



Great Swamp Watershed Association
The Passaic River **WATERKEEPER®** ALLIANCE Affiliate



Across the Watershed

Spring-Summer 2020

Protecting our Waters and our Land for More Than 35 Years

Greta Thunberg: Inspiration for Young People, and Us All

By Stephanie Jones, Guest Author

In addition to the direct water quality and land protection efforts of the Great Swamp Watershed Association, we are committed to educating our next generation about the importance of these conservation efforts. One of the primary means by which we do so is through our interactive school programming and education initiatives, tailored to be suitable to ages kindergarten through college level.

We aspire to get young people excited and committed about the profound opportunity they have to make a meaningful difference to specifically, water and land conservation, and more broadly, to climate concerns, locally and beyond, through adopting an eco-conscious lifestyle, and, ideally, becoming vocal advocates for our environment.

There can be no greater inspiration for our youth than seventeen-year-old, Swedish climate activist Greta Thunberg, who just was nominated for the second time for a Nobel Peace Prize.

Greta, born January 3, 2003, in Stockholm, Sweden, is known for her “School Strike for the Climate” Foundation, which rallies children and teens to join her civil disobedience protests against schools for failing to educate our youth about corporations abusing our environment. Alternately known as Fridays for Future (FFF), Youth for Climate, Climate Strike or Youth Strike for Climate, School Strike for the Climate is an international movement of millions of school students who on



(continued on page 19)

From the Desk of the Executive Director Okay, Boomer, Let's Get to Know Our Marvelous Millennials!

by Sally S. Rubin

Let's face it, the phrase, "generation gap" exists for a reason. As the mother of three millennials, I thought I would do some research into their generation (and piggyback on the article in this newsletter entitled "Generational Giving"). Following is a summary of the behaviors, traits and statistics I learned about this up and coming generation:

Millennials (a/k/a Gen Y) were born between approximately 1982 and 2000. With 83 million millennials in the U.S. (compared to about 74 million baby boomers), they became our largest generation in 2016, they are the most educated generation, and they are currently the fastest growing segment in the workforce. Statistically, millennial females outperform millennial males, and 57% of college undergraduates are female. They are also the most in debt for student loans of any generation.

Millennials are plugged in 24/7 (literally) and prefer to use email, texting, and social media on their phones over talking on them. They are multi-taskers and sometimes find it difficult to stay focused.


Millennials are willing to trade high paying jobs for better work-life balance and they want flexible work schedules. Time is important to them. Millennials marry later in life but are family-oriented. They are less likely to buy a home in their younger years and typically live with their parents longer. They were most impacted by the 2008-2010 recession and their salaries lag accordingly.

Millennials are optimistic, confident, ambitious and achievement oriented. They want their work to be meaningful. They have high expectations of their employers and are

not afraid to question authority. They value teamwork and collaboration and demonstrate loyalty. They want to get involved and engaged. They appreciate feedback and guidance and benefit from mentoring. They tend to job hop and are often looking for something new and better. They work hard and are believed to be the most entrepreneurial generation.

Millennials appreciate diversity, are open-minded, and have a high level of compassion. They are civic-minded, both locally and globally, and focus on societal needs. They are inspired by a cause not an organization. They have been described as conscious capitalists and are willing to pay for sustainability. The majority believe global warming is real, man-made and serious. They believe all actions matter, big and small. Millennials care about the earth and keeping it healthy. They demonstrate their commitment from their focus on tiny houses to eco-tourism to thrift store shopping. Many millennials are embracing a plant-based diet and eco-friendly living.

The millennials are not the youngest generation. Meet Gen Z, those that were born starting in approximately 2000. As you will see in the article about our interns, we are already welcoming Gen Z into all things Great Swamp Watershed Association.

So, the next time you find yourself face-to-face with a marvelous millennial or an even younger member of Generation Z (what will come next?!), remember to look for the bridges that connect the generations and narrow the gap. As we are seeing with Greta Thunberg, the future is in their capable hands! 

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Upcoming Events

Sunday Hike Series at Hedden Park Sunday, March 1, 1-3 PM

Hedden Park, 124 Reservoir Ave, Randolph, NJ

Gather up your family and friends and join us for a leisurely, late-winter hike at Hedden Park, a beautiful piece of the Morris County Park system. Partially paved recreation trails traverse the Wallace Brook and cross Jackson Brook on this easy hike. We will enjoy a relaxing stroll to Indian Falls, a scenic point of interest along the Green Trail, and take in the natural beauty of the park. This family-friendly hike is perfect for people of all ages. If you like, bring along a snack and some water in a reusable bottle. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Breakfast Briefing: Nature-inspired Solutions to Reducing Carbon Tuesday, March 10, 8-9:30 AM

GSWA Headquarters, 568 Tempe Wick Rd., Morristown, NJ

As we aim to mitigate the pace of climate change, we must find innovative solutions. Join us for an interesting look at tackling the climate crisis by mimicking nature. Dr. Serpil Guran, Director of the Rutgers Eco-Complex Clean Energy Innovation Center, will discuss a sustainable approach to managing organic waste (agricultural waste & pre-and-post-consumer food waste) through “circular carbon economy.” This is a closed-loop system where carbon emissions are reduced, reused, recycled and removed (the 4 Rs). Inspired by how nature works, this solution supports the restoration of the balance of the carbon cycle. Dr. Guran will break it all down for us to better understand the technologies and the supporting policies and decision-making behind it. Registration

is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Sunday Hike Series at Garret Mountain Sunday, March 15, 1-3 PM

Garret Mountain Reservation, 8 Mountain Ave, Woodland Park, NJ

Join us at Garret Mountain as we take you on a journey through the trails of this beautiful reservation. Situated 500 feet above sea level, the reservation offers several overlooks with panoramic views of northern New Jersey and New York City that you can't see from anywhere else in Passaic County. Bring your camera and wear your hiking boots. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Vernal Pool After-Dark Exploration Hike Friday, March 27, 7-9 PM

GSWA Conservation Management Area (CMA), 91 Tiger Lily Lane, Harding Township, NJ

With temperatures rising, the forest floor will be hopping with new life as frogs and other amphibians crowd into shallow puddles of water to breed and lay their eggs. These puddles, better known as vernal pools, tell us a lot about nature here in New Jersey. And we must hurry - they disappear quickly. This annual nighttime exploration provides a fun, outdoor learning experience for kids and adults alike. Discover the differences between a spring peeper, a chorus frog, and a wood frog. Find out how far an endangered spotted salamander will walk to find a mating pool. And learn how all that we appre-

ciate about springtime depends upon a few unassuming puddles of water on the forest floor. Warm clothing and waterproof hiking boots are strongly recommended, and don't forget your flashlight. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

**How to Green Your Closet:
A Sustainable Fashion Deep-dive
Saturday, March 28, 2-3:30 PM**

*Livingston Public Library - Public Room, 10
Robert Harp Dr., Livingston, NJ*

Green isn't your color? That's okay - we're talking eco-friendly green. Join Megan Meiklejohn, Transparency Manager at EILEEN FISHER, as she digs into the unseen impacts of our clothing; from the farm to the dyehouse to your closet. Additionally, Claire Whitcomb, Madison Environmental Commission Chair and a longtime writer at EILEEN FISHER, will share the basics of building a mindful wardrobe. Learn how to: identify which fibers are most sustainable, shop for simple, quality clothes, and make sustainable choices about washing. She will also discuss repairing and caring for your clothes and locating resources for recycling textiles at the end of their life. Co-sponsored by GSWA and Livingston Public Library. This event is free and open to all. Registration is required. Register at GreatSwamp.org or call 973-538-3500.

**Maker Workshop: Build a Warbler Bird Box
Tuesday, March 31, 5:30-7 PM**

*GSWA Headquarters, 568 Tempe Wick Rd.,
Morristown, NJ*

Join us for a fun-filled evening that's for the birds! Come learn about the beautiful little yellow songbirds, Prothonotary Warblers, and their nesting habits - along with those of similar birds. The talk will be followed by constructing your very own Warbler nest box to take home and enjoy. This

workshop is limited to the first 16 people to register. Registration is required. GSWA members: \$30/bird box; non-members: \$40/bird box. Covers the presentation, all materials and light snacks. Register at GreatSwamp.org or call 973-538-3500.

**Stream Assessment Training
Saturday, April 4, 9 AM-3 PM**

*Location TBD, check GreatSwamp.org
for updates*

Interested in becoming a stream monitoring volunteer or just learning more about stream health? This is the training for you! An indoor classroom session teaches you how to conduct visual and biological stream assessments, identify macroinvertebrates, and recognize environmental factors that may impact stream health. An outdoor session lets you practice your new-found skills at a local stream site. By afternoon, you will be a fully trained visual-stream assessment volunteer and ready to conduct an assessment! Bring a pair of boots and clean shoes to change into. There will be a short walk to reach the stream. Tools and supplies are provided. Preferred volunteers are 15 or older. Includes indoor & outdoor sessions. This free training session will be conducted in conjunction with the AmeriCorps New Jersey Watershed Ambassador Program. Registration is required. Register at GreatSwamp.org or call 973-538-3500.

**Maker Workshop: Wild Edibles - Make &
Take Garlic Mustard Pesto
Thursday, April 9, 5:30-7 PM**

*GSWA Headquarters, 568 Tempe Wick Rd.,
Morristown, NJ*

This workshop will explore the ongoing threat of invasive plant species as it relates to biodiversity and ecosystem health. Learn about the impacts of invasive plant species, how to identify the wild edibles, and where and (more importantly) where NOT to forage for them. Then we'll take it outside and harvest our own garlic mustard, followed by a workshop that will teach you how to

cook with these tasty invaders! By the end, you'll have your very own container of garlic mustard pesto to take home - a delicious reminder of all the benefits of removing invasive plants. The cost for this program is \$10 for GSWA members, \$20 for non-members. Space is limited to the first 20 to sign up so register today! Register at GreatSwamp.org or call 973-538-3500.

Pre-Easter Hike at the CMA Saturday, April 11, 10 AM-12 PM

GSWA's Conservation Management Area (CMA), 91 Tiger Lily Ln., Morristown, NJ

Nature is blooming all around and the critters of our Conservation Management Area are fully awake after a long winter's nap. So, gather up your family and hop on over to check out all the activity at this pre-Easter hike. While the birds are busy making their nests, wood frog tadpoles can be seen swimming about, spring peepers and forest frogs will be calling from the cattail marsh pond, and the woodpeckers will resume drumming at the trees that are starting to bloom. Come reconnect with nature and our woodland friends at this relaxing morning hike. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Breakfast Briefing: 2019 Water Quality Report Card

Tuesday, April 14, 8-9:30 AM

Location TBD - Check GreatSwamp.org for updates

Water – you drink it, you bathe your children in it, you sustain your gardens with it. So, don't you want to know what's in it? Don't leave it to your imagination. At Great Swamp Watershed Association, we spend a lot of time in the water all year 'round examining what's going on along your stretch of

the Passaic River and beyond. And with all the water quality monitoring we've conducted, we have lots of interesting information to share. Come get the low-down from GSWA Director of Water Quality, Sandra LaVigne, as she takes you on a virtual tour of the Passaic River from Mendham through Florham Park to Livingston. She will also outline the plan to expand our sampling on the Passaic further downstream to Little Falls and will provide a readout on GSWA's first full year of microplastics sampling. This is your opportunity get the facts and ask your questions. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 for adults and \$5 for children is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Maker Workshop - Whoooo Wants to Build a Screech Owl Box?

Tuesday, April 21, 5:30-7 PM

GSWA Headquarters, 568 Tempe Wick Rd., Morristown, NJ

Join us for a workshop that is sure to be a hoot! Enjoy an evening of information and a little elbow grease. We will kick-off the workshop by learning about the elusive, silent hunters of the night - owls, followed by the hands-on portion. GSWA will provide you with everything you need to build your own Screech Owl box to take home and hang in your yard. Eastern Screech Owls reside locally year-round and adjust well to human presence. Hanging a Screech Owl box is a great way to attract these fascinating birds to your backyard allowing you and your family to experience their seasonal nesting and roosting habits and year-round activities. This workshop is limited to the first 16 people to sign up, so don't miss out - register today! GSWA members: \$30/bird box; non-members: \$40/bird box. Covers the presentation, all materials and light snacks. Register at GreatSwamp.org or call 973-538-3500.

Plant-based Meals – Sample & Learn
Wednesday, May 6, 6:00-7:30 PM

*GSWA Headquarters, 568 Tempe Wick Rd.,
Morristown, NJ*

With all we're hearing about the benefits to ourselves and our planet by switching to a vegan (aka plant-based) diet, are you a little curious what it's all about? Come sample and learn from a pro. Vegan Chef Dianne Wenz will share tips on cooking vegan as she gives a real-time demonstration, preparing three (3) main courses and a dessert. Then comes the best part - the tasting! We will also mix in some pub-quiz style questions throughout the evening. Be the first to answer correctly and take home one of several prizes. You will leave with delighted taste buds and recipes to try at home. Remember, replacing even one meal a week with a vegan option is beneficial to you and the planet. So, let's learn how to do it right together! Space is limited. Registration is required. Cost: \$25. Register at GreatSwamp.org or call 973-538-3500.

Plein Air Watercolor Painting:
Mimosas and Monet
Saturday, May 9, 10 AM-12 PM

*Location TBD - Check GreatSwamp.org
for updates*

Calling all watercolor artists of any level! Gather up your supplies and step outdoors to capture the beauty of nature on canvas. We're in the process of finding just the right spot to set up shop. Come paint with Judith Hummer, a watercolor artist and instructor specializing in transparent watercolor painting using experimental techniques. You'll learn to use watercolor to evoke emotions, environment and movement. What is plein air painting? It's simply the act of painting outdoors. You will need to bring your own supplies: watercolors, brushes, canvas, easel - whatever you need to create your masterpiece. We'll supply the mimosas and tasty treats. Registration is required. Cost: \$20. Register at GreatSwamp.org or call 973-538-3500.

**Breakfast Briefing: Do You Really Want to
Know What You're Drinking?**
Tuesday, May 12, 8-9:30 AM

*GSWA Headquarters, 568 Tempe Wick Rd.,
Morristown, NJ*

Long before your water comes out of the tap, it's taken a journey. The water must be regulated to take out the impurities and safety measures must be taken. Join Frank Marascia, Production Manager at New Jersey American Water, for a fascinating, in-depth look at what's in our water, what they treat it for, what they don't treat for, upcoming issues, and the state of our water infrastructure. Remember, knowledge is power. Registration is required. This event is free to all GSWA members. Non-members, a suggested donation of \$10 is appreciated. Register at GreatSwamp.org or call 973-538-3500.

Great Swamp Great Music Festival
Sunday, June 7, 2020, 12:00 - 5:00 PM
(gates open at 11:00 AM)

*Hartley Farms Polo Field, 9 Hartley Farms
Rd., Morristown, NJ*

Live music, food, friends and more are on tap at our 3rd Annual Great Swamp Great Music Festival.

Grab a spot under the tent or in the field and groove to the music of five (5) local bands. Grab a bite to eat, check out the vendors, and enjoy an adult beverage at the beautiful, historic Hartley Farms Polo Field in Morristown, NJ. It's all the ingredients you'll need for a sensational Sunday afternoon! Tickets: \$25/adult (\$30 at the gate); \$15/high school and college students; children 13 and under are free. Purchase tickets at GreatSwamp.org or call 973-538-3500. See you there! 🌲

GSWA Education Programming Off to a Great Start!

by Adam Palmer, Education Associate

Educational programming has already begun in 2020! On January 21st, GSWA education staff travelled to classes at Louise A. Spencer school in Newark to teach forty-five 6th grade students about watersheds, water quality and where our water comes from. These forty-five students are just the beginning, last year GSWA programming benefitted over 3,000 students across several schools all along the Passaic River and Great Swamp area.

Most of the students are very excited to see our topographic model being laid out, wondering where their house or school might be on it as we set up the small city emulated by the Enviroscape model.

“Who used water this morning?”

This is usually the first question asked of students, all of whom raise their hands as they recall brushing their teeth, showering or flushing a toilet.

“But where did that water come from before the tap?”

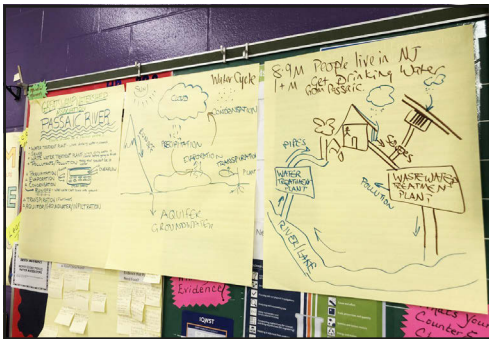
In considering this question we can explore with students the journey water takes as a vital resource to humans and the environment. We discuss the natural water cycle and how it's missing one of the biggest users of water- people! Then we construct the “real” New Jersey water cycle, starting at the tap and ending back around with treatment plants, storm drains and combined sewage overflows (CSOs). Using GSWA's



topographic model of the Passaic River watershed, we define and explain the concept including having students creating their own model of a watershed using markers and paper. Students discuss differences between permeable and impermeable surfaces and the role that can play on water issues such as pollution and flooding.

We also speak about the types of problems our water can face as it relates to pollution. Using our enviroscape model of an urban landscape, students explore how different sources of either point source (PS) or non-point source (NPS) pollutants can enter the system and what kind of threat they pose. We are able to explore the different infrastructure we have in place such as water treatment plants, storm drains and why combined sewage overflow can be a problem in more developed and urban communities who still use them. We then discuss what kinds of solutions might remedy each situation, including things such as green infrastructure like rain gardens as well as public education.

These in-class programs are the first part of the three-part programming GSWA will conduct with a variety of schools, the second part being an exploration of the school's playground in relation to water. During the playground exploration, students create the story of a rain drop, as it travels from different parts of their playground throughout the water cycle. They also will get a chance to map out their playground us- (continued on page 9)



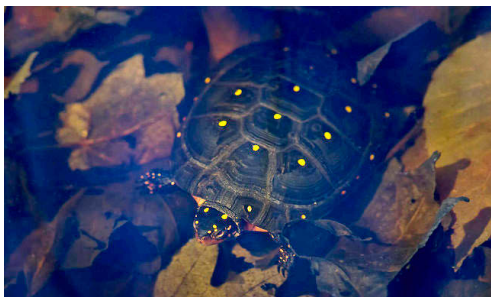
New GSWA Program for Members: Join the Spotted Turtle Society!

by Kristina Necovska, Membership & Social Media Associate

You've supported us for years. Decades, maybe. Your simple act of support has been the foundation of our success for almost 40 years. Now, we're asking for another simple action- be our friend!

Help GSWA grow with these changing times. By joining the **Spotted Turtle Society**, you are giving us access to a valuable resource: your attitudes, thoughts, and values! Now that GSWA is expanding our reach, we cannot assume that a one-size-fits-all approach can best provide support to residents along the Passaic. We have seen how buffer zones diminish considerably as we follow the river downstream. Does the lack of green space affect people's attitudes about the environment? We'd love to know.

This is a survey program for members. Our goal is to reach 100 members to kick off the program. Once that happens, you



Jim Gilbert, Great Swamp NWR - a spotted turtle with one spot per scute

will receive an e-mail with some conclusions about the topic and a link to the next survey.

What do we hope to learn?

Any number of things. If we discover we have an inordinate number of birders among our members, we would offer you better birding programs. Perhaps you're interested in more citizen science initiatives or ways you can constructively communicate to your towns about issues that matter to you. We're here to listen.

Why a Spotted Turtle?

Spotted turtles are endemic reptiles to the Great Swamp and other deciduous wetlands in the North East. They are common enough that changes in their population can tell us a great deal about the environmental health of their habitat. They are resilient problem solvers, long-lived, and have a long memory. The key to their success so far is their adaptability and variability.

Just visit Greatswamp.org/sts and start by filling out our first survey.

All results and e-mails are strictly confidential, we will never publish any identifying details about a participant. Looking forward to hearing from you all.

Questions? E-mail Kristina at Knecovska@greatswamp.org



*Spotted Turtle by
Edward Knobel, 1896*

GSWA Education Programming Off to a Great Start! *(continued from page 8)*

ing diagrams and create a model of their playground that would best address any water related problems posed.

The third and final portion of programming ends with a field trip out to the Great Swamp at our Conservation Management Area, where students explore how water moves in a natural environment. Depending

on the season, many will go for an ecological hike and participate in activities and discussion related to water quality. All the concepts learned in each segment tie together to provide students with a deep understanding of the importance of water as a resource and inspiration for future STEM leaders of tomorrow. 🌲

Some Goodbyes and Hellos:

We offer a most heartfelt thank you to some departing trustees and advisory council members. Michael Dee, Jay DeLaney, Cathy Lee, Nadine Vitro, and Anthony Sblendorio all completed their terms as board members. These past few years have seen significant growth at GSWA and we couldn't have done it without their tireless support!

Phyllis Fast, Jay Graham, and Lois Olmstead have completed their terms as Advisory Council members and we are grateful for their support as well.

We welcome new board member Marilyn Dee (yes, wife of Michael Dee!). Marilyn Dee, a long-time supporter of GSWA, lives in Harding Twp. As a former 30-plus year resident of Bernardsville, Marilyn served that community as a member, co-chair and chair of the Borough Board of Adjustment for 7 years, and as a 12 year member of the Open Space Committee. She currently serves on the Board of the Bernardsville Garden Club as co-chair of civic improvement. Marilyn has a Bachelor of Science degree in business from Fairleigh Dickinson University. She enjoys gardening with her husband, Michael, and reading with her book group friends.



Marilyn Dee

Of course, we are pleased to welcome retiring board members Michael Dee, Jay DeLaney, Cathy Lee, and Nadine Vitro to our Advisory Council. We can't let them go too far! We are also pleased to welcome Andrew DeLaney, Jeff Grayzel, and Chris Sanchez to the Advisory Council as well.

Andrew DeLaney joins the Advisory Council this year as a new member. As a Morristown attorney, Andrew has experience in handling criminal defense,



Andrew DeLaney

residential real estate closings, civil litigation, wills/trusts/estates, and landlord/tenant matters. Andrew has a J.D. from St. John's University School of Law and a B.A. in Political Science and Government from Syracuse University.

Jeff Grayzel presently serves as Deputy Mayor of Morris Township where he has also served as Mayor. He also previously served two terms (6 years) on the Township Committee and brings with him a wealth of knowledge and experience from participation on a broad spectrum of boards and committees. Jeff continues to serve as President of G3 Medical Development in Englewood, NJ, a medical device, product development company in the area of cardiovascular medicine with a focus on interventional cardiology. Jeff has a M.S. in Industrial Engineering from Columbia University, NY and a BA & BS in Economics/Operations Research from Cornell University.



Jeff Grayzel

Chris Sanchez earned his CERTIFIED FINANCIAL PLANNER™ designation in 2019. As an Analyst at Regent Atlantic, Chris is responsible for analyzing client financials, preparing recommendations, and assisting the Wealth Advisors in developing strategies to help clients reach their goals. Chris holds a Bachelor of Business Administration in Finance from Temple University and received his Certified Financial Planning Education from Stockton University.



Chris Sanchez

We hope to have a few more dedicated individuals join our Board or Advisory Council in the coming months. If you think you would be a good candidate, please reach out to Sally Rubin at srubin@greatswamp.org or call 973-538-3500. 🌱

Microplastics, Sampling and Advocacy

by Sandra LaVigne, Director of Water Quality

Plastics have become ubiquitous in our lives and our environment and are quickly being recognized as not only an environmental issue but a human health issue as well. A recently published review of studies show that human consumption of these particles could range between ~40K to over 100K per year, with the most common pathways being bottled water and fish/meat. Though the effects of this consumption are just beginning to be studied, the report concludes that they can pose a threat to human health. (Cox, K. et al, Environmental Science & Technology, 2019)

The Great Swamp Watershed Association began to collect data on microplastics in our local waters in 2018. Our pilot study found plastics at all nine sites sampled. The plastics we identified were broken down into three categories; chips, film and fiber. These microplastics most often originate from larger sources such as single use plastic bags, plastic bottles and straws. At one site, Snyder Ave in Berkeley Heights, results showed 2 microplastics per liter. While this may not sound like much, when you consider in 2018 the USGS reported the average daily flow for this area of the Passaic River was 345 million li-

ters per day, that equates to 690 million particles of plastics per day through just Berkeley Heights.

In 2019, we continued our study, sampling 15 sites with a plan to sample five more sites at high water levels in early 2020. With generous backing from the Leavens Foundation and The Watershed Institute, these samples are being processed at New Jersey City University for more detail analysis.

GSWA actively supports our local communities as they enact ordinances to reduce reliance on single use plastics. We have presented our findings at town council meetings in Madison, the Chathams, and Berkeley Heights, all of which have successfully passed ordinances. We have also shared our data with the communities at local farmers' markets and through our work with high school students in the area. This advocacy is an important part of GSWA's mission, to use scientific data to support positive change for our waters and our communities. We thank all of those who have participated in promoting and passing these ordinances and everyone who does their part by using reusable bags, bottles and straws to keep plastics out of our waters. 🌲

Waterkeeper Alliance News

by Alison Cosgrove, GSWA intern

The Waterkeeper Alliance fights to ensure that every community worldwide has the right to drinkable, fishable, and swimmable water. Since 2016, GSWA has been a proud Waterkeeper Alliance Affiliate-working to expand our role to protect the Passaic River from its source in Mendham to Newark Bay, and working alongside local partners the Hackensack Riverkeeper and New York- New Jersey Baykeeper on issues that are vital to us all. We focus on address-

ing issues such as water pollution from urban stormwater runoff and connecting communities back to their local rivers. The North Atlantic region of nine states has more than 24 waterkeeper groups, mobilizing 38,000 volunteers and supporters and acts as the guardian of more than 53,000 miles of waterways. GSWA keeps you focused on water quality issues locally, and our sister Waterkeeper groups focus on water quality issues around the country and around the world. 🌲

Conservation Management Area Stewardship Update

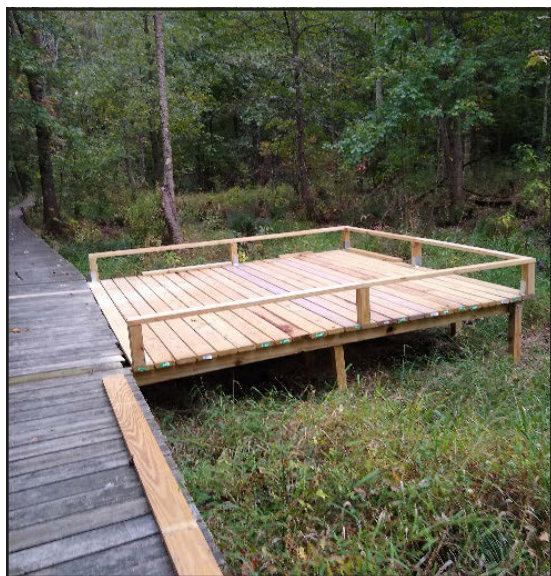
by Hazel England, Director of Education & Outreach, Land Steward

2019 was the most productive field stewardship season at GSWA's Conservation Management Area (CMA) by any metric or superlative you might care to use! Over 2,200 hours of volunteer time was expended by more than 350 volunteers who cleared, trimmed, hammered, spread and planted to continue to make the area more usable for programming, more valuable as wildlife habitat, and more effective as a flood storage habitat. We planted over 1,000 shrubs and trees, constructed over 250 feet of boardwalk around the trails and battled invasive plants on almost 8 acres of the site. We also used more mosquito repellent than ever before, due to the wet spring and early summer, and our volunteers likely ate more donuts than we will ever tell!

We are thankful for the many hundreds of hours of stewardship volunteered at the CMA site throughout 2019. We welcomed groups

both large and small. Longtime corporate partners Goldman Sachs, whose Community Team Works initiative allows employees to give back close to where they live, were back for their 14th year with us, and we hosted task filled workdays on 8 (count 'em) consecutive Fridays in May and June. Several school community service days filled with eager middle school kids from area schools ran barrow loads of mulch to renovate trails, and picture taking high school students snapped selfies by the piles of invasive plants they had cut. Groundwork Elizabeth, who spent 6 days working with GSWA, embodied their organization's mission- to bring about the sustained regeneration, improvement and management of the physical environment. They did just that, braving incredibly hot and humid July temperatures to don waders and work their biceps as they hand sawed invasive trees in our red trail marsh, which was slowly being encroached upon by European Buckthorn and aggressive stands of Red Maple. Our trusty internal GSWA volunteers, who know who they are and how much we appreciate and rely on them, have been the backbone of helping coordinate these corporate and community volunteers and conducting restoration at the site for more than 15 years.

As we look ahead to 2020, with no perfect vision jokes in sight, we will continue to utilize volunteers for the bulk of our stewardship work at the site. We would love to host your group, for a half or full day workday, and our field season begins in early April and runs through to mid-November. Contact us at hazele@greatswamp.org to find out more about how your group can get out into the nat-



No, not an outdoor dance floor, but our new teaching area at the newly renovated Red Trail marsh

ural environment to build teamwork and give back to the swamp.

In an exciting update, after many years of discussion and planning, GSWA has finally obtained the permits that will allow some exciting restoration activities to be conducted in 2020. Through funding from the USDA Natural Resources Conservation Service, and a program known as EQIP, we will be working in and around the streams that cross the property to put some curvature back into their artificially straightened banks. When it rains, straightened streams act like fire hoses, scouring the banks as water moves along at high velocity, increasing erosion and removing soils and sediments from banksides. Our project will install woody debris to allow the stream to begin to reclaim a more sinuous path, sculpting out some areas of the banks and depositing material onto others. Over time, this more natural path will slow the flow of water, allowing sediment to settle, and creating spaces for macro invertebrates to better establish within pockets of woody material. Ditches installed across the property in the 1920s and 30s will be plugged to allow water to soak into the ground more effectively and undo the too-rapid draining of the wetland areas. At the same time, vernal or temporary pools will be created around the site which will re-establish better hydrology and store more water for longer, in more effective ways than occurs currently. Vernal pools make excellent breeding places for amphibians and

insects alike, which in turn encourages predator species and allows for flourishing wet loving plant communities.

These projects will likely have some impact on the existing trail system and we are beginning planning for hardening and increased resiliency of the trails at the site to address the wetter conditions that will likely prevail after the stream restoration and vernal pool enhancement take place. Funding from the New Jersey Conservation Foundation Franklin Parker small grants program will allow us to build several hundred feet of raised boardwalk to allow visitors to continue to hike the property, even while it remains wetter. These trail improvements will be essential since we are utilizing the site for teaching much more intensely, and for more of the year than ever before.

So, if you haven't visited the CMA recently, we encourage you to get out and take a hike to see the improvements we have already made and to envision those that will be shaping up over the next twelve months. If you make it to the rear of the property, you can even celebrate with a visit to the new marsh platform, which overlooks the newly restored marsh and allows us the opportunity to gather larger groups for teaching while out on the boardwalk sections of the trail.

Send us your photos from your visit—we love to see people using the property we are working so hard to restore! 🌱



Community partners from Groundwork Elizabeth remove invasive trees from the Red Trail marsh at the Conservation Management Area.

The Question of PFAs


by Sandra LaVigne, Director of Water Quality

PFA's, PFOA, PFOS, GenX what do they stand for? Why do we keep hearing about them and how can this affect us? PFAs or perfluoroalkyl substances are a manmade set of chemicals created with properties that repel water and oil. The two most commonly used and currently studied are PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanesulfonic acid). GenX is a trade name used to produce fluoropolymers without the use of PFOA, however, the chemicals used in this process are also being found in ground water.

First introduced into common use in the 1940's and 50's, PFAs have been used in a variety of ways including as fire repellents, non-stick coating for pans, in carpets, clothing and food packaging. Early manufacturing practices and disposal of goods containing the PFAs has led to elevated levels of the chemical in the environment and in waterways (Rhode Island Dept of Health, 2018). This group of chemicals are slow to break down in the environment, are soluble in water, and can build up in the body through continued exposure or consumption.

People can be exposed to PFAs through exposure to food grown in contaminated soil or watered with sources containing PFAs, exposure to air and water near industrial areas where PFAs were manufactured, and areas where firefighting efforts have occurred. Health concerns related to prolonged exposure include increased cholesterol levels, developmental effects in infants, increased risk of certain types of cancer, and effects to the immune system.

In 2006, the EPA began the PFOA Stewardship Program, working with eight major companies in the industry to eliminate the production and emission of PFOA and related chemicals. This program has also been instrumental in phasing out the import of these chemicals into the country. In December 2019, the EPA, following the PFAS Action Plan (established in Feb 2019) moved towards regulating limits on levels of PFOA and PFOS in drinking water and is working on studies to determine what that limit should be.

New testing methods for identifying these groups of chemicals in water have been developed and approved by the EPA. Methods 533 and 537.1 now effectively measure 29 PFAs in drinking water. If homeowners are concerned about these chemicals, state certified laboratories are able to use these methodologies to test the levels of PFAs in tap water. There are also filtering systems that can help to remove PFAs from your drinking water. Both granular activated carbon (GAC) systems and reverse osmosis (RO) systems will reduce the amount of PFA, as well as other possible contaminants from tap water. Filters that are NSF P473 (National Sanitation Foundation) certified have been tested and certified to remove PFAs from drinking water. These systems range from under the sink systems like those offered by Aquasana, to countertop systems like Berkey Counter Top Filter, to water pitcher systems like Life Straw Pitcher. These are just a few of the options available to homeowners who have concerns about PFAs in their water. 

The Sustainability Equation- Using Common Sense to Make Good Eco-Decisions

by Hazel England, Director of Education & Outreach, Land Steward

Sometimes trying to live a simpler, greener, lifestyle can seemingly end up causing more aggravation and headaches! Knowing what your best options are as you balance carbon footprint, product recyclability, environmental impact of ingredients, and the ease, effectiveness and cost of an item can seem an overwhelming task. Considering a purchase from every angle - so called 360° purchasing - can be draining, and as more companies offer 'green' or 'eco-friendly' versions of their products, sorting out which make sense for your household can mean performing complicated environmental balancing equations in your head. Nobody said being green was going to be easy, but it doesn't need to be this hard! With GSWA's focus on living Watershed Friendly, and emphasis on single use plastic reduction for water quality improvement, we can give you some suggestions to help you navigate the maze of consumer choices.

Before buying your next items, ask yourself: Is it cost-effective? Is the container it comes in reusable? Refillable? Recyclable? Does it use little or no packaging? Does the product inside work effectively? How does the cost compare with a regular version of the product? And finally, do I *really* need it, and if I own one I no longer want, what can I do with it? While we all learned the 3R's back in the day, there are other **Re-** prefixes that make sense apart from **Recycling**. When considering a purchase why not also include:

Refusing single use – especially when the item is plastic (see our article in this newsletter detailing which communities are leading the way with single use plastic bans, and our articles from last year's news-

letter on how to make the switch to reusable bags.) A 2017 study in the Science Advances Journal [<https://advances.sciencemag.org/content/3/7/e1700782>] estimated that of all 8.3 billion metric tons of plastic ever produced, 6.3 billion metric tons has become plastic waste, and of that only 9% has been recycled, leaving the great majority accumulating in landfills and local environments. Reusable straws, water bottles, coffee cups, and bags all can make a cumulative dent in reducing our consumption of single use items, but a look in any trash shows that fast food and take out containers comprise a sizable portion of the single use stream. Wouldn't it be great if New Jersey towns could emulate the European city of Brussels, which has begun a sustainability initia-



Single use containers – all made of non-recyclable single use plastics from a recent GSWA staff lunch.

tive known as the Tiffin project- an attempt to reduce single use take out containers in a meaningful way. Eco-minded residents sign up to the program and purchase standardized stainless-steel containers to use when buying take out. They receive a 5% discount from the restaurant for doing so. The proj-



Some of the many well known consumer brands participating in the LOOP program

ect estimates it will save 1.5 tons/yr/1000 members, saving 4 tons of Co2 and \$22,000 in saved single use purchase costs [<http://tiffin.be/tiffin/>]. While we are not quite to this point, local restaurants are starting to consider more sustainable packaging, switching to paper, or reducing the amount of extraneous packaging on orders to comply with local ordinances.

Refill when you can. Refilling is no longer just for water bottles, although we hope by now you have ditched the plastic and are saving money with a reusable bottle. Using your own coffee mug saves you ten cents every time you use it at major coffee shops. Refillable growlers for beer purchases are increasingly available, and save you money, as well as cutting down waste. A glance in a typical recycling bin reveals shampoo bottles, detergent containers, and cleaning product bottles galore. As the recycling market undergoes sharp, painful changes based on the profitability of recycling items not labeled plastic #1 or #2, many of these product bottles with #5 and up cannot be recycled at all and head off to landfills. Recent figures suggest that 75% of people recycle, 75% of

plastic generated ends in landfills, and only 9% is recycled. Wouldn't it be great if the product within all those packages could be purchased without the waste? Step forward a new program known as LOOP, a partnership between waste management firm Terracycle, and major consumer brands. Imagined as a modern, sustainable take on the concept of the milkman delivery services of yore, LOOP members purchase the recognizable brands they already know and love- Haagen Das, Cascade, Tropicana and Seventh Generation to mention a few. Paying a onetime returnable deposit for containers, products are packed into the LOOP reusable delivery tote and UPS drops them off to your doorstep. Emptied jars and bottles go back in the tote (even dirty if you like) for return to LOOP facilities, where they are cleaned in a hi-tech process, then refilled. This is sustainable living with ease- since purchases are ordered online, doorstep delivered, and automatic resupply can be triggered by LOOP's receipt of your empty jars. The process saves time, energy and resources in the process – LOOP's independent analysis of the cost of LOOP compared to traditional packaging

purchase, including trucking to landfills and single use materials cost shows at least a 20% saving in energy use. [loopstore.com] If the concept takes off, LOOP intends its products to be available on Amazon and at your local grocery store, with reusable packaging process a simple add on to your daily buying process. It's a great example of a truly circular economy- the holy grail of sustainable consumerism.

Try **Repairing** before you **Replace**, and **Refurbishing** items before you discard; or **Re-selling** them to a new owner. The rapid turnover of consumer goods due to built-in obsolescence adds immeasurably to our environmental footprint and landfill tonnage each year. The desire for newer, brighter, shinier items can be a hard one to kick. Read product reviews and try to shift purchasing to a consideration of the longevity of the item, and the ability to recycle its components when you are done. It is now easier than ever to sell unwanted items you may have purged during winter decluttering sprees, on apps such as Mercari, Carousell, LetGo, Offerup as well as the old standbys of eBay and Craigslist. Phone friendly apps allow you to snap a picture and list items instantly, then add details as you go. You can even chat with prospective buyers directly. Carousell is even free. Reselling apps keep unwanted products out of landfills but allow you to make money as you say goodbye to them. You might even find items you want on the same sites. Consider taking a 'No new purchases' pledge for a month and see how you can find the things you need with a lighter environmental footprint when purchased gently used. If this sounds too complicated, drop off to Goodwill, keeping items out of landfills and prolonging their useful life.

Rethinking and **Reconsidering** your choices. While handmade organic charcoal toothbrush in a bamboo or stainless steel con-

tainer might solve one problem- namely that of plastic free packaging, and environmentally sound ingredients, its' sticker price at more than ten times that of regular toothpaste, and online only availability may mean that your environmentally aware purchase comes with a high energy cost due to packaging, shipping and small scale production with expensive ingredients. On a recent trip to a large retail drugstore, the choices for personal care products were overwhelming. Each brand utilizes uniquely shaped packaging, with lots of plastic wrapping that cannot be recycled. Finding environmentally responsible items can be hard, but seeking those with less extraneous packaging, use of natural materials in their construction, more plant derived and mostly pronounceable ingredients inside can steer you in the right direction.


Remove the water. Shipping heavy items costs more, so buying concentrates or dried versions of products, which are lighter, but contain all the essential ingredients sans water saves energy, space, and packaging, reducing the carbon footprint. Consider trying shampoo bars, which can ditch both packaging and water, bar soaps and a natural brush for washing dishes, aromatherapy oils on a woolen ball in lieu of single use dryer sheets, or using detergent concentrate pressed into wafer like sheets and purchased in refillable paper cartons. If you have bottles you like, refills of cleaners, dish soap and all-purpose cleaners, can be ordered online from companies such as Cleancult. [cleancult.com] Products come in recyclable paper-based packaging, are 90% plastic free, and have a low carbon footprint.

So next time you are standing in the aisle of your local supermarket, eyeing the shelves laden with products, run through your mental **Re-** checklist, and it will guide you to making smarter product decisions for a more sustainable future! 🌱

Plastic Bans

By Chris Coultas, GSWA intern

To start the new decade off right, 15 municipalities within the Passaic River Watershed have passed and placed into effect single-use plastic bans. This is a part of a growing list of municipalities in New Jersey that have put single-use plastic bans into effect (Clean Ocean Action 2019). The extent of the ordinances range between banning “high volume retail businesses” from handing out single-use plastic bags to outright banning most single-use plastics (including bags, straws, styrofoam containers) and imposing fees on paper bags. As shown in the chart, most of the bans started on January 1st, however there are a few that will start in March and May and one that will go into effect in December. Of the fifteen municipalities listed in the chart that have passed a ban, seven of them lie along the Passaic River corridor and three of them are within the Great Swamp Watershed. Currently, there are four municipalities within the Passaic River Watershed that are working towards a single use plastic ban (Harding, Newark, Verona, Wycoff), however legislation has not been written or adopted yet. To some, these actions may seem small, however these are crucial first steps in reducing the plastic pollution that plagues our waterways and harms aquatic life. A study published in *Nature Communications* in 2017 estimated between 1.15 to 2.41 million tons of plastic enters the oceans via rivers annually, peak months being between May and October (<https://www.nature.com/articles/ncomms15611>). Currently, New Jersey lawmakers are debating on a statewide single-use plastic ban. In December of 2019, the New Jersey Senate Budget and Appropriations Committee advanced the bill that would ban single-use plastic and

paper bags after one year of the bill’s passing, and a ban on polystyrene containers after two years. The bill would also ban the use of plastic straws unless a customer requested one(<https://why.org/articles/no-bags-at-all-n-j-bill-advances-that-would-ban-both-paper-and-plastic/>). Supporters of the bill are calling it a “landmark” legislation, saying that if the bill is enacted it would be among the most expansive in the country. You can do your part by calling/writing your legislative district member urging them to vote yes on the single-use plastics ban, information can be found on <https://www.njleg.state.nj.us/members/legsearch.asp>. 

Passed Ban/Date in Effect	Effect of ban
Berkeley Heights* Dec 1, 2020	Bans point of sale single use plastic bags, assigns a fee for recyclable paper bags, restricts plastic straws unless requested, bans polystyrene
Chatham Borough** March 1, 2020	Bans businesses from handing out plastic bags and places a fee on paper bags
Chatham Township** March 1, 2020	Bans businesses from handing out plastic bags and places a fee on paper bags
Garfield* January 1, 2020	Bans businesses from handing out single-use plastic bags and plastic straws
Glen Rock January 1, 2020	Bans retail stores from distributing single-use plastic bags while placing a 10-cent fee on reusable bags and paper bags. Violating businesses face fines up to \$200
Madison** March 1, 2020	Bans businesses from handing out single-use plastic bags and places a 10-cent fee on paper bags.
Millburn* June 3, 2020	Bans businesses from handing out single-use plastic bags and polystyrene containers. The ordinance also requires businesses to only give out plastic straws if a customer requests it.
Montclair TBD	Bans single-use plastic bags at box retailers/ high volume retail establishments
Paramus January 1, 2020	Bans businesses from handing out single-use plastic bags and Styrofoam containers
Parsippany-Troy Hills January 1, 2020	Bans businesses from handing out single-use plastic bags and places a fee between 10 cents and 25 cents on paper bags.
Ridgewood Village January 1, 2020	Bans businesses from handing out single-use plastic bags and places a fee on paper bags.
Saddle Brook January 1, 2020	Bans businesses from handing out single-use plastic bags.
South Orange January 1, 2020	Bans single-use plastic bags and places a five-cent fee on paper bags.
Summit* May 1, 2020	Bans businesses from handing out single use-plastic bags; Bans polystyrene food containers from being bought, sold or distributed; restricts plastic straws to only at customer’s request.
Woodland Park* March 30, 2020	Bans businesses from handing out single-use plastic bags, new regulations place a fee of at least 10-cents on paper and reusable bags

*Lie along the Passaic river corridor | **Lie within the Great Swamp Watershed

Greta Thunberg *(continued from page 1)*

Fridays participate in demonstrations to demand attention from politicians to take immediate action to address the climate crisis.

Hearing the story of Greta’s August 2019 journey to New York city by boat to attend the United Nations’ Climate Summit alone is enough to excite the youngest of would-be conservation activists.

Eschewing a gas-guzzling airplane, Greta opted to travel by boat to Manhattan to draw attention to her mission for a better world by 2030. She was accompanied by her father, a cameraman, and a two-man crew, demonstrating that there are zero-carbon methods of travel. Such a decision is typical of the blunt speaking, preternaturally mature teen, who is keenly aware of how each decision she makes impacts the environment, and sends messages to her legion of followers, here, of the dangers of global emissions and other human-created pollution. Her sixty-foot Malizia II, powered by electricity generated by underwater turbines and solar panels, was greeted by a spectacular flotilla of seventeen sailboats at the Verrazano Bridge.

Greta tweeted at the time: “The UN has sent out one boat for each of the 17 Sustainable Development Goals (SDGs) to greet us! Thank you!”



“Young people around the world are demanding urgent climate action by all leaders,” said Amina Mohammed, UN Deputy Secretary-General. “They are leading the kind of transformative change needed to drastically reduce carbon emissions to protect our planet and ensure the wellbeing of people.”

She continued, “Our individual and collective actions will transform our world, save lives and ensure a life of dignity for all”, echoing the public health goals of the Great Swamp Watershed Association’s Mission.

For more information on how our classroom environmental education programs can encourage our local children and teens to become eco-conscious, please contact us. We may be speaking to the New Jersey-born next Greta Thunberg! 🌱



Generational Giving in an Age of Philanthropy

by Wade Kirby, Director of Development

It appears the majority of Americans are instinctively motivated to assist the work of a charity whose mission they believe positively impacts the lives of others. To coin a phrase, this manifests itself in terms of one's donation of, "time, talent and treasure." Interesting to note is how different age groups within the population render their support, and why. There are currently three major groups capable of collectively making a measurable impact. They are: Baby Boomers (ages 55-75), Generation X (ages 40-54), and Generation Y (ages 25-39.)

Baby Boomers, the oldest and most capable in terms of disposable income, have a tendency to trust large organizations such as the American Cancer Society and the World Wildlife Fund to use their donations wisely since they are well established. Their preferred method of giving is through direct mail or telemarketing solicitations. Only 10% of boomers say they plan to increase charitable giving over the next 12 months due to the debilitating effect of the recession. They are, however, exceptionally generous, accounting for 43% of all giving and donating almost twice as much to charities as the younger generations. Cause-Related Marketing; buying products because some, or all, of the proceeds will support a given charity is not a priority for baby boomers. They rarely give to charity through crowdfunding appeals such as Kickstarter or Indiegogo due to their unfamiliarity with those platforms. The generosity of boomers might become even more impactful were they to spend more time learning about the charities they support. An informed philanthropist's giving can then become transformational as opposed to just transactional.

Generations X and Y (Y being Millennials) are a group of consumers intent on mak-

ing a difference in the world around them. In the past year, millennials surpassed baby boomers as the nation's largest living generation. Deeply committed to helping, their giving is focused on integrating the causes they care about into their daily routines and purchase behaviors. As contrasted with boomers, Cause-Related Marketing appeals to millennials as they have no additional out-of-pocket expense. Restaurant gift cards seem to be among their favorites! Millennials are more inclined to scrutinize an organization's mission prior to making a decision about giving. Giving from the heart motivated by social issues such as helping veterans, feeding children, and training therapy dogs might rank among their top priorities. Two dominant trends, microfunding and innovation have a strong appeal for the future of millennial giving. Asking millions of young supporters for \$5 or \$3 can attract mass audience support for a particular cause. Using a device (cell phone) to send an immediate donation, especially if it is matched, increased in some way, or given at no cost is also a critical stimulus. Leveraging technology will be the hallmark of the most successful causes over the next few years.

Due to the impact of our mission on the health of the surrounding community, the GSWA has been fortunate with its fundraising and growth throughout its thirty-nine year history. The demand for our services has never been greater! We rely on the generosity of our donors, regardless of age demographic or philosophy for giving, that enables us to match an annual budget that increases every year. We accept your contributions of, "time, talent and treasure" gratefully acknowledging that you regard our work as a priority for the quality of life for generations to come. 🌱

Fundraising For Our Future

by Debbie Rice, Office Manager and Event Coordinator

Hundreds of GSWA members and friends filled the ballroom at Brooklake Country Club in Florham Park on October 3rd in support of the Great Swamp Watershed Association's 2019 Gala celebration. Among plentiful food and drink, attendees enjoyed participating in our largest Silent Auction to-date, featuring almost 200 delightful prizes and some very exciting Live Auction grand prizes. Among the distinguished guests in attendance was U.S. Representative Mikie Sherrill, the year's Gala Honoree, and many took advantage of the evening's VIP pre-Gala reception to spend personal time with the Congresswoman. The crowd rose to the challenge—the Vegan Challenge that is—and took advantage of the offer by four anonymous supporters who collectively donated \$75 for each and every

vegan meal served at the event. It was an easy choice for many, as the menu was specially designed for GSWA by acclaimed plant-based chef, Leslie Durso, enticing 242 participants to generate an extra \$18,150 in revenue, not only helping GSWA but also helping our environment. A sincere THANK YOU to our wonderful advertisers, ticketholders and generous contributors who donated to the celebration. Special thanks to our underwriters: New Jersey American Water, Pfizer Consumer Healthcare, Atlantic Health System, Normandy Real Estate Partners, BASF, PSE&G, Schenck Price Smith & King, LLP, Adrienne & Reed Auerbach. With your generous support, GSWA grossed almost \$220,000 for our environmental programs which benefit everyone in our communities and protect the natural water resources they provide us. 🌲



Gala Honoree, U.S. Representative Mikie Sherrill, addresses the crowd at the 2019 Great Swamp Gala on the importance of clean drinking water, clean air, and protecting our natural resources in New Jersey.

GREAT SWAMP WATERSHED ASSOCIATION PRESENTS

GREAT SWAMP

GREAT MUSIC!



live music
merch
food trucks
beer & wine

PROTECTING OUR WATER TOGETHER



Sunday

June 7

12-5 (gates open at 11)

Hartley Farms Polo Field
Morristown, NJ

GreatSwamp.org
973-538-3500

Education by the Numbers

We were busy bees in 2019, buzzing into many classrooms, playgrounds and forests and streams around the region. Here are some stats from our amazing 2019 year in Education:

9 – # of Interns working with us over the academic year and summer program period.

10 – # of Students2Science STEM Environmental Science Field Programs for high school students.

11 – # of new schools in 2019 that GSWA had not previously worked with.

27 – # of college students experiencing wetland ecology programs from 2 different colleges.

45 – # of new programs or repeat programs to new audiences.

240 – # of middle school students receiving programming from GSWA staff in 2019.

550 – # of students taught in programs from K-12 combined age groups at community events.

1,482 – # of elementary school students taught, from 13 different schools and 8 different towns.

1,316 – # of high school students taught, from 14 different municipalities

3,615 – # of students benefiting from our programming- from in class teaching, to water quality focused playground explorations to our SWaMP school water quality program to field ecology trips.

5,149 – **Total number of individuals reached**, including family and adult general education programming.

As we look forward, our 2020 vision is to continue to partner with our existing historic schools, and to deepen relationships with our newer downstream partner schools. 🌲

Hot Spots

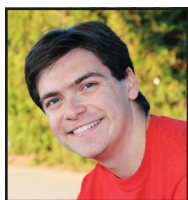
Long Hill: In our last newsletter, we mentioned that Long Hill Township had a referendum on its ballot to sell their sewer treatment facility. We advocated in favor of its sale which would provide sewer service to 150-200 homes currently on septic systems and reduce the numerous facility capacity exceedances which sent partially treated effluent into the Passaic River. We are pleased to note that the referendum passed.

Rolling Knolls: The EPA Feasibility Study for the Rolling Knolls Landfill Superfund has still not been released and has no release date in sight. On the positive side,

GSWA was awarded an EPA Technical Advisor Grant (TAG) for \$50,000 which will enable GSWA and the Community Advisory Group (CAG) to hire its own technical advisor to review and comment on documents. The Request for Proposals was sent out in November. Four proposals were received, three consultants were interviewed in January and the technical advisor has been selected. A contract is being drafted and we hope to have a meeting with the CAG and interested parties in mid-March. Please check GSWA's website for updates. 🌲

Meet Our Spring 2020 Interns!

Every year, GSWA participates in local internship programs where we mentor young people, offering them a chance to gain a better understanding of the inner workings of an environmental organization. In the past, we have typically worked with college undergrads pursuing degrees related to environmental science. Recently, local high schools began offering internship programs to their seniors so, before heading off to college, they could gain some practical work experience in their field of interest. In fact, this May, we will host a handful of students from Madison and Morristown Beard High Schools. GSWA is proud to participate in these programs, teaching our interns the importance and the personal satisfaction of environmental careers. And, of course, we love when they come back and share where their time with us has led them. Of our three current interns, two are college students attending local schools and another is a recent college graduate.



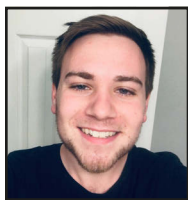
Nicky Vanech

Nicky Vanech joined GSWA in November 2019. He researches and writes for GSWA's newsletter and works on school presentations and experiences for students. His environmental research includes a thesis completed prior to earning his BA in Communication from Marist College in 2018, where he remains involved with an alumni choir. In addition to tutoring and internship experiences, he enjoys hikes with his family and friends.



Alison Cosgrove

Alison Cosgrove is a senior public health major from William Paterson University. Growing up in West Milford, she spent most of her time outside in parks or riding her horse. She is currently working on a study regarding climate change with the chairperson of the public health department at her school. Upon graduation, Alison hopes to continue researching public health and environmental health issues and trends. She is excited to begin her internship and complete more environmental projects.



Chris Coultas

Chris Coultas is an intern at the GSWA in the spring of 2020 and a Junior at Drew University studying Environmental Science and Sustainability with a minor in sociology. His main area of interest is studying Environmental Justice along with a focus in GIS and ecology. He also works in Drew's arboretum managing the forest restoration project with Dr. Sara Webb. Chris has lived in Long Hill township his whole life, being lucky enough to describe the Great Swamp as his backyard. He will be assisting in various projects such as conducting water quality assessments and writing for the monthly e-newsletter. 🌲

With Special Thanks to the Summit Area Public Foundation!

by Rick Porter, Director of Institutional Relations

Great Swamp Watershed Association (GSWA) wishes to say “Thank You” again to the Summit Area Public Foundation for its generous support of our important work.

GSWA adopted a strategic mission expansion in 2016 to protect the Passaic River from “source to sea.” In doing so, we focused our expansion efforts for programming downstream on several key communities on the Passaic, one of which was Summit, NJ and its surrounding towns. It seemed only natural, and a very good fit for our organization, that we would look to the Summit Area Public Foundation for grant support.

Since late 2017, the Foundation has very generously supported our work to expand our unique and impactful environmental

education and water quality programs in Summit and near-by towns such as Berkeley Heights, New Providence, Chatham Borough, Chatham Township, Millburn/Short Hills and Livingston, NJ.

With the Summit Area Public Foundation’s help, we have been able to:

- Add new school partners and deepen previously existing school relationships in the area.
- Develop new relationships and enhance existing partnerships with environmentally focused organizations in Summit and near-by towns.
- Expand our water quality monitoring activities in the area, especially as they relate to our new microplastics sampling protocol developed in late 2018.
- Host public education events in Summit to disseminate important and relevant information, such as our annual Water Quality Report Card.

Over the past two calendar years, GSWA has reached over 1,500 children and adults in the Summit area through the presentation of our school environmental education programs and public outreach activities. Participants have been given an awareness and understanding of the integral relationship between their health and quality of life, and the health of the environment.

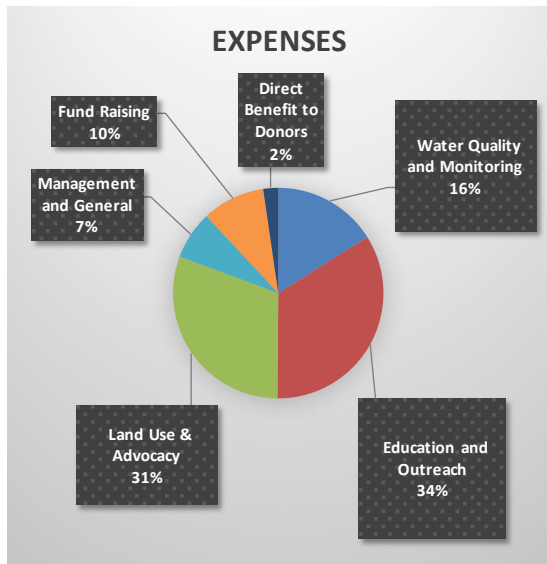
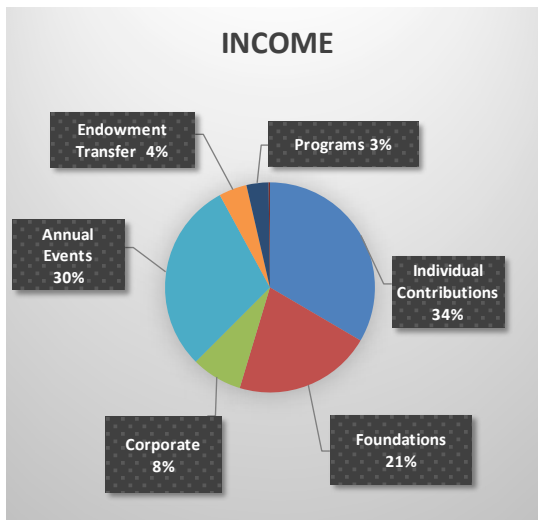
The current round of funding received from the Summit Area Public Foundation will allow for further expansion and deepening of our programming in the region. We are sincerely grateful for the Foundation’s support. 🌱



Kent Place students mapping their local view of the Passaic River during one of our in-school presentations.

Financial Report: Statement of Activities for the Fiscal Year Ended June 30, 2019

	2019
INCOME	
Individual Contributions	\$ 309,996
Foundation Support	196,826
Corporate	72,721
Annual Events (Gross)	274,188
Endowment transfer in (4% draw) - see Note 1	40,000
Programs	31,528
Miscellaneous & Interest Income	1,976
Total from Primary Operations	927,235
EXPENSES	
Programs:	
Water Quality and Monitoring	\$ 137,213
Education and Outreach	290,633
Land Use & Advocacy	260,453
Depreciation	5,928
Total Program Expense	694,227
Management and General	63,335
Fund Raising	82,277
Direct Benefit to Donors	19,631
Total from Primary Operations	859,470
SURPLUS/(DEFICIT) - see Note 1,2 (a)	\$ 67,765
ENDOWMENT ACTIVITY	
Market Value 6/30/18 Note 3	\$ 1,184,084
Investment Income & Interest Earned (b)	30,786
Gain/Loss on Investments (c)	51,353
Net change - see Note 2	82,139
Transfer to Operational Funds Note 1	(41,238)
Endowment Market Value 6/30/19	\$ 1,224,986
Market Value 6/30/18 Operational Funds Invested	\$ 54,813
Change to Operational Funds Invested	41,238
Market Value 6/30/19 Operational Funds Invested	\$ 96,050
Total Funds Invested 6/30/2019	\$ 1,321,036



Note 1:

In addition, the organization did not use the \$40,000 or 4% allotted to operations from the endowment. The funds were set aside as Invested Operational Funds. These funds include the Endowment Transfer 4% and market changes.

Note 2:

To tie to the audited financial statement's "change in net asset" line, you need to add (a), (b), and (c) above.

Note 3:

In 2018 the Investment account included \$54,813 Operational Funds invested



Great Swamp Watershed Association

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