources...water. As best said by Ruth,

“We can all do something to keep water, the essence of life, on our properties.”

She and her husband are living proof of that.

TAKEAWAYS

- With modern construction, water retention and run-off is rarely considered. This can lead to flooding, erosion, property damage, reduced and/or contaminated water supply and groundwater.
- Creative thinking based on how nature works can provide beautiful and beneficial solutions for managing rainwater.
- Working with nature is easier than working against it!



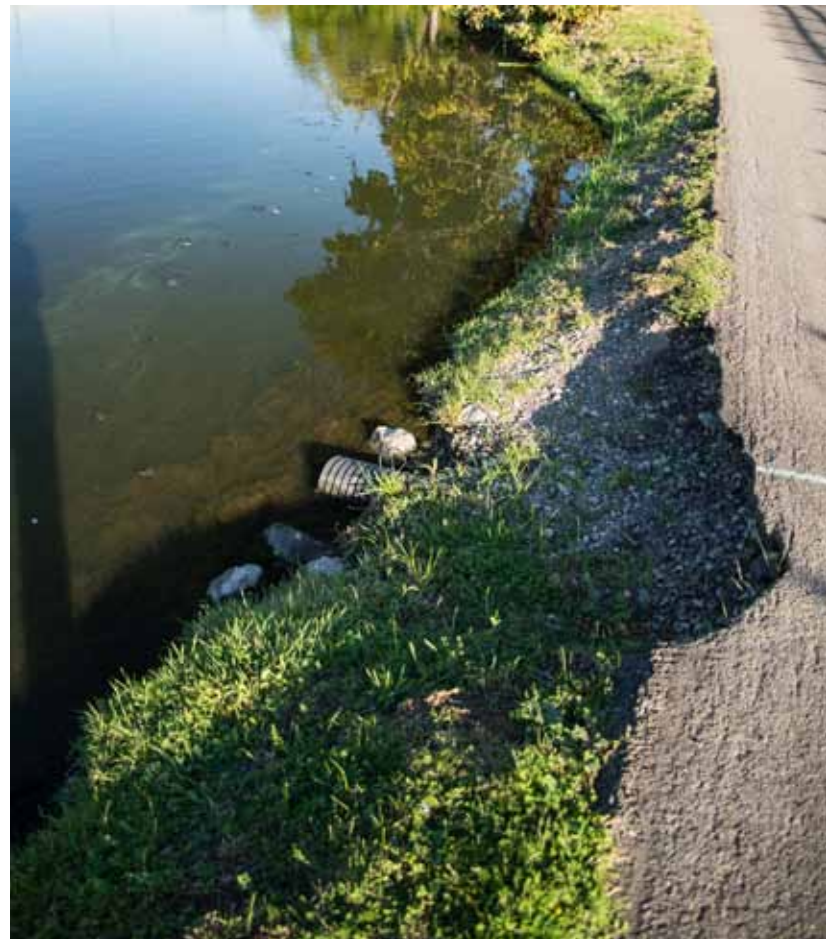


*Chadakoin Riverwalk
before restoration*

Creating an Urban Oasis

Many hands make light work

For decades, rainwater washing off rooftops, paved streets, and impervious surfaces all sheeted downhill in Jamestown, causing horrible erosion on the banks of the Chadakoin River. In addition, the old storm drains discharged directly into the river, adding salt, oil residues, and other pollutants with each rainstorm. By 2016, the southern shore of the Chadakoin River basin had eroded so badly that the Riverwalk was in danger of collapsing and falling in! United together, the Chautauqua County Soil and Water Conservation District, Roger Tory Peterson Institute, City of Jamestown, and Jamestown Board of Public Utilities (BPU) designed a sustainable, long-term solution.





With funding from a New York State DEC Water Quality Improvement Project grant, two Chautauqua County occupancy tax grants for protection of lakes and streams, as well as additional support from the Ralph C. Sheldon Foundation, EcoStrategies, and the Roger Tory Peterson Institute, the Riverwalk Green Infrastructure and Water Quality Improvement Project was complete.

Rather than using only rock and hard structures, the water's edge has become a "living shoreline," full of native living trees, shrubs, grasses, and wildflowers, all growing and rooted together to help absorb and filter runoff, provide stability to the bank, and keep soil and sediment out of the river.



NY ironweed



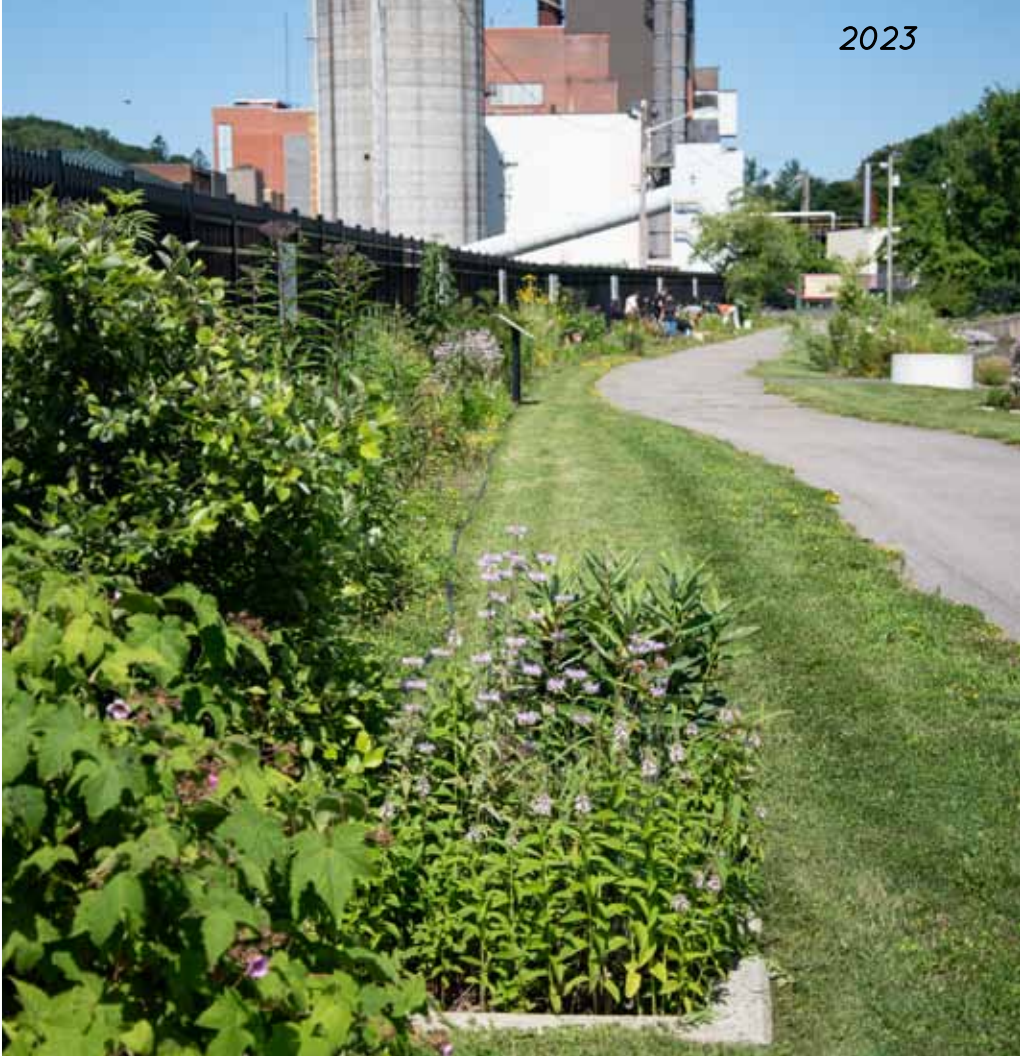
2021

Custom-built retention basins were placed on either side of the Riverwalk and were connected to existing storm drains. They capture and filter storm water and allow pollution and sediments to settle before slowly releasing filtered water into the river without causing erosion.

A native plant rain garden, with design help from Chautauqua Watershed Conservancy, was installed using plant materials from local nurseries.



The garden lines the Jamestown BPU fence and works to capture additional residual storm water that is flowing off the land. Displayed along the fence above the garden are informative signs describing various plants and animals likely to be seen in this improved habitat.



2023



Hummingbird clearwing
visiting wild bergamot

This project not only restored, stabilized, and beautified the Chadakoin riverbank, but it also enhanced rainwater retention, increased filtration of rain runoff, and created habitat for urban wildlife including many pollinators. All around this project was a win-win! The Riverwalk is a busy place now with human, animal, and insect enjoying the lush gardens. Many locals were a big help by volunteering their time to maintain the gardens and help the native plants get established instead of getting over-run by weeds. It is truly remarkable what can be accomplished when local governments, businesses, organizations, and individuals work together for a common purpose!

TAKEAWAYS

- The philosophy on how to best manage rainwater in an urban environment has changed dramatically in recent decades forcing cities to rethink their infrastructure.
- Retaining, slowing down and filtering rainwater as it flows through a natural environment is better than rapidly diverting it into a storm drain.
- Green infrastructure and community involvement are critical when re-imagining the ecological and economic benefits of rainwater.





Nature's Classroom

Hands-On Education, Heartfelt Lessons Learned

*“If we want our children
to move mountains,
we first have to let them
get out of their chairs.”*

~ Nicolette Sowder

The school is busy and bustling with activity, but it's not just the students we are talking about. The wide-eyed wonder of vivid colors, buzzing pollinators, bird flurry, and wildlife scurry are engaging and connecting students to a world so desperate to be appreciated, conserved, and explored...and they are doing this all in their own schoolyard.



Monarch on swamp milkweed

With all of this activity – human, insect, and bird alike – Chautauqua Lake Central School is making an environmental difference in Chautauqua County. Their commitment to sustainably and responsibly teaching children how to help the environment and local communities led them to be the first school in the County to receive National Wildlife Federation (NWF) Schoolyard Habitat recognition. The students created habitats that include essential elements needed by all wildlife – natural food sources, clean water, and cover – and also serve as an outdoor education site where students engage in cross-curricular, hands-on learning.

Students worked to establish food, water, cover, and places to raise young for local wildlife. The garden now holds sycamore trees, elderberry bushes, swamp and common milkweed, and bluebird houses built by students. These students are also learning how to keep their water source from freezing in the winter, experimenting with possible solar solutions and how to develop a setup that works for their area. Elementary Principal Megan Lundgren states, “It’s been inspiring to see students take ownership over this process. By exploring the nature that surrounds us, students have learned how natural elements thrive and how they can positively influence the local habitat.”



“My favorite part of the process was that I learned we could solve a problem with a tree.”

~ Makennah Ryberg



Common milkweed

Students recognize that outdoor education has proven social, emotional, behavioral, and educational benefits. While learning in a new nature-based classroom, students have the opportunity to take leadership roles and show empathy for classmates and nature, all while building resiliency through new experiences. “The smell of fresh air, sounds of nature, bird calls, and colors around us, all calm us down. We like the opportunity to explore every day. We learn and clear our minds because we don’t have to be on a computer screen to learn,” explain the 5th graders. “We were given ownership, responsibility, and freedom in this project. We built relationships and made a positive impact to reduce our carbon footprint to help make our school eco-friendly by giving back to the environment,” states Kortlyn Fairbank.



Alice, Mackennah, Kortlyn, Tatum & Macy



“We began by researching how to help the watershed. We learned that by committing to a few small things, we could build on them each year to continue to grow our garden. We began with research on native and invasive species. As we keep adding to our garden area, we are helping to provide resources for a variety of animals species and organisms,” explained Tatum Bensink. “My favorite part of the process was that I learned we could solve a problem with a tree. Our garden area is very wet. Through research we learned that sycamore trees love wet areas. These trees will grow fast, love the water, provide shade, shelter, food, and places to raise young,” described Makennah Ryberg.



Students meeting with
Chautauqua County Executive PJ Wendel

Third graders Cameron Ward, Oakley Smith, Molly Freay, Emma Schieber, Eleanor Pender, and Ruby Emhardt have gone on to form the “Chautauqua Lake Sea Savers” to help protect our watersheds. As they learned about how Chautauqua Lake connects to the Gulf of Mexico, they decided to take action here locally. The Sea Savers and other students explained the importance of understanding native and invasive species and herbicide and pesticide use and its impact on the runoff in our watersheds. Third graders requested “A Call to Action” and sent over 300 letters to the County Executive explaining why the lake is important to them and asked for a commitment to provide legislative support for funds to improve education, protection, restoration, and conservation of our watersheds.

These students want people to know that small changes can have a big impact on our environment, and they just need to start somewhere.

They are proud to say that their sycamore tree has grown over three feet since planting in October 2022! Giving students the opportunity to think globally and act locally has allowed them to connect to their learning on a more personal level. We are extremely proud of everything they have already accomplished and excited to see how they continue to choose to make a difference in Chautauqua County and the world.





A Community Catalyst
One Woman's Passion Makes a Difference





Blue false indigo



Butterfly milkweed

Nancy Paul and her husband have had their place in Point Chautauqua for 27 years. Her passion and commitment to native plants and beautifying her yard and community is more than evident in the colorful petals and stalks that dance in the wind, full of buzzing bumbles and bountiful butterflies.

“We are not lakefront, but what I do in my yard affects everything and everyone that lives around me.” After many years of research and learning, Nancy transformed her yard into a native haven for local birds, bees, and butterflies and graciously shared her knowledge and passion for gardening with her community. “One is nearer God’s heart in a garden,” Nancy explains. “I love the variety of plants with varying heights, colors, and bloom times. I love watching the hummingbirds and butterflies. I have planted a wide variety of native berry-producing shrubs for the birds. I get a nice variety of birds but, I especially love seeing the orioles and hummingbirds in summer.”

Over the past 10 years, Nancy Paul’s community efforts have been absorbing run off, encouraging pollinators, and beautifying their community with native plants - not only at her home but also at the public swimming area.



Ruby-throated hummingbird



“We are not lakefront, but what I do in my yard affects everything and everyone that lives around me.”





With volunteer help from the Point Chautauqua Historical Preservation Society and the Point Chautauqua Association, the community has created beautiful buffer gardens that adorn their lakefront community park area, as well as their Preservation Commons Park in the center of the community. As a member of the executive board of the Point Chautauqua Historical Preservation Society, Nancy has helped host their Open Gardens event for the past three years, educating the community on the benefits of native plants. She was presented a prestigious award for her tireless efforts to improve her community by the Point Chautauqua Association in July 2023.

Thank you to Nancy and her team of community volunteers for their tireless efforts to beautify their neighborhood and make welcome changes that benefit the community as well as the lake.



TAKEAWAYS

- One does not need to have lakefront property to have an impact on lake-health.
- One person can make a huge impact.
- Gardens are a great way to bring communities together.
- Native plants positively influence the health of local plant and animal communities as well as the human community.



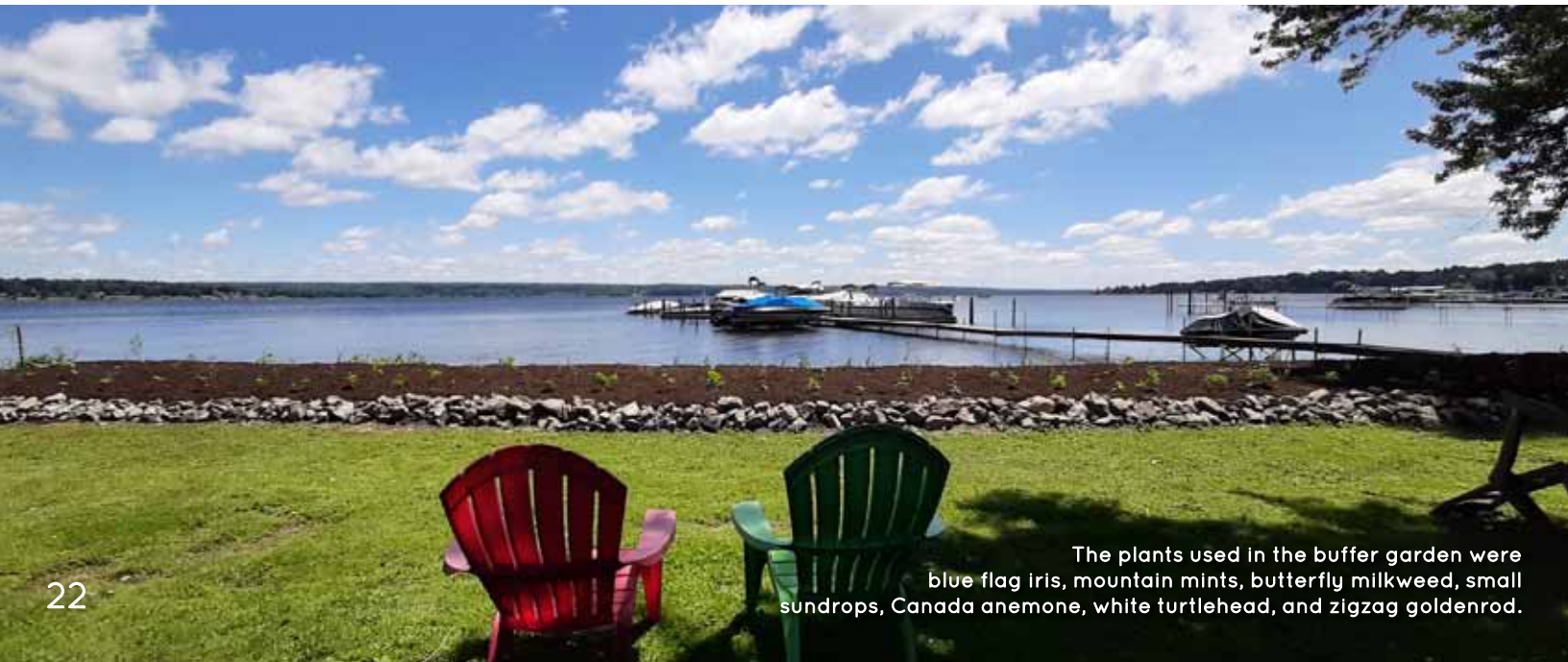
Before full restoration 2022

Beachside Buffer

The Lighthouse Point community in the Town of Chautauqua has a private beach, and it needed some help. The shoreline was eroding quickly, and the geese were constantly invading, neither of which created a pleasant beach environment. So they came together for a solution.

A native plant buffer interested them because it protects the lake and local ecosystems, staves off erosion, and

keeps the geese at bay. They did some research and contacted the Chautauqua Watershed Conservancy to see what could be done. Chautauqua County Soil and Water Conservation installed rocks to reduce erosion and stabilize the shoreline. After that was completed, the community reached out to some local nurseries to ask what native plants they had available, if they could assist with planting, and what the costs would be.



They decided to work with Royal Fern Nursery and discussed goals and various plant options with them. In the end, they chose a mix of plants based on when they would flower (so there would be continuous blooms), what types of insects they support, and how tall they would get (so as not to block views of the lake).

The hard part was deciding on a spending budget and developing a maintenance plan. There had been a natural buffer done before, but

it was not maintained and eventually became overgrown. Since the installation in 2022, the garden has been thriving! The community is very pleased at how much the monarchs appreciate the buffer, but the geese do not! They can use the beach and the park area freely, without concern of stepping in goose poop! Choosing shorter native plants that bloom from spring until fall with a simple maintenance plan has really done wonders for this community's private oasis.



Summer 2023

TAKEAWAYS

- Everyone can agree that if you have a beach, you want the best for that beach! There are beautiful and natural ways to keep the view, keep the shoreline, and keep away the geese.
- If at first you do not succeed, try again! This community learned from a past buffer garden, and now they have a lush, established garden in just a few years.
- The geese had to be kept away at first, but one year later, by the time summer rolls around, the plants are grown and the geese are gone!





Unwanted Guests

As you walk around your yard or drive along our beautiful county roads, your eyes gaze on all of the lush greenery and healthy stands of elegant tall trees that flash and dance before us. To the casual observer, our open fields and forested areas are healthy stands of vegetation that offer a rich and bountiful habitat to us as well as to our local insects and wildlife. Unfortunately, as you dig deeper into the woods and thickets, you observe that a large percentage of that green are plants that do not belong here.

Finding their way overseas in the ballast of ships, crates of fresh fruit, the feet of migrating birds, or our highway corridors, non-native plants, shrubs, and trees root themselves in our lush, inviting environments and begin the process of transformation. And to the casual observer, you don't even realize what's happening. These "unwanted guests" can cause significant changes to our local ecosystems, upset the ecological balance of our yards and neighborhoods, and can even cause human health issues and economic harm to our entire nation.



Japanese barberry



Eurasian honeysuckle in bloom

We are talking about invasive species – a plant or animal that lives in an area where they do not naturally exist. How do we deal with this onslaught of unwanted plants that take over our land and transform our landscapes?

When Debbie Crahen and her husband bought their home in Dewittville in 2022, they did not realize that their beautiful new property came with a large unwanted guest. A giant stand of Japanese knotweed over 75ft. wide by 120 ft. long towered in their backyard. Debbie said, “We had a ten-foot high ‘jungle’ of knotweed at the back of our property. We didn’t want it to take over our clearing or get near our foundation...I can say I have had many knotweed dreams.”

In addition, a creek runs through the back of their property, carrying rain and stormwater from the community into Chautauqua Lake. A large portion

of the creek bank as well as its bed is inundated with this knotweed. The extensive expanse of knotweed could inhibit water flow and contribute to flooding in the community, as well as overtake and smother any native plants trying to establish themselves. Getting in touch with the right people and addressing the situation as a community has been the best and most efficient and effective way to rid their neighborhood of this invasive plant. Debbie was grateful for the help of the Chautauqua Watershed Conservancy and ArborWild Environmental experts in devising a plan to eradicate this species in the neighborhood. Their homeowner’s association has also been diligent in having common areas checked and treated.

“It takes a village. Fortunately, we moved to the right one!”



Japanese knotweed in bloom



ArborWild injecting herbicide into a Tree-of-Heaven

Slow It Down, Spread It Out, Soak It In

Easy Tips to Prevent Rainwater Damage to Your Property

*Creating more sustainable and resilient landscapes is not only a matter of beauty, but also a way of enhancing the environmental, social, and economic benefits of both public communities and rural backyards. Sustainable landscapes aim to reduce the negative impacts of human activities on natural resources, such as water, soil, air, and biodiversity. Resilient landscapes aim to adapt to changing conditions, such as climate, natural disasters, and human pressures, while maintaining their functions and values. How can we, as Chautauqua County homeowners and community members, create landscapes that are more **sustainable**, more **resilient** and more **beautiful**?*



Rain Gardens

A rain garden in your yard is an easy and beautiful solution to deal with excess water runoff. This water-smart landscape feature is designed to catch and filter water runoff with the help of native plants. Plus, your rain garden will recharge groundwater and provide a home for our local birds, pollinators, and wildlife! The Chautauqua Safety Village partnered with the Chautauqua Watershed Conservancy and Royal Fern Nursery to create a rain garden for their campus. This rain garden will educate the community on environmental safety, with a focus on naturally improving the watershed.

Permeable Pavement

Home improvement projects, as well as outdoor living spaces and patios are becoming very popular. If you are considering a new patio, or driveway, choose a permeable material which allows rainwater to soak in through the surface. Permeable paving surfaces reduce water runoff, help replenish our drinking supply and they are beautiful!



Rain Barrels

As more and more people build, renovate, or spruce up their homes, awareness of rainwater runoff becomes more and more important. Roof gutters and downspouts should not be routed to discharge to hard surfaces such as driveways, streets, ditches, or storm drains. Instead, direct them into rain barrels, lawn areas, gardens and/or rain gardens that would enjoy and soak in the extra moisture.



*Looking to sink your teeth into a new project?
Contact us today!*



CHAUTAUQUA
WATERSHED
CONSERVANCY

Since 1990, the Chautauqua Watershed Conservancy has been the region's leader in land conservation, watershed protection, and ecological restoration. It is our mission to preserve and enhance the water quality, scenic beauty, and ecological health of the lakes, streams, wetlands, and watersheds of the Chautauqua region. This publication displays several examples of the technical assistance the Chautauqua Watershed Conservancy provides to individuals, businesses, and municipalities. Our staff works closely with landowners to help them understand and implement the best land, wildlife, and water resource management practices available for our region.

In addition, we identify lands with high ecological, hydrological, and scenic value and work with landowners to protect these critical habitats, either through a land donation, land acquisition, or through establishment of conservation easements. Our organization currently owns and manages 35 nature preserves in the region, all of which are protected in perpetuity to benefit future generations.

For more information about the projects featured in this publication, or about our work, visit www.chautauquawatershed.org or contact our office at 716-664-2166.



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Thank you for picking us up! “Working with Nature” is more than just a magazine; it’s a movement aimed at recognizing and celebrating a culture of environmental responsibility right at home. By featuring the innovative practices of our neighbors, we hope to instill a sense of pride and collective responsibility within our community. Through these stories, our goal is to emphasize the profound impact that individual actions can have on our local ecosystems and, by extension, the global environment. This publication serves as a valuable resource, offering real word and local examples of what you can accomplish in your own backyard. We hope that you come away from reading it encouraged to implement similar practices in your own homes, inspired by others in your community. By promoting a sense of connection and shared purpose, we aspire to create a network of like-minded individuals who collaborate, learn, and grow together. Ultimately, “Working with Nature” aims to foster a sense of environmental consciousness, encouraging everyone to be stewards of our planet, one native plant, school garden, or green roof at a time. Together, we can create a sustainable legacy for future generations, starting right here in our Chautauqua County community.

**- Whitney Gleason, Executive Director
Chautauqua Watershed Conservancy**



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