



**Great Swamp Watershed Association**

The Passaic River **WATERKEEPER®** ALLIANCE Affiliate



# Across the Watershed

**Fall-Winter 2020**



*Protecting our Waters and our Land for More Than 35 Years*

## Lifetime Volunteer Achievement Awards

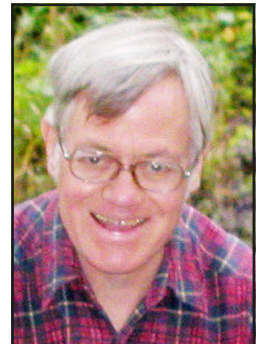
*by Hazel England, Director of Education & Outreach and Land Steward, and  
Sandra LaVigne, Director of Water Quality*

Each Summer, GSWA staff present volunteer awards at our annual volunteer appreciation picnic. Each staff member picks a volunteer that over the previous year has stood out for their help in some fashion to help the organization achieve its mission. We often stand on a chair looking over the assembled picnickers and give a shout out for the help our recipient has given us in that year. Some of our volunteers have been thanked multiple times because they continue to work with us year in and year out. Though we work with a large and enthusiastic group of volunteers, some amazingly committed and long-term volunteers have been active in the organization for decades, and conduct much crucial work helping staff with water quality testing, data analysis, stewardship, education, development, communication and more.

Members of the Board of Trustees, while lauding all volunteers who help us to carry out our work, wanted to create an award for those exceptional volunteers who have given of their time, effort, knowledge and support over the course of many, many years. These volunteers have been the backbone of our organization, making all we do possible. This award will not be given out annually, but when an awardee has dedicated their time and efforts over a span of time volunteering for GSWA.

This fall, the first ever **GSWA Lifetime Volunteer achievement awards** were to have been presented to the unsuspecting recipients at our annual gala. Since the Gala will now take place virtually, we wanted to honor these extraordinary volunteers and explain a little more about how they have helped GSWA to thrive over the years.

**Steve Gruber:** Steve has volunteered with GSWA for more than 15 years, and we are indeed lucky to have his help. This is not just because of his amazing work ethic- he may actually volunteer more hours in a year for Great Swamp Watershed Association than some of our part-time staff work! But since his retirement, he has been a full-time volunteer for an astonishing number of other local organizations, amongst whom he splits his time. Steve volunteers by helping so many organizations, we are (continued on page 18)



Steve Gruber

# From the Desk of the Executive Director GSWA's Impressive and Unplanned 2020 Accomplishments

by Sally Rubin, Executive Director

I've always said, 'you learn a lot about a person by how they respond to the unexpected.' No surprise to me, when we had to close down our in-person programming in mid-March, the GSWA staff snapped to action. I am proud to share the noteworthy achievements the staff has accomplished to date this year, before and during the pandemic:

- From July 2019 to mid-March 2020, more than 1,500 children and adults participated in our in-school and outdoor experiential learning opportunities, and our public education events. Almost 40% were from urban centers such as Newark, Jersey City, Orange and Paterson, NJ.
- In the short time we were operating normally in 2020, GSWA hosted more than a dozen public education events attracting over 200 attendees. Many of the events were new including a series of Sunday hikes and a do-it-yourself (DIY) workshop making reusable produce bags and food container covers, which was a big hit! Due to COVID, the DIY bird box, screech owl box, and planter box building events all had to be quickly converted to make-at-home projects that included pictures and step-by-step instructions.
- After schools closed down, we re-designed and delivered remote environmental education classes to approximately 900 students, and social-distancing, no-contact public events and online family-oriented environmentally focused activities reaching over 1,000 people.
- Just prior to most schools shutting down classes for the summer, Hazel England, Director of Education & Outreach, presented virtual classes from her backyard garden on pollination, photosynthesis and other ecological processes to nearly 300 6th and 7th grade students at schools in Bridgewater and Paterson, NJ. She and Adam Palmer, GSWA Education Associate, also conducted online programming for over 100 children at Millington School for their annual Environmental Fair, which is normally an all day, in-the-field event.
- In late May, Sandra LaVigne, Director of Water Quality, delivered online macroinvertebrate classes to several new schools, including Governor Livingston High School in Berkeley Heights and Union County Vo-tech High School in Scotch Plains, among others. Sandra taught over 200 students with this virtual programming.
- Also in May, Sandra presented our 2019 Water Quality Report via Facebook livestream. It received nearly 500 views, many more than was possible with an in-person program!
- Sandra transformed her semi-annual stream assessment training program into an online, self-paced, three-part program which was viewed by over 250 people.

Please be sure to let us know if you change your e-mail address. Send a note with your name, address, and old e-mail address to [srubin@GreatSwamp.org](mailto:srubin@GreatSwamp.org) so you don't miss out on our new monthly e-newsletters.

- We also created a series of very popular backyard scavenger hunts that ran for four weeks in April and had wide-spread online use across the Tri-State area and beyond. Some teachers incorporated our scavenger hunts into their virtual lessons for students. Here are some comments we received:

“Thank you for putting this together for the kids during this difficult time.”

“When we saw a fiddlehead (young fern) on the list, we didn't know what these were so we looked them up. There were tons of them that we wouldn't have noticed if not for this scavenger hunt!”


- In May, June, and July, we held weekly online nature-based photo contests which attracted participants of all ages from across our watershed and the greater Passaic River region. We received many “thank you” messages from participants who were grateful to have a safe, stimulating outdoor activity.
- This summer we posted a weekly “creature feature” on Facebook focusing on a new bug, reptile or animal relating to water and our mission. This encouraged our viewers to get to know the critters in our watershed.
- GSWA owns 73 acres of protected wetland forest in Harding Township we call our Conservation Management Area (CMA). The CMA is our main center for outdoor environmental education.

This summer, alongside our summer interns and volunteers following safety protocols, we worked to maintain the trails at the CMA keeping it open to the public for free, passive recreation such as hiking, exploring and bird watching under social distancing guidelines.

- During the past months when state, county and local parks were closed or overwhelmed with visitation, this beautiful and peaceful place was especially valuable. It absolutely emphasized the importance of open space when people needed to escape to the great outdoors. We continue to get a lot of visitors to our property and often receive messages of appreciation like this one:

“This afternoon (Sunday / 4-19-2020) my wife and I walked the trails at the end of Tiger Lily Lane. Quite lovely and educational..... nice statement for the GSWA...lots of work went into the trails and the Center. People were practicing social distancing.”

If you haven't discovered this hiking gem, please go for a walk on Tiger Lily Lane in Harding and email me about your experience at [SRubin@GreatSwamp.org](mailto:SRubin@GreatSwamp.org)!

We may not know when this current situation will end, but one thing is certain – GSWA will continue to find creative ways to deliver our mission, providing environmental education to students and the public, monitoring the quality of our water and protecting our land. 

# GSWA Board of Trustees

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# Across the Watershed

is a publication of the **Great Swamp Watershed Association.**

GSWA is a member-supported non-profit organization that has been protecting the waters and the land of the Great Swamp Watershed for more than 35 years.

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# GSWA is Pleased to Announce Two New Individuals Have Joined our Board of Trustees

*by Sally Rubin, Executive Director*

**C**larke Wagner brings over 30 years of experience in the financial markets. In his current position, Clark serves as Chief Investment Officer at Foresters Financial where he oversees the \$6 billion general account portfolio. Clark joined GSWA's Finance Committee in 2017 and has been indispensable with his sound and prudent guidance of our investment strategy and policies. Along with his involvement with GSWA, Clark works with the Nantucket Conservation Foundation. He and his family reside in Chatham, NJ.



*Clark Wagner*

Paul Boudreau is a Private Banker with Peapack-Gladstone Bank and serves exclusively through the Bank's private banking program.

He recently retired as President of the Morris County Chamber of Commerce after serving 10 years in that role. Prior to his Chamber position, he worked at Honeywell for 25 years retiring as Vice President, State and Corporate Relations.



*Paul Boudreau*

Paul served on the New Jersey Public Employment Relations Commission from 2012-2019. He was a member of the New Jersey Mental Health Association Board of Directors from 2014-2019 and the Morristown Airport Advisory Board and served on the Board of the Somerset Hills YMCA for eight years. Paul currently provides volunteer leadership to the Tri-County Scholarship Fund. He was a member of the Maine House of Representatives from 1976 to 1978. 🌲

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## Au Revoir Rick a/k/a ROCK

*by Sally Rubin, Executive Director*

**R**ick Porter, our Director of Institutional Relations, "retired" recently. Originally planned for April, Rick graciously offered to extend his retirement to the end of June. Yet as I write this in mid-August, he is still hard at work helping us secure grant funding. It would be challenging enough to replace Rick under normal circumstances as he brought a unique blend of talent, enthusiasm, dedication, and humor to our organization. And these are far from normal circumstances. What a good sport he has been to continue working diligently for us even while he and his lovely wife, Kate, have moved to Cape Cod.

Rick joined the GSWA family in 2015

and was a wonderful addition to the staff and a friend to all of us. In addition to writing and securing grants, Rick was our grill master. If you attended any of our barbecue events, Rick was the one wearing an apron and a big smile, wielding his spatula over the hot coal grill! He and Kate worked tirelessly at our annual galas as well as cooking and serving gourmet dinners, crafted by our staff, that were auctioned off to the highest bidders.

Rick was truly a ROCK in our GSWA family. He and Kate will both be missed, but we wish them all the best on this next adventure in their lives. And Rick, don't be surprised when we drop in to visit on the Cape! 🌲

# Upcoming Events

## Outdoor Activities

### September Hikes

**Thu, Sept 10; Tue, Sept 15; Thu, Sept 24  
6:00 – 7:30 PM**

*GSWA Conservation Management Area  
(CMA), 83 Tiger Lily Lane, Harding*

**This September, GSWA is offering three evening hikes** at our 73 acre wetlands restoration site, the “Conservation Management Area”. What can you expect to see in September? Mushrooms and other fungi are plentiful this month. After the rains of August, you can be sure to find fungi of many shapes and colors poking up through the leaf litter.

The wet meadow will offer the late-Summer blooms of the sunflower family of wildflowers; purple ironweeds, white bonesets and yellow goldenrods. Late summer insects will still be active and plentiful, beetles, solitary bees, and other pollinators are preparing for their Fall hibernation. Dragonflies like the swamp darter will be laying their eggs along the Silver Brook. Bird life will be very active as the Spring and Summer warblers will be heading back south so be on the lookout for both year-round birds and Summer migrants.

**Note: Advance registration is required, space is extremely limited. No walk-ins.** Hikers required to wear masks. This event \$10 for adults and \$5 for children. Register at GreatSwamp.org or call 973-538-3500. Programs are offered subject to current advisory status from the Governor’s office. Also, please “go before you go” as there are no available facilities at the site. If you must cancel a reservation, please email knecovska@GreatSwamp.org so we can invite the next person on the wait-list.

### October Hikes

**Tue, Oct. 6; Thu, Oct 15; Tue, Oct 20  
5:00-6:15 PM**

*Location TBD*

**October is for Asters.** These wildflowers often grow quite tall over the other tall meadow grasses. New England aster shines an intense lavender color that will brighten any cool cloudy day. Be sure to look out for the Panicked aster too, these look like an apartment complex of daisies, with small flowerheads that can be anywhere from white to baby pink or very pale purple. These flowers will be magnets for the year’s remaining pollinators. Poison ivy will be changing colors and bearing white berries which will help birds fatten up for the Winter. On the forest floor, chipmunks and squirrels will be busy collecting acorns for their winter storage. Where there are rodents like chipmunks, voles, and white-footed mice there will be slithering snakes and hungry foxes keeping their numbers in check. By late October and early November, birds from the far north will be making their way back to New Jersey like the cheerful white-throated sparrow.

**Note: Advance registration is required, space is extremely limited. No walk-ins.** Hikers required to wear masks. This event \$10 for adults and \$5 for children. Register at GreatSwamp.org or call 973-538-3500. Programs are offered subject to current advisory status from the Governor’s office. Also, please “go before you go” as there are no available facilities at the site. If you must cancel a reservation, please email knecovska@GreatSwamp.org so we can invite the next person on the wait-list.



Check back at [\*\*GreatSwamp.org/events\*\*](https://GreatSwamp.org/events) for more hikes and outdoor activities this Fall. Never miss out on our educational events by signing-up for our e-newsletter at [\*\*GreatSwamp.org\*\*](https://GreatSwamp.org)

## Virtual Seminars

**Details will be emailed after registration for virtual events.**

### **Virtual Evening Briefing: “GSPA 101”**

**Thu, Sept 17, 6:30 – 7:30 PM**

*Register via [GreatSwamp.org](https://GreatSwamp.org)*

Join us for a virtual presentation on the topic of: Us! What does a watershed association do? What is a watershed, even? How does GSPA protect our water, how do we restore wetlands at the Conservation Management Area, and more detailed information about our mission dedicated to monitoring and protecting the waters of the Great Swamp Watershed and Passaic River. Event will be followed by a Q&A session.

### **Virtual Evening Briefing: Putting your Garden to Bed the Watershed Friendly Way Tues, Sept. 29, 6:30-7:30 PM**

*Register via [GreatSwamp.org](https://GreatSwamp.org)*


Come the Fall, many homeowners snip, clip and clear their gardens with zeal, not realizing that some fall tasks are better than others at helping your garden to get ready for the spring, and to also be a valuable place for wildlife and the watershed too! There are many things you can do as you get your garden ready for winter that can reduce your impact on the land, such as aiding beneficial

species so they are ready to help munch on pests next spring, or helping your lawn and natural area to soak up as much rainfall as possible over the winter months. Plus, you can make your yard as appealing as possible for birds and other wildlife to call home. Learn what you can do, and what to avoid as you put your garden to bed the Watershed Friendly Way!! Please ask any questions as you register and we will try to answer them in our virtual presentation. Event will be followed by a Q&A session.

### **Virtual Breakfast Briefing: “Environmentally Friendly Cleaning Products”**

**Thu, Oct 8, 9:30-10:30 AM**

*Register via [GreatSwamp.org](https://GreatSwamp.org)*

Grab your morning coffee and donuts and join us for a presentation to learn about common chemicals found in most typical cleaners. You will learn why these chemicals pose a threat to clean water and what you can do about it. We will discuss environmentally friendlier options and substitutes to help you be more watershed friendly in your everyday cleaning. Event will be followed by a Q&A session. 

# Rain Dampened the Field, but Not the Spirits of All Who Attended the Great Swamp Great Music Festival

By Val Thorpe, Director of Communication and Membership, (and Music Fest Magician)

Like a fancy Thanksgiving meal, leading up to the 3rd Annual Great Swamp Great Music Festival on August 16th was all about the prep work. “No” was never an option. So,

one’s safety. In response to the pandemic, we established new protocols: registration took place from cars, 15x15-foot squares were marked out on the field for social distancing



GSWA board members and staff safely wearing their masks.  
From left to right: Kevin Sullivan, Sally Rubin, Val Thorpe, Debbie Rice, Guy Piserchia, Nic Platt and Falco



GSWA board members social distancing.  
From left to right: Kevin Sullivan, Guy Piserchia and Nic Platt

from the moment we decided to move forward with our second biggest annual fundraiser (six weeks out!) at our new location, Giralda Farms in Chatham Township, until the big day, our number-one focus was every-

(which took four people two full days in the blazing heat!), and hand sanitizing stations were setup throughout the festival field. On-stage, microphone covers were replaced, and shared equipment was sterilized between bands.

As the rain trickled down, enthusiastic volunteers continued to set-up. GSWA Executive Director, Sally Rubin, said “We’ll just dance in the rain.” And that was obviously everyone’s attitude that morning based on all the smiling faces. Just before start-time, the weather decided to cooperate. Not Enough Jeffs eagerly hit the stage kicking off the festival and setting the tone for an exceptional afternoon of entertainment. A momentary glimpse of the sun gave way to a brief second wave of rain. But our determined festivalgoers were unphased.

They had come prepared ready to ride out whatever came our way in the name of great music! Lenox Underground took the stage next, followed by three bands new to our festival, The Big Fuss, Big Train, and Rosewood.





*Social distancing in the rain.*

Without a doubt, all five bands brought it! They delivered an outstanding show to our audience that was one for the books.

It was impossible to tell who was more elated, the audience or the band members. Bright smiles could be seen on both sides of the festival. All the performers donated their time and talent in support of GSWA's mission. Rain or no rain, the day was a big success! Don't worry if you missed this year's event, we will be back next year for another amazing event in support of a great cause!

Special thanks to our festival sponsors who made this all happen: Atlantic Health Systems, Delta Dental, Adrienne & Dillard Kirby, Peapack-Gladstone Bank and Peapack Private Wealth Management, Senlac Partners, Community Foundation of New Jersey, Matt & Agi Krauser, Pipe Works Home Services, Schenck, Price, Smith & King, LLP, Reed & Adrienne Auerbach, and RegentAtlantic. Additional heartfelt thanks to Ricciardi Brothers for donating the paint for our

social distancing spots, our staff, volunteers, food and merchandise vendors who were all true professionals throughout the day, Rubinetti Disposal, Harding Twp. DPW, Chatham Twp. DPW, and Morris County MUA. Special shout out to Kevin Sullivan for all his help coordinating with Dave Helmer at Morris County Park Commission and Kevin's wife, Cindy, Kathy Pfeil and Kit Stinson for their help promoting the event in a mere six weeks! 🌲



*Some young fans taking a photo of their favorite band.*

# Autumn in Our Wetlands

by Kristina Necovska, Membership Associate

By our timekeeping method, Autumn begins when day and night have reached equal proportions – when the Sun is perpendicular to the equator, around September 22. Our calendar is based on such astronomical events, which can be measured with extremely precise accuracy. Down on the ground, though, life moves at a different speed and how we understand the seasons is markedly different than what plants and animals experience.

Plants, fungi, and bacteria can also measure time. If they couldn't, they would not be able to grow or respond to seasonal events. While Summer is the peak of the year in the vegetative calendar, Autumn arrives much earlier than we might assume. For green life, Autumn doesn't start on September 22. It starts much earlier in August when plants' photoreceptors detect that daylight is in decline.



*New York Ironweed (Vernonia noveboracensis)*

Scientists working in environmental and biological fields have termed this time “ecological autumn”. Starting in August, plants

start to “notice” changes in available light through pigments in their cells called phytochromes. Phytochrome is sensitive to different wavelengths of light, and plants use this pigment to determine length of available light and its direction! So, when days become shorter, plants have already kickstarted their autumnal preparations. Woody plants specifically halt new growth and instead synthesize substances which start to cut the leaves off from their stems.



*Swamp Rose (Rosa palustris)*

By late August, pickerelweeds lose their purple flowers and the rose mallows fall to the river edge. There is a whole host of late blooming asters, goldenrods, and sunflowers that continue the celebration into September and October. This is because not all plants base their flowering entirely by available light – some plants evolved to take advantage of the fact that pollinators stay active until the temperature drops. So long as there are hungry bugs, there's a niche to fill. This is the perfect time to get to know the autumnal flowers of our wetlands and marshes:

**Turtlehead (*Chelone glabra*)** can be found at the CMA if you look hard! Its un-



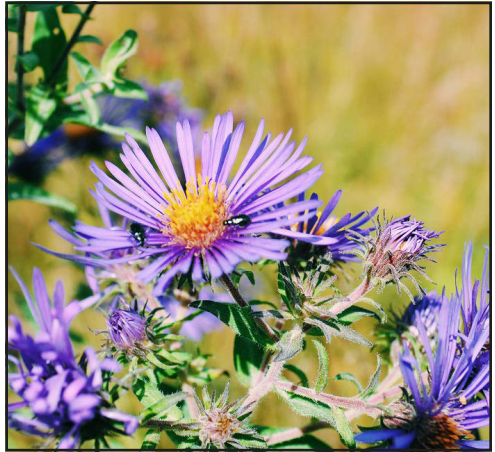
*Turtlehead (Chelone glabra)*

usual flower is specifically developed with its pollinator in mind, the bumblebee. Turtlehead produces a lot of nectar, but only bumblebees are strong enough to pry open its flower. When they find that nectar is abundant, they will search relentlessly for another plant and thus aid its pollination. Because this flower is reliant upon a single type of pollinator, their conservation is a priority.

**Swamp Rose (*Rosa palustris*)** is adapted to wetlands, marshes, and other lowlands and only produces flowers in small clusters or as single crimson to pink flowers. It will typically flower later than other roses. Native birds and mammals use the rosehips from this shrub as emergency food reserves in the wintertime.

**New York Ironweed (*Vernonia noveboracensis*)** will bloom into the late fall. This member of the aster family can be found in wet meadows such as the Great Swamp National Wildlife Refuge. Its scientific name *Vernonia* refers to the English botanist who described the species in 1698, however before its renaming, it was widely used by indigenous people as medicine.

**New England Aster (*Symphyotrichum novae-angliae*)** can be found in the forested edges of marshes, or sunny wet meadows. It flowers late into the Autumn and



*New England Aster (Symphyotrichum novae-angliae)*

is an important plant for a wide variety of pollinators which include bees, moths, ants, beetles, and any other nectar feeding insect. Because of its wide range and common occurrence, this plant was also important to many indigenous people as a treatment for fevers. 🌿

*All photos © Kristina Necovska*



# Impacts of Corona Virus on GSWA's Work and Mission

*By Hazel England, Director of Education & Outreach*

As we all grappled individually with the far-reaching implications of COVID-19 throughout this year, we thought we would dive deeper into some of the impacts of the virus that relate to Great Swamp Watershed Association's mission of protecting land and water quality, and some of the timely and interesting research that has been occurring on this front.

As we wrote about in a recent e-newsletter, epidemiologists spend much of their time trying to pinpoint exactly where cases of coronavirus are increasing. Looking at sewage might not first seem to be the place where corona virus caseloads can best be established, but a recent waste-treatment plant coronavirus test being developed can pinpoint spikes in COVID-19 infection rates more than a week earlier than current medical tests. Scientists have long known that waste-water treatment plants allow them to study tangentially, everything that goes through us, and down our drains! This type of public health detective work has been used to determine potential painkiller addiction rates in communities by extrapolating types and amounts of painkillers appearing in wastewater. Similarly, it turns out that the corona virus is shed in discernible amounts through human waste early in infection, often when patients are still asymptomatic. By 'counting' the amount of corona virus genetic material in a known amount of wastewater from wastewater plants treating a known number of households, scientists can predict where cases will soon be surging. Knowing this information many days before residents are ill enough to visit their doctor or emergency room, and early in the infection cy-

cle, may help authorities to intervene and reduce community spread of the virus. Do not worry unnecessarily though, wastewater treatment cleaning practices such as UV light Ozone treatments kill pathogens before effluent is released back to water bodies, so discharge is not a source of virus spread.

As area residents protect themselves from the pandemic by wearing disposable masks and gloves, cleaning and disinfecting surfaces more frequently with disposable wipes, and using curbside pickup and take out to comply with health orders, single use plastic waste has soared. As an organization, GSWA has spent the past two years waging single use plastic reduction campaigns, based on the results of our micro-plastic testing along the Passaic, and through our Watershed Friendly Living programs. Along with all the other grim news, this increasing return to single use, just when we were starting to change consumer behaviors and help introduce single use ordinances and plastic bag bans can be disheartening.

The single use plastic increase numbers worldwide are staggering. In Wuhan, China, where virus impacts were felt first, preliminary data suggests hospitals at the peak of the pandemic were creating 240 tons/day of single use plastic PPE waste compared with 40 tons on a typical day. Some predictions suggest the USA could generate a years' worth of waste in just two months through the increase in plastic medical waste [world Economic Forum, Plastic Pandemic and COVID-19]. The Thai Environmental Institute suggests that 6,300 tons of plastic waste/day, up from 1,500 tons on a typical day, has been produced due to home delivery of food

during lockdown. And any walk around a supermarket parking lot turns up discarded disposable masks, wipes, and gloves, which during rainstorms make their way to storm drains and eventually to rivers and oceans. Indeed, researchers are already detailing PPE increases in trash sampling in coastal waters. It can feel as if we are facing a single use pandemic as well as a Coronavirus one, so what can the concerned homeowner do to make a difference, yet still stay safe? Even though it may feel as if taking actions are insignificant, it can be empowering to feel you can control your individual contribution to a problem. Here are some suggestions to safely move to reusables:

- Current science advice is that reusable cloth masks which can be washed and re-worn, effectively protect the general population well against virus spread and reduce plastic mask waste. GSWA has patterns to make your own mask on our website, or you can purchase masks which show off your personal style with baseball logos, slogans, and quirky designs.
- Disposable gloves for the public are not necessary or even CDC recommended in most cases, and frequent hand washing and antibacterial use is often more effective in protecting you against virus transmission than glove wearing while out and about. Consider purchasing a reusable spray bottle and fill with alco-

hol and essential oils to use as an instant germ killer. Carry and use hand sanitizer and get into the habit of using them frequently, supplanting glove wearing with good hand hygiene, and saving the gloves for medical professionals.

- Disposable Lysol-type wipes are certainly handy, but both the plastic fibers they are made from and the containers they come in contribute to single use plastic pollution. Try cutting up a T-shirt from your COVID-19 lockdown closet purge into small squares, soak with disinfectant (62% alcohol solution or other disinfecting solution) and store in a Rubbermaid tub with a lid. Toss used wipes into a bin, leave until the bin fills, wash, and reuse. You can also use cheap face cloths to the same end.
- Consider taking a plastic bag and trash grabber (a long stick with a hooked nail at the end is a simple homemade version) with you on walks and pick up the PPE trash left by others. You can place trash directly into the bag, so there is no need to directly touch any of the waste. Since so many volunteering activities are still curtailed, you can feel good about doing your part to keep your local watershed and community safe from micro-plastics now and into the future by removing plastic waste before it reaches waterways. 🌱





**G**SWA's biggest fundraiser of the year—our 2020 Great Swamp Gala and Silent Auction—is going virtual! On October 1st, you can enjoy all the fun and excitement of our annual Gala and amazing Silent Auction from the comfort of your own home, or anywhere you like, and you don't even have to dress up! Going virtual means that all of our members, friends, colleagues and family members can join in on the fun from anywhere, so please share the news! It's FREE to participate. Mark your calendar now and watch for the link on our website at GreatSwamp.org and in your email!

This has been a most challenging year and GSWA has risen to the challenge, continuing its important work of monitoring our waters, protecting our lands, and bringing the public new events,

contests and projects to keep us engaged and uplifted. Each and every participant brings us closer to reaching our goals, so please take part, bid lively and generously in our auction, and consider donating the cost of your usual ticket or table purchase to support us. Every dollar counts and makes a difference!

We've got an entertaining and fun show lined up for you, so be sure to register for the virtual event. There's no risk in our secure signup and each registered participant will be eligible for a **Special Prize Giveaway** during the event!

Everyone's a winner when they support GSWA, so be sure to browse our **Silent Auction** which will be live before, during, and after the virtual event. The auction will be full of great prizes including fine wine, vacation getaways, beautiful artwork, DIY nature kits, personal



pampering items, golf packages, an electric bike, and so much more! We'll even help by mailing gift certificates and small items directly to your home. If you're a lucky winner of something stupendous, we'll be happy to hold your gift at our Morristown offices for pickup.

A bottle of red, a bottle of white? It all depends upon your appetite for this Gala. Whatever your preference, we've got you covered. **VIP Gala Celebration Packages** are available to you as a special treat this year! GSWA is offering our viewers a beverage and nibbles package with pre-event delivery to your home (within 30 miles of Morristown only) the week of Gala for your

enjoyment during the show. At registration, choose a Standard Celebration Package with a bottle each of great red and white wine and homemade gourmet snacks, or upgrade to our Premium Celebration Package which includes premium wines, if that suits your taste. Non-alcoholic sparkling cider will also be offered for those most discerning palates. If you normally buy a table at Gala, why not throw a **Virtual Viewing Party!** Instead of buying tickets for your friends, order a Celebration Package for each of your table-mates, inviting them to view the Gala as well! Remember, every dollar you spend helps GSWA continue the very important work we do. 🌲

*A tantalizing sample of this year's auction items.*



# Growing it Green in Paterson with the Help of a Local Garden Club!

*By Hazel England, Director of Education & Outreach*

Over the years, GSWA staff have given countless presentations to area garden clubs on our water quality work. We have also been the beneficiary of past funding support for stewardship and educational programs from several area clubs. Our relationship with the Garden Club of Madison (GCM) goes back more than fifteen years, and during the summer of 2019 we were honored to be invited by the GCM to submit a proposal to the Garden Club of America (GCA) Founders Fund. This prestigious award is presented annually to three non-profit organizations from across the entire USA, who work in partnership with a GCA club to put together a deserving application. After discussion, The Founders Award Committee felt our education and Green Infrastructure work in Paterson Schools would be an ideal fit.

In urban, underserved, communities such as Paterson, stormwater flowing over the many impervious surfaces means flooding is a real issue, negatively impacting both water quality and quality of life. Some Paterson schools even close for more flood days than snow days! Green infrastructure projects such as rain gardens and drainage swales can help to reduce stormwater flooding by creating places where water can infiltrate into the ground, reducing the quantity of water reaching storm drains and heading to overloaded wastewater treatment plants. As part of the grant submission process, we toured Founders Award Committee members around rain gardens we had previously helped install at three Paterson schools. In conjunction with Rutgers Water Resources Program, who han-

dled the engineering and construction, we worked with students to first learn about, then choose and install plantings for the rain gardens.


We explained to the committee our process in working with the students over multiple sessions. First helping kids to build understanding and awareness about water quality issues with our topographic and EnviroScape models, then learning more about how intact ecosystems work with a trip to Great Swamp, finally focusing on being part of the solution by actively choosing and installing the native plants in the rain garden at their school. We described that often on planting day, students were digging in the dirt and planting for the very first time. The committee thought this an ideal potential Founders Award application, as it had both educational and environmental benefits, and would allow us to work with truly deserving, underserved areas. One component of the award is the inclusion of garden club members to help achieve the finished project. GCM members were excited to help with plant choice activities for students, bringing their plant know-how to help rain garden plants chosen do double duty as native pollinator attractors. We fleshed out the meat of the program, laid in the details of how and when it would take place, how garden club members could be involved, created budgets, spreadsheets and timelines, and over many, many hours crafted, then submitted the detailed application.

And then we waited....

Applications were due at the start of the year, and awardees were notified in May. First

place Founders Awardees receive \$30,000 and runners up \$10,000. We determined that we could work with and install rain gardens at one or two schools depending on the award received. Our application passed the initial state and regional rounds and we were excited to be one of three finalists, ensuring we would receive a financial award. Our application was featured as the center page spread in the national GCA magazine, complete with photos of the students we had worked with at PS28 carrying out plant choice lessons, and on their field trip to Great Swamp!

After what seemed like forever, we were


delighted to receive the news in May that we had been chosen for a \$10,000 award. This is truly an honor, as no New Jersey organization has ever won before. While the impacts of COVID-19 may affect our timeline and methods of instruction, we are excited to begin planning the rain garden installation this fall, and have agreed with PS30, Dr. Martin Luther King Complex in Paterson, that they will be our partner school. We are immensely grateful to the GCA Founders Award, and for the ongoing, spirited support of the ladies of the Garden Club of Madison. We cannot wait to dig in! 

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## Chairman's Appeal Scores Success!

*by Wade Kirby, Director of Development*

As is the case with many not-for-profit organizations, the fiscal year for the Great Swamp Watershed Association runs from July 1st - June 30th. As we approach the end of each fiscal year, our fundraising efforts are "stepped up" as we send a direct mail solicitation from our Board Chairman, fittingly called our Chairman's Appeal. This is a final solicitation to encourage as many gifts as possible from those whose intentions to support us may have been forgotten or overlooked earlier in the year. Same source repeat gifts are also certainly encouraged! This appeal serves to round out our fundraising for the fiscal year with an eye on meeting our budgetary requirements. The coronavirus crisis posed a formidable threat to the success of this year's Chairman's Ap-

peal, however, appeals such as these are often incentivized using a matching gift challenge. **Enter our Board of Trustees!** 100% of our trustees together pledged an unprecedented \$17,450 to be matched with contributions from other donors in support of our efforts to protect clean water and preserve open space. This commitment was a clear reflection of the board's belief in our mission, especially during this difficult time. We are, needless to say, very grateful! We conclude the challenge with an impressive \$24,342. Adjustments were made in our 2020-2021 budget to account for the impact on our normal fundraising efforts due to COVID-19. Thus, as we continue through 2020, please know that ongoing donor support is especially needed and your participation is deeply appreciated. 



## Lifetime Volunteer Achievement Awards *(continued from page 1)*

amazed he has time to fit it all in- yet he does so consistently and tirelessly. From helping The Raptor Trust take care of their rescued and rehabilitating birds, to assisting Great Swamp National Wildlife Refuge build and maintain their trails, Steve is active all over the Swamp. He has lent a hand conducting trail and conservation work with The Nature Conservancy, New Jersey Conservation Foundation, NYNJ Trail Conference, New Jersey Audubon Society, and more. He attends and volunteers at Morristown Unitarian Fellowship, supports the homeless and food insecure by delivering excess garden produce to food banks, and I am sure there are more organizations to add to the list as well. But to GSWA he is special. He has been intrinsically involved and instrumental in the construction of our own trails and infrastructure at the 73-acre GSWA Conservation Management Area. Since 2005, when we built our first boardwalk trails and deer enclosure, Steve has built, monitored, and maintained the fence which is so critical in allowing successful restoration at the site. He has built hundreds of feet of boardwalk, and now fifteen years on, is even involved with rebuilding sections that have worn out. There is likely not a section of the property that he has not been key to creating, repairing or restoring. He has battled thousands of invasive plants, removing roses and burning bush with gusto, and helped plant hundreds of native shrubs in their place. He leads corporate volunteer day crews, allowing us to work in more effective small groups, and quietly teaching volunteers plant recognition or boardwalk construction skills. He volunteers at outreach events, helps with set up and take down for our gala and music festival and many other behind the scenes tasks that enable our organization to run smoothly. A Newark native originally, Steve now lives in Millington, swapping the lower reaches of the

river for the upper Passaic, but staying true to the watershed all his life. He retired almost 20 years ago after a career as a research chemist for Schering and has used his retirement to give back to so many organizations! Thank you to Steve, for all that you do.

### **Frank and Dot (Dorothea) Stillinger:**

With the Stillingers, we gain not one, but two amazing volunteers, each helping the organization in different, but overlapping and meaningful ways over several decades. Frank Stillinger has been a Trustee and volunteer with GSWA for more than 20 years, helping with land



*Dot (Dorothea) Stillinger*

and water conservation work throughout. A PhD Chemist studying particular properties of water during his academic career (when Executive Director Sally Rubin was introduced to Frank, she was told



*Frank Stillinger*

he could tell her why water is wet!), it seems only fair that Frank should have chosen to volunteer for a water quality organization! As longtime Chatham Township residents, Frank has helped at stewardship workdays removing trash from streams, installing stream crossings to enable the initial trails at the Conservation Management Area to be laid out, and creating the first trails around the CMA when the invasive rose bushes were so thick they had to be battled just to enter the property! Frank has



chaired the land and water committees of the organization, and rolled on and off and back onto a thoughtful role as a Trustee for the organization.

Dot, has encyclopedic knowledge of local area land use issues, being longtime Chatham residents and understanding the ten towns of the original Great Swamp Watershed region intimately. She has also served on the board—sometimes alongside, sometimes in place of Frank, and has been involved with almost every committee from finance, to development to Gala planning, to local advocacy issues, but most often with land use preservation. Chair of the Chatham Environmental Commission, Dot spends her summers working at the Silver Bay Y at Lake George, yet she still manages to maintain the connection to GSWA while away. Her insightful and well-reasoned advice on any potential acquisition, or land use issue help GSWA to stay on top of issues we should become involved with. We thank Dot and Frank for being the power couple they are and giving back to GSWA over so many years.

**Roger Edwards:** Roger was one of the first volunteers I met when I started as the Director of Water Quality at GSWA. My predecessor, Laura Kelm, told me he was an amazing volunteer and he has continued to dedicate his efforts assisting our organization. By the way, Laura's predecessor, Kelley Curran, had told Laura the same thing! It was true then, and it is true now. He is an asset to GSWA and we are happy to show our gratitude with this award recognizing his achievements.

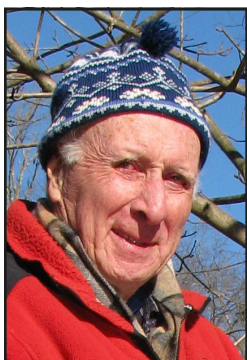
For almost 20 years GSWA (and until its

dissolution the Ten Towns Committee) has had the benefit of the assistance and scientific knowledge of Roger. He has volunteered his time to serve GSWA in an amazing variety of tasks including membership drives, mailings, serving on committees, and water quality sampling. As a PhD Physicist, his experience was invaluable as he served on our Science and Technology committee. He has dedicated countless hours to in-depth research of the data collected not only by GSWA but also from outside sources such as USGS. His research helped to facilitate our downstream expansion as the data he gathered helped to determine the best locations for our new downstream sampling sites.

Our robust chemistry sampling program has been supported by his efforts in other ways as well. He is first to volunteer his time as we go out quarterly into the streams to collect samples in all kinds of weather. His assistance with the analysis and compilation of all the data that GSWA collects helps to expand the understanding of what is happening in our waters. These insights further assist GSWA to utilize our data to complete projects and work with our local communities to improve water quality. Roger has also volunteered his writing skills to put together articles and publications such as papers on the impacts of salt in Loan-taka Brook and reports on GSWA's long term water quality results to submit to NJDEP.

With two decades of dedicated service to the GSWA and environmental concerns, Roger has proven an invaluable ally for water conservation. It is for this that we honor his assiduous commitment to the GSWA.

We wish we could pay tribute to these extraordinary volunteers in person, and some day soon we will, but for now, please accept our grateful appreciation for your commitment and dedication to Great Swamp Watershed Association. 🌲



Roger Edwards

# Culverts and Crossings in our Watershed

by Sandra LaVigne, Director of Water Quality Programs

We are privileged to live in an area rich in water resources. Streams, rivers, ponds, and lakes are everywhere you turn, or more importantly, everywhere you drive. Following Hurricane Sandy in 2012, attention was drawn to many areas where bridges and culverts were failing or inadequate and engineers began to develop plans for renovation. Previously, the main function of these structures was to convey water from one side of a road to the other with only minor consideration placed on the ecological importance of the stream systems. In 2015, a group from the University of Massachusetts Amherst decided to organize a methodology and data hub to assess bridges throughout the north-east states. The goal was to determine the ecological impact of these crossings on our streams. They formed the North Atlantic Aquatic Connectivity Collaborative (NAACC). Focusing on the aquatic connectivity and efficacy of our river crossings, they strive to rank the bridges and work with local municipalities to prioritize structures for improvement. In 2020, through a partnership with the NY/NJ Harbor Estuary Program and the Hudson River Foundation, GSWA is proud to join the ranks of surveyors who are contributing data to this important collaborative.

Streams should be thought of as a single, often very long, linear ecosystem. The nature of these systems depends on organisms being able to move freely from one end to the other. Aquatic organisms, such as trout and eels, depend on this movement for reproduction. Other animals, like mink, utilize long stretches of stream corridors for habitat and food. Inadequate connectivity, often caused by poorly designed crossing areas, can have

serious impacts on the populations of these organisms as well as on the health of the ecosystem as a whole. The surveys developed by the NAACC assess the connectivity in the areas of bridges and culverts for both aquatic and terrestrial animals as well as for the flow and function of the streams.

Sandra LaVigne, GSWA's Director of Water Quality and Adam Palmer, Education Associate, began working with Isabelle Stinnette from NAACP, taking to the stream crossings, to learn about the different types of culverts and the importance of their place-



ment within the system. Over the two days of training, we explored culverts along Indian Grave Brook and the Passaic River. Many of the bridges in the area are beautiful to look at and in good condition structurally allowing for both aquatic and terrestrial passage. In the picture above is a crossing along Hardscrabble Rd where it intersects with Indian Grave Brook. On the left of the picture you can see where exposed rocks and terrain allow small mammals to cross safely under the bridge.

Conversely, the culvert crossing pictured next from a small unnamed tributary in the upper Passaic River area was inadequate,



with no room for terrestrial crossing and only limited connectivity aquatically.

We are happy to report that of the ten crossings we have so far surveyed along the Indian Grave Brook and Upper Passaic River, only two were inadequate including the one pictured here. The other was a small crossing near the headwaters of Indian Grave Brook that was partially buried. We are looking forward to gathering data on an additional 70 crossings within our assigned area. This will cover only the upper region of the Passaic River headwaters sub-watershed and the Primrose Brook sub-watershed. In the future we hope to continue this partnership and gather data on the remaining watersheds in our area. 🌲

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## Water Sampling News

*By Sandra LaVigne, Director of Water Quality*

GSWA is proud to be partnering up with Jonah Ventures to expand our bacteria sampling program. Through the Waterkeeper network, GSWA was offered the opportunity to work with Jonah Ventures to collect DNA source tracking data. This will allow us to better understand what is contributing to the elevated bacteria levels in some of our area streams. This type of data narrows down the possible contaminant sources by identifying what DNA is found in the sample such as domestic dog, deer, or human. Jonah Ventures is providing GSWA with four kits, free of charge, which we will use along stream stretches that have had continuously elevated *E. coli* levels. Watch our e-news for further updates on this exciting project. 🌲

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### Interested in Volunteering?

If you are interested in getting actively involved in efforts to protect and preserve the watershed, GSWA has a number of volunteer opportunities (see [GreatSwamp.org/volunteer/](https://www.GreatSwamp.org/volunteer/)).

Please send an email to [volunteer@GreatSwamp.org](mailto:volunteer@GreatSwamp.org) if you would like to volunteer.

# GSWA Virtual Challenges a Huge Success!

By Adam Palmer, Education Associate



Some weekly theme categories for the GSWA Photo Contest



This spring, GSWA Educators had to put on our thinking caps as we came up with some virtual offerings to keep people busy when the lockdown was put in place. What resulted from the brainstorm sessions were several extremely successful virtual programs including a stay-at-home scavenger hunt and a nature inspired photo contest. Made possible by GSWA's Board of Trustees, cash prizes were offered to our contest winners and entrants every week.

In April, when the **Stay-at-home Scavenger Hunt** launched, it sparked over 1500 website views and game sheet downloads, engaging participants from New Jersey, New York, Maryland, and as far away as California. These scavenger hunts encouraged participants to search their backyards and neighborhoods for nature and water related things such as “a native plant”, “a tree you can't fit your arms around” and even challenged participants to “draw or capture sunrises/sunsets” on camera, all to fill out their list. Some schools who were still in session remotely and were looking for supplementary programs even took on the scavenger hunt for their students to participate in weekly.

Following the success of our scavenger hunt, GSWA knew we had to come up with and offer more virtual challenges. In May, the

**Spring Quarant-green Photo Challenge** was rolled out. Consisting of weekday and weekend challenges, participants submitted their top three photos based on the current theme. Winning photos were selected by GSWA staff members and announced on our social media along with honorable mentions.

GSWA also partnered with Unity Charter School in Morris Township to offer them an exclusive photo contest for their students with the theme “Colors of the Rainbow”.

As summer began, we took what we learned from our two previous programs and combined them into our summer offering with GSWA To-Go. Somewhat of a hybrid program between scavenger hunt and photo contest, GSWA To-Go provided a weekly challenge every Friday over the course of the summer during which participants submitted photos including our “GSWA To-Go” logo in the picture. Winners were selected at random from our entries and awarded a cash prize.

As we move into the fall, we are putting our thinking caps back on to develop and launch more virtual offerings that help educate and advance GSWA's mission! If you missed out on the fun this spring, you can still access the materials for our scavenger hunt at our website [www.greatswamp.org](http://www.greatswamp.org). 🌲



# What's up with Water?

By Sandra LaVigne, Director of Water Quality

GSWA has been hard at work, as always, to collect water quality data from around the watershed. This year marked a new milestone for us as we continued our expansion down the Passaic River. For the next three years we have added four new sites between Livingston (our previous most downstream site) and Little Falls. These sites will help us to further our goal of understanding what may be impacting water quality in this region. Using this data, GSWA can help communities to connect to the river and better understand what they can do to protect this wonderful resource.

But wait, that's not all! In 2014, GSWA completed a project with Seaton Hackney Stables to protect Loantaka Brook from harmful storm-water runoff. This project was initiated due to findings from our bacteria monitoring project which had found elevated levels of *E. coli* bacteria in Loantaka Brook downstream from the horse farm. These levels indicated that runoff was carrying potentially harmful bacteria into the stream system which adversely effected the ecosystem as a whole. Bacteria levels in the stream were high and the macroinvertebrate population had lost both diversity as well as quantity. With the help of grants and gen-

erous donors, a plan was made to move the horse pastures back from the stream and improve the buffer zones and in 2014 that work was completed.

In 2020, GSWA has returned to the area of Loantaka Brook to follow up on the work that was done and do some in-depth monitoring of the water quality. In May, we collected multiple macroinvertebrate samples along the stretch of Loantaka Brook that was impacted by the restoration work. Though these samples will ultimately be sent out to a laboratory for full analysis, the stream-side observations are that the

biological community has rebounded well. We observed many macroinvertebrates that are indicators of excellent water quality such as stone flies, mayflies, and dragonflies. The diversity of the sample was also robust, another good indicator that our efforts have been a success. In August, we finished up a five-week round of bacteria monitoring in the area as well. Our samples in the Seaton Hackney section of Loantaka Brook were well within the state standards set for streams for three out of the five weeks. The first sampling week and the final week were both elevated slightly due to very heavy rain fall within the twenty-four hour period just before sampling. This is a normal spike that was observed throughout our sampling range and not a cause for concern. 🌱



*Intern Chris Coultas collects macroinvertebrates along Loantaka Brook*



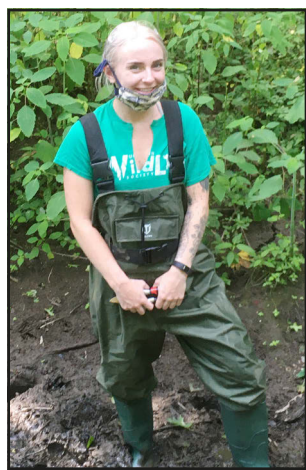
*Intern Juliet LaVigne collecting bacteria samples*



# Four Footed Furry Friends at the Conservation Management Area

by Leah Wells, GSWA Intern

A typical day's work as part of the Great Swamp Watershed Association (GSWA) stewardship team involves invasive species management with very little interruption.



Intern Leah Wells

On one morning, however, my coworker Rachel and I heard a rustling in the bushes nearby. When we both glanced in the direction of the noise, we saw a dark-furred, bushy-tailed animal run down into the same stream we were standing in. After considering all the possibilities, we realized that our new friend was in fact an American mink!

The medium-sized aquatic hunter is part of the Mustelidae family along with weasels, badgers, otters, and ferrets. They keep the natural ecosystem of the swamp in check by feeding on a variety of prey including mice, rabbits, small birds, frogs, crayfish, and other fish.

While minks are quite common in New Jersey, they are solitary and primarily nocturnal animals, making human encounters rather rare. Rachel and I were astonished that we had both just experienced our first run-in with a mink and it made us wonder — What other mammals call the GSWA home?

To answer this question, I asked Dr. Tammy Windfelder, a professor in the biology department at Drew University. Dr. Windfelder has been conducting research at GSWA Conservation Management Area (CMA) since 2009.

“In addition to the mink, the GSWA CMA has mice (lots of mice!) representing several different species. The three species I encounter most often are white-footed mice, deer mice, and meadow jumping mice,” she said. “This site also has short-tailed shrews and I caught

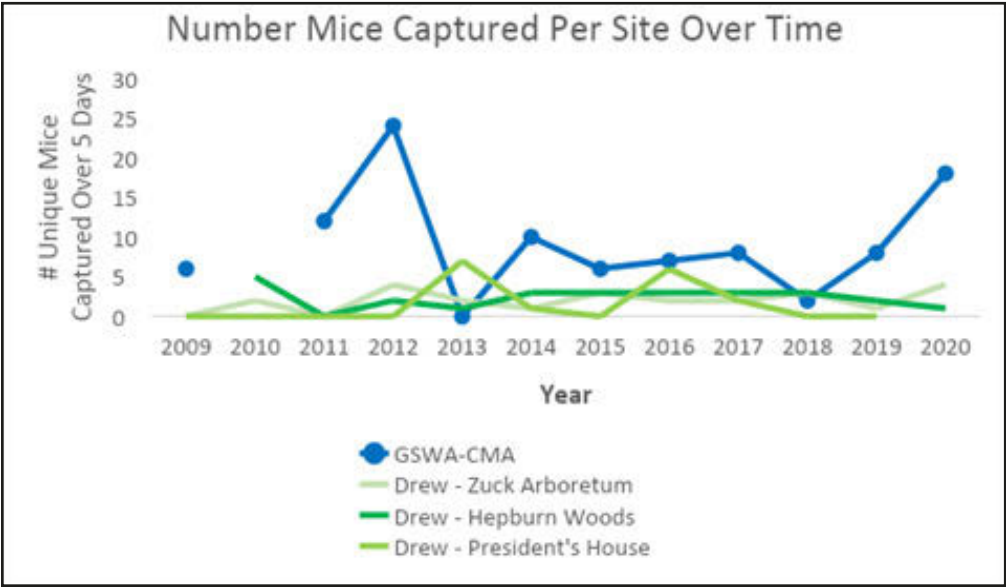


Photo by Blaine Rothausen

a meadow vole back in 2014. There are also eastern chipmunks, southern flying squirrels, and eastern grey squirrels. Long-tailed weasels and foxes were seen on camera traps. Larger species include raccoon, Virginia opossum, striped skunk, and the occasional white-tailed deer. And of course, this year I also ran into a black bear.”

Dr. Windfelder's research on small mammals has focused on documenting which species are present at the campus of Drew University and GSWA's CMA over time, as well as studying changes in population sizes. She also investigates the effects of deer and deer-proof fencing on these populations and evaluates the responses these small mammal populations have to natural disasters and disease.

With Dr. Windfelder capturing more mice than any other species at the CMA, her



study shows that many mammal species have fluctuations in population sizes year to year.

“Over the past 12 years we have captured, marked and released 101 mice at the GSWA CMA, compared to only 26 individuals at the Drew site where mice are most abundant (Hepburn Woods),” Dr. Windfelder shared. “The average number of mice captured at the GSWA CMA is 9.2 individuals per 5 trap-days, which is nearly four times the average of the most prolific mouse site at Drew University (2.4 mice per 5 trap-days at the Hepburn Woods). One hypothesis for this difference is that there are significantly more fox and other predators present at Drew University to keep the mouse population in check compared to at the GSWA CMA.”

With this newfound information, I con-

tinue to unravel the mystery of the Great Swamp ecosystem. Whether you may already be familiar with the area or have never scratched the surface of the region’s diverse habitats, there is a never-ending breadth of knowledge to be gained by studying and visiting within the swamp ecosystem.

The Great Swamp Watershed Association Conservation Management Area is home to a diverse array of habitats which support mammals, birds, reptiles, amphibians, plants, and fungi- it is much more than the invasive plants we have spent many hours pulling! There is truly never a dull day on the job. Hiking through these enchanted woods is a fun, rewarding experience for adventurous individuals, budding biologists, and families alike. 🌲

# GSWA Creates Quarantine Cookbook Coming Soon to a Kitchen Near You (We Hope!)

With recipes like Chocolate chip espresso cookies, Shrimp with feta, Vegan chocolate cake, and Pumpkin gnocchi, our recipe packed cookbook will get you cooking through any lockdown. Each recipe has been lovingly contributed by GSWA staff, volunteers and friends of the organization – we even have a recipe from our local 11th district Congresswoman Mikie Sherrill – but you will have to buy the book to get her Mary's fish tacos recipe!!

More than 65 recipes are presented by meal type, with clear, simple instructions to make the dish, and with lockdown friendly

substitutions for missing ingredients. Pictures of the prepared food help tempt you, and illustrations and facts about the Passaic River from source to sea break up the recipes, and help you learn more about who we are and what we do while you wait for your recipes to cook.

Take a sneak peak at one of the pages below. The recipe book, born out of the need to cook (and eat!), and then share recipes we were all making during the stay at home quarantine, is being sold as a fundraiser for the organization. Books will be \$30 for hard copies. Visit [greatswamp.org](http://greatswamp.org) to pre-order your copy today! 🌱

## Fun Flexible Quiche

Recipe by Sandra La Vigne

*Quiche in some form or another has been around since at least the Roman times. The basis for this recipe comes from early English cookbooks circa 1300. The crust is a family recipe that has been handed down to me from my Grandfather who was a baker. The example I give here uses a mix of fresh herbs but I have used mushrooms and broccoli, asparagus, and corn and all taste great. So have fun, experiment and enjoy!*

Bake at 450°F for 20 then reduce oven temperature to 350°F for an additional 20 to 30 minutes or until the filling is lightly browned and firm in the middle.  
Serves 8

### Ingredients:

1 - 8 or 9 inch pie plate

1 pie crust - to make your own look up recipe in "What can I make with flour..." section of the cook book.

### Filling

1 C shredded cheese of choice (I usually use cheddar)

1 tsp chopped fresh basil or 1/2 t dry basil

1/2 tsp fresh or dry thyme

1/2 tsp parsley

4 eggs

1/2 C cream or milk

### Alternate Fillings

1/2 C chopped steamed broccoli

1/2 C sautéed mushrooms

1/4 tsp crushed rosemary

### Here's how:

Preheat the oven to 450°F

Line pie pan with uncooked pie crust

Filling -

1. Spread the shredded cheese of your choice out in the bottom of your pie crust.
2. (If using other fillings ie: broccoli/mushrooms etc; these should be cooked then spread out on top of the cheese)
3. In a large bowl whisk eggs until frothy
4. Add cream and herbs to eggs and whisk until well mixed
5. Pour egg mixture over cheese (and other fillings)
6. Place quiche on the middle rack of oven and cook at 450°F for 20 minutes.
7. Reduce oven temperature to 350°F and cook for an additional 20 to 30 minutes or until filling is lightly brown and firm in the center.

### helpful notes:

- Pre-made pie crust can be used instead of homemade
- Cheese - I usually use whatever is in the refrigerator which is usually a mix of cheddar and gouda but anything will work from mozzarella to Swiss to asiago
- Use any combination of vegetables/herbs you have around. Vegetables should be precooked (ie: steam broccoli or peas, saute mushrooms etc) and should total no more than 1 C altogether.
- When available I use light cream to make a nice fluffy filling but milk (regular to skim) will work. I have also substituted sour cream or ricotta cheese when no milk was available.



# From the Financial Corner:

by Sue Levine, Director of Finance

Our fiscal year ended June 30th and I am happy to report that we exceeded our financial goals in spite of the challenges of maneuvering within the covid19 civil authority requirements. We were fortunate to have some donors step up their donations and provided funds earlier than normal to help continue our programs and land stewardship initiatives. We were also successful in securing the Small Business Assoc. Cares Act PPP funds which furthered the ability to modify our programs during a very trying time.

What we learned during shutdown is that our streams and rivers kept flowing, so the need to care for and protect them was **unfaltering**. Our families greatly appreciated all the online programs and **contests** our education team put in place to **challenge** children in our community and offer fun educational family programs, particularly during the shutdown.

Finally, I would like to share that our endowment funds, which ended the fiscal year at \$1.2M, fared well in a tumultuous market thanks to the strong support of our dedicated Finance Committee. Thank you Finance Committee members, you are an invaluable resource and GSWA is grateful to have your support. 🌲

## Have You Considered Including GSWA in Your Estate Plans?

Designating the Great Swamp Watershed Association as a beneficiary in your will is a sure way to continue your support for our work and sustain it long into the future.

Specific language in your will should of course be reviewed with your attorney. For more information on GSWA's Planned Giving program, please contact Sally Rubin, Executive Director at (973) 538-3500 or [srubin@greatswamp.org](mailto:srubin@greatswamp.org).

## GSWA Experts Available to Speak to Area Groups

Do you wonder, "What is in my water?" or "What can I do to keep water clean for my children?" These and other questions about water quality, land preservation, and local efforts to protect the environment can be answered by the Great Swamp Watershed Association (GSWA). GSWA speakers give interesting, hands-on presentations that will educate and inspire members of your local club or group. Please contact Hazel England, Director of Education & Outreach at (973) 538-3500 or [hazele@greatswamp.org](mailto:hazele@greatswamp.org).



## **Great Swamp Watershed Association**

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