THE RIPPLE EFFECT

The Annual Newsletter of WaterWays



Our mission is to empower kids and community members to protect and restore their waterways.



A note from our director | MARY BETH SUTTON

I am heading to St. Lucia in December for the 3rd trip this year because there is so much to celebrate with our work there (not to mention I will celebrate my birthday while I am there as well!!)! It has been an incredible year to get back to my second home, St Lucia, introduce Brooke to the wonderful people and places, and finally accomplish our rebranding to WaterWays at our Caribbean home base! Our rebranding week was exhausting but thrilling, none of which would have been possible without our incredible Programme Director, Nadia Cazaubon, leading the charge and our new Education and Communication Specialist, Colleen Edwards, keeping everyone organized and on track (and hand painting the treasure hunt



Mary Beth on the CO Trail

rocks!). Our new collaborator, Ryan Cazaubon, his Rotary Club, and our whole Rotary family in St Lucia were instrumental to the success of our rebranding. Margaret Monplaisir, aka the Rum Mum, made her debut as a Board Member by graciously hosting our closing celebration. Big projects with collaboration across government agencies and the corporate world are happening, so stay tuned! I am so proud of our Lucian team!

Speaking of teamwork, WOW!!! Our Tennessee Valley staff has knocked it out of the park this year! The BIG news was the NoogaKnox Challenge which catapulted our RainSmart Yards program into the forefront of our lives! We are so fortunate to have Rosy Harpe, our RainSmart Yards coordinator and owner of Two Natives Landscaping, to lead our efforts. Thankfully, botanist Jared Odell was available to help too since he ended up making the most yard visits. With support from our City of Chattanooga partners from Mayor Kelly and his communications staff to the Sustainability Office and our wonderful friends at the Water Quality Office, of course we WON and BEAT KNOXVILLE!!! We presented the results and details about the program at the annual stormwater conference and with all the positive feedback, who knows where this will lead next year!

RainSmart Yards is really a community education effort leading to improved practices to reduce stormwater runoff. Our school-based education efforts also hit a huge milestone this year, reaching EVERY elementary school in the Hamilton County public schools! We had great support from the corporate

community, including Mueller and Tennessee American Water, to sponsor focused programs at schools as well. Part of this success is due to Kristen Woodall, our AmeriCorps VISTA whom we hired as our full-time Community Outreach Coordinator and Emily Culp, our new Education Coordinator. Our education programs at school sites and at Enterprise South Nature Park really shine. But who on staff makes us laugh the most? Is it Candy or Randy? Candy Clark is integral to our success, not just as our fun-loving Development Director, but also as a helping hand in programs or building rain gardens, or anything! She led us to our best Save Water Drink Wine ever and also worked with Brooke to coordinate the community led Tennessee River Rescue.





Brooke. Three years ago, when the **Grandview Foundation** had the faith in us to provide a multiyear grant to hire a staff person, I had no idea how transformative it would be. And that's because of who took that job and ran with it, expanding our reach in school and community programs and improving our work. WaterWays is booming and credit is due to the multi-talented, positive, fun leadership and work of Brooke Fleeman, who is now our Assistant Director. We simply wouldn't be where we are without her. So, to the **Grandview Foundation**, thank you. You helped spur this momentum.

Thank you to the City of Chattanooga Water Quality Program for trusting us to implement the programs we developed together. This helped energize us and expand our capacity. And to each and every one of our supporters along the way, thank you. You have made this possible.

But do you know who the real winners are of WaterWays' growth? All of you. Every single one. Because we ALL need clean and abundant water for life.

With Gratitude,

Mary Bell
Mary Beth Sutton **Executive Director**



Meet our team!

Our international team is made up of passionate individuals with a shared vision of a clean and healthy global environment. We love our growing team!



Mary Beth Sutton Executive Director



Nadia Cazaubon Caribbean Programme Director



Brooke Fleeman Assistant Director



Candy Clark Development Director



Kristen Woodall
Community
Outreach Coordinator



Emily Culp Watershed Education Coordinator



Rosy Harpe RainSmart Yards Coordinator



Colleen Edwards
Caribbean Education and
Communication Specialist



Scott Ruth Signal Mtn. Watershed Coordinator



Margaret Asher AmeriCorps Vista



Randy Hale Owner North River GIS Gear Closet Manager



Jared Odell Botanist

OUR VISON FOR 2023 AND BEYOND

WaterWays has a long term goal: Get kids back in EVERY creek in our region, even after a rainstorm. What does that mean? No flash flooding. No E. coli spikes because of sewer overflows or septic failures. No rafts of litter blocking storm drains or culverts and causing flooding. Less pollution from roads and parking lots getting into our streams. Our outdoors, our rivers and creeks....they are an economic powerhouse for our region. These are OUR streams, our rivers, our outdoor spaces. If we want to make every creek healthy, we all have some work to do! Join our team either by volunteering, donating, or sharing our vision to get kids back playing in every creek!

SAME VISION & MISSION JUST A DIFFERENT LOOK!





Caribbean Student Environmental Alliance (SEA) began its work at Ciceron Secondary School in 2004 with principal Ron Isaac and in partnership with Carilec, Lucelec, Solid Waste Management, and Sustainable Development. That initial project was a great success, and Caribbean SEA launched! Fast forward to post-pandemic restrictions, and Caribbean SEA celebrated World Environment Day and World Oceans Day with a weeklong series of events to initiate our rebranding to WaterWays Caribbean. Our Board of Directors saw the need to rebrand ourselves to better represent what we do and our mission; thus, the name was changed to WaterWays in 2019 in the US, and now we have officially changed our name for our Caribbean chapter to WaterWays in Saint Lucia. The events all focused on our mission of empowering youth and community members to protect and restore the waterways where they live, work, and play. Our Young Professionals Advisory Board was instrumental to the success of our rebranding, hosting the Trivia Night at the Yacht Club and assisting with all of the other events!

OUR REBRANDING WEEK FESTIVITIES INCLUDED

ISLAND TREASURE HUNT
FREE SNORKELING LESSONS
YOUNG PROFESSIONALS TRIVIA NIGHT
ISLAND-WIDE LITTER CLEANUP



21 rocks were hidden in natural spaces for the treasure hunt.



Young Professional member Christian Seales providing snorkel lessons at Pigeon Island





ENVIRONMENTAL CLUBS



WaterWays has sponsored or assisted with Environmental Clubs at schools across St Lucia, from Camille Henry to Vieux Fort Primary. Currently, we are assisting at Les Etang, Soufriere, Fond St Jacques, Vieux Fort, Dame Pearlette Louisy, and Camille Henry Primary Schools. We also sponsor a community club in Marigot who most recently have learned about the importance of Parrot Fish for our reefs. The Marigot club also gets to learn swimming and snorkeling! Vieux Fort Primary also has a birdwatching club! Many of the schools also get assistance preparing Science Fair projects.



RAINFOREST TO REEF CAMP

It was so exciting to be back in the rainforest with all the kids again for camp. This year the kids set up camp at the Forestry Cabin near the Des Cartier Trail in Micoud. They learned about different birds and other endemic species at camp and along the rainforest trail, learned about water quality and played in the Mahaut River, tie dyed t-shirts and of course, ate lots of s'mores! Following all this, the kids were then led by the Saint Lucia Cadets through the rainforest and across the mountains to Grand Eden Estate in Soufriere. There the kids learned about the effects the rainforest and communities have on each other, how to purify water for drinking and helped IWECO plant trees. To top off the week, the kids went were treated to learning snorkeling at **Anse Chastanet's** house reef before heading home. Learning while having fun means It was yet another successful Camp!

MEET OUR YP PRESIDENT



Hi! I'm Monique Calderon, current President of WaterWays Caribbean Young Professionals Board. I am a 27-year-old fisheries/marine biologist with the Department of Fisheries here in Saint Lucia. I am very passionate about conservation and restoration of the marine environment of Saint Lucia, and the wider Caribbean. In the future, I would love to participate in

the education of the youth of the Caribbean, hoping to influence a new generation of ocean stewards. I believe this will ensure that the region's marine environment will always be protected. Want to learn more,

contact us at monique@mywaterways.org.

The **Young Professionals** will be hosting beach cleanups, snorkel days for both kids and parents, and other social events to promote the WaterWays Caribbean team, as well as the **Young Professionals** themselves.



ADOPT-A-RIVER

WaterWays Caribbean launched a new program during our rebranding festivities, **Adopt-A-River!** A successful program already in the states (Adopt-A-Waterway), our Director and Caribbean staff felt very passionately about engaging the community to address the growing litter crisis in St. Lucia. The **Choc River** was the first river segment to be adopted. The adopting group was the **Rotary Satellite Club of St. Lucia-Sunset**. This site is highly littered as it is next to a major roadway and shopping center. Their first event took place this June during our rebranding week events, where the group was presented with their sign (seen below). The group is estimated to have removed <u>over 600 pounds of trash</u> within the hour clean-up event. We look forward to encouraging more groups to adopt sections of rivers in need of care.





THE CHOC WATERSHED PROJECT

We are currently working with multiple corporate, government, community, and school partners to implement a sustainable model for environmental teaching and community action to reduce litter in the **Choc River watershed**. Our goal is that this watershed project can be replicated in other watersheds in St. Lucia and across the **OECS** (**Organization of Eastern Caribbean States**) region. Through this collaboration, we have established a network of resource personnel to not only assist with teaching but also to improve the **Choc Watershed** by allowing the schools and partners to reduce solid waste. (focusing on plastic) through awareness, community litter reduction, hands-on learning, and installing a floating **litter boom** on the river.



LITTER BOOM

a floating barrier
designed to tactically
prevent litter from
continuing to float
downstream.

BIG SPLASH AWARDS



During our rebranding festivities, we honored the corporations and partners that have made a difference to St. Lucia's waterways with our first **Big Splash Awards**. The **Community Water Champion Award** was presented to **Mrs. Judith Verity**, who has been an unfailing supporter of teaching young people to protect our island and ocean. While her particular focus has been on the children of Marigot, she has supported WaterWays efforts across the island. WaterWays applauds Mrs. Verity for her many years of efforts to protect our environment!

The Corporate Water Champion Award was presented to St. Lucia Electricity Services (LUCELEC) via Roger Joseph, Strategy Development and Implementation Manager. LUCELEC's sustainability focus extends beyond renewable energy to supporting environmental initiatives, environmental education in schools, and our annual Rainforest to Reef camp. St. Lucia Electricity Services Limited is pleased to have been able to help WaterWays (previously Caribbean SEA) to achieve its goals over the years.



Judith Verity accepts Community Water Champion Award from Mary Beth Sutton



Rodger Joseph accepts the Corporate Water Champion Award for LUCELEC



MEET OUR NEW BOARD MEMBER

Margaret Monplaisir has served on the Management team of the St. Lucia Distillers Group of Companies for the past thirty-eight years. Her career path and personal growth are intertwined with the growth and success of the Company. From 2013 until 2020 Margaret served as Managing Director for the Group. She was later appointed as CEO. St. Lucia Distillers Ltd. the parent company is a well-recognized company in St. Lucia, manufacturing international award-winning rums which are distributed throughout the world. Margaret has an MBA in General Management from the University of the West Indies.

HUGE THANK YOU!

OurWaterWays staff in St. Lucia and in Tennessee want to say a **HUGE** thank you to all those who participated in and sponsored our events this summer. We couldn't have done it without you!



Signal Mtn. Watershed Updates



While we have worked with the Town of Signal Mountain on projects for many years, in 2020 we were awarded a grant to reduce nonpoint source pollution in the Middle Creek and Shoal Creek watersheds. What does that mean? Since those streams are on the state's dirty streams list (303 d list) because of pollution from E coli, sediment, and acidic mine drainage, our goal is to reduce those pollutants. To begin our work, it was important to get a full picture of the scope of the problems before implementing treatments. We have tested the water quality and evaluated mine sites and have recently been joined by UTC grad student, Michelle Sidwell, who is doing more frequent analyses, including heavy metals from the old mine seeps around Fruedenberg Creek. We also have started planting trees with members of the community to reduce erosion and improve the mine areas that were recently reclaimed by **TDEC.** In addition, many homes in the watersheds have been certified as RainSmart for reducing runoff from their We have preliminary designs for the treatment of runoff from two abandoned mines which will be installed after approval by the landowners and permits received. In addition, septic system remediation in the Bee Branch watershed will soon be starting!





Intern Spotlight Michelle Sidwell

Originally from Nashville, Michelle attended school at the University of South Carolina for a degree in Marine Science. After working at the Gatlinburg aquarium for four years, Michelle came to Chattanooga, where she is currently working on her master's degree in environmental science.

"My work within WaterWays is monitoring old coal mine seeps on Signal Mountain, where acid drainage water has been found. Weekly I collect samples and data for these seepage points to determine their chemistry and influence on the larger creek system."

Mtn. Creek | Watershed Updates



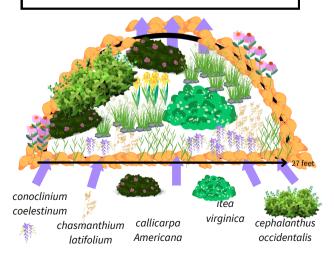


We finished up our Mountain Creek 319 grant (funded by an agreement with the Tennessee Department of Agriculture Nonpoint Source Program and the United States EPA) not quite the way we had planned since we had to delay the streambank restoration project at Mountain Creek Church of Christ, but the great news is we were able to reallocate those funds for work at multiple sites throughout Mtn. Creek watershed. WaterWays selected six sites in the watershed to construct green infrastructure and reduce erosion with native plants and nature-based erosion control measures, including the church, Red Bank Community Center, schools and the new Walden's Ridge Park. Any projects undertaken through a 319 grant requires a match from the

land owner, and we have had so much fun with the "matches" including design work from Red Bank HS engineering students and volunteers. Never underestimate the worth of volunteers! We spent two days at the new park working with over 70 volunteers, removing invasive species and creating a MOUNTAIN of privet and bittersweet. We then planted and created natural erosion controls, especially along the switchbacks on the crazy trails! Volunteers included North Chick Conservancy, SORBA, Land Trust for TN, and a great enthusiastic group from Ernst and Young! Special thanks to Lee Friedlander and his energetic students from Hixson High and Chris Frishcosy and his UTC Engineering students! We contracted with Two Natives Gardening to design and lead the work at the park as well as the other installations, and we have been so incredibly impressed! Next up is a DIY streambank stabilization workshop with UTK Biosystems Engineering Department, led by the energizer herself, Dr. Andrea Ludwig. We can't wait to show you what we've done!

Rain Garden

A rain garden is an Infiltration area to accept and filter stormwater runoff, featuring native plants and beneficial pollinator species. The design shown below is for one of the installations at the Red Bank Community Center. The arrows indicate the flow direction of runoff through the inlet and outlet.





RainSmart Yards and the NoogaKnox Challenge

What a year for our newly renamed RainSmart Yards program! What started as The My Tennessee: Clean Water Starts Here program was renamed in time for our spring season and the NOOGAKNOX Challenge! The challenge was a friendly competition between **Knoxville/Knox** County Chattanooga/Hamilton County areas to see who could get the most yards certified as Smart Yards, reducing stormwater runoff from their properties. Our City Mayors jumped on board with our Water Quality, Sustainability, and Communications teams from the City, and the competition launched on World Water Day, March 22, 2022.

Throughout the growing season, local residents took the self-survey on our website and our team attempted to conduct yard visits at all of the properties. We have yet to accomplish a visit to everyone's yard, but we will continue visits until we complete them all! (PS YES a yard visit is required to get an award, so check your email for scheduling emails from us!). Mayor Kelly and his staff were the champs in terms of helping us promote the challenge and WE BEAT KNOXVILLE!!

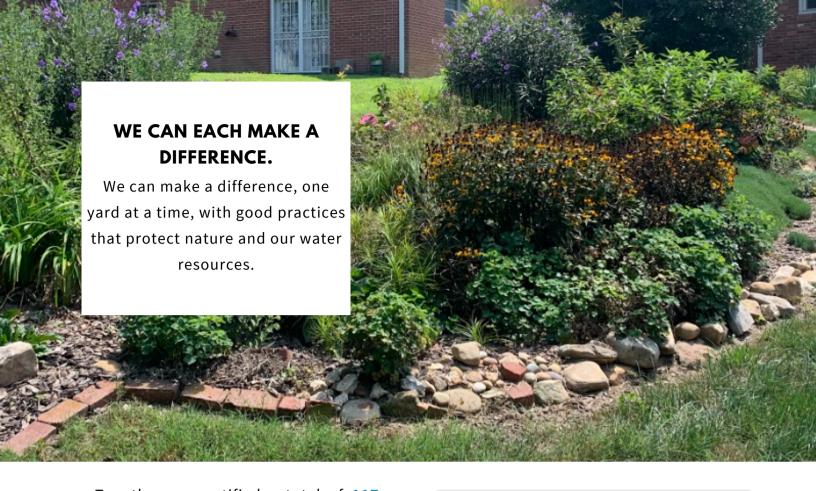






The REAL winner is the
Tennessee River which received
an estimated 2.44 MILLION
fewer gallons of runoff because
of what homeowners are doing
in their yards.





Together we certified a total of 117 yards, but the WaterWays staff visited over 200 homes to get to our 97 certifications. The most common issue is folks with downspouts that empty directly onto their driveways which then flow to the streets. The second most common issue was not incorporating native plants into the landscape. Native flowering plants are essential to infiltrating stormwater and also help pollinators! Watch for more competitions in the spring, and remember, no matter which community wins, we are all winners with better water quality!



CHECK OUT THE
CHALLENGE WEBSITE
TO LEARN MORE

Nooga Knox CHALLENGE IMPACTS



2.44 Million Gallons (and counting!) stormwater runoff saved from entering the Tennessee River



3,1000 Tennesseansdirectly educated on their impact on the Tennessee River



400,000 Residents (approx.) recieved communications about River protection strategies



117 Yards certified since March 21st 2022

Adopt-A-Waterway

Adopt-A-Waterway is co-sponsored by the City of Chattanooga and Hamilton County Water Quality Programs. Adopting groups pledge to care for a stretch of the stream or river for two years, during which they will plan and facilitate two stewardship projects. Typically, adopters organize creek clean-ups (one of our top priorities). Adopters can also choose other stewardship opportunities, such as tree plantings, monitoring water quality, and invasive plant removal. WaterWays staff support adopters through event planning and providing materials such as gloves, litter grabbers, and trash bags. We will also support adopters as they explore other stewardship projects.

Our Adopt-A-Waterway program is excited to have many new creek section adoptions in 2022 such as:

- WanderLinger adopted Suck Creek through Pick Up For a Pint
- Rising Fawn Gardens adopted Lookout Creek
- Eric Fleming adopted Citico Creek
- Green | Spaces adopted Citico Creek

Intern Spotlight!



Heather Qualls
Heather grew up in Soddy Daisy,
Tennessee. She is currently pursuing
a double bachelor's degree in
Geology and Environmental Science
at the University of TN at
Chattanooga. She is excited for the
opportunity to be an intern for
WaterWays, and to learn more about
how she can make an impact in our
local communities' water systems.



Sera Thomas
Sera is majoring in Environmental
Science and minoring in Geology at the
University of Tennessee at Chattanooga.
She is an active officer and member in
the geology club and the Sigma Gamma
Epsilon honor society at UTC. After
school, she plans to attend graduate
school for tectonic geomorphology

ADOPTER HIGHLIGHTS:



- In the beginning of June, Boy Scout Pack #116 completed their third clean-up of Shoal Creek for the year. With a group of 4 scouts and 3 adult chaperones, they removed 8 bags of litter from the creek. As some of our youngest adopters and the first to adopt a site on Signal Mountain, we are thrilled to have them as part of the program!
- WanderLinger Brewing kept up the good work on Suck Creek and hosted monthly clean-ups of their site throughout the summer. The final Pick-Up For A Pint took place on June 11th. They rounded out the summer with some impressive stats:

4 clean-ups in 2022 98 total volunteer hours 117 bags of trash removed 25 tires removed

We are excited to see them lead the way in adoptions by breweries and aim to encourage other breweries to follow suit!



 Green | Spaces adopted a section of Citico Creek that runs through Orchard Knob Elementary School property. Their staff members reported being happy to contribute to cleaning up an area they noticed being dense with trash for a long time!

TENNESSEE RIVER RESCUE

The Tennessee River Rescue is an annual community-led clean-up of the Tennessee River and some of its tributaries. This event occurs on the first Saturday of October every year. It began over 30 years ago with a group of Chattanooga residents that were motivated to have the community clean up the river.



This year's event was a great success, with over **650 volunteers** led by Zone Leaders out to twenty-one sites across four counties. As the River Rescue continues to grow, we are planning for our biggest event yet!!! Next year will be the **35th Annual River Rescue**, and we want everyone in the TN River basin to have the opportunity to come out and participate.

National Grants For Clean Water!

WaterWays has been awarded an Urban Waters Grant from the National Wildlife Foundation! Funds will go towards school programs, school outdoor classroom builds, green infrastructure in the Chattanooga Creek Watershed, and the creation of an environmental college for adults.

The Five Star and Urban Waters Restoration Program focuses on the stewardship and restoration of coastal, wetland, and riparian ecosystems across the country. Its goal is to meet the conservation needs of important species and habitats, providing measurable and meaningful conservation and educational outcomes. The program requires the establishment and/or enhancement of diverse partnerships and an education/outreach component that will help shape and sustain behavior to achieve conservation goals. WaterWays is excited to use some funding towards litter boom installations on Chattanooga Creek (see page 5 for litter boom description).

We are happy to announce that WaterWays is the 2022 recipient of American Water's Keeping Communities Flowing Grant! This substantial grant will go towards community development initiatives such as outdoor classrooms and field trips, programming for county schools, and job training/ summer jobs in green infrastructure for teens. We are over the moon and excited to get to work! Thank you, American Water, for this generous grant!



This grant would be utilized for education of both students and the community, engaging older students in paid environmental internships, and improving access to water-based recreation for lower income neighborhoods.

School Programs

WHAT A YEAR FOR PROGRAMMING! WATERWAYS HAD AN OPPORTUNITY TO WORK WITH EVERY COUNTY ELEMENTARY SCHOOL THIS YEAR!

Our education programs are going strong with students across Hamilton County continuing to participate in stewardship and education activities in multiple watersheds. What does an afternoon of the WaterWays program look like? Well, it looks like kids learning what a crawfish is for the first time. It looks like students becoming more aware of their personal impacts on our streams. The aha moment leads to a lifelong love of the outdoors. The joy that students experience while standing in a creek is unparalleled, and we are grateful for the opportunity to facilitate these experiences and our partnership with Enterprise **South Nature Park.**

WATERWAYS PROGRAM OFFERINGS

SERIES PROGRAMS

Groups in our series programs, such as Stream Teams, consist of environmentally-minded students who meet regularly during the school year and explore their local waterways.

OUTREACH PROGRAMS

WaterWays offers environmental education opportunities in the classroom, creek, and virtually! Education outreach programs are typically 30 minutes to one hour in length and will include a brief introduction of the topic & vocabulary, followed by an activity.

FIELD TRIPS

WaterWays has facilitated so many field trips this year! From soils to adaptations, we cover a wide range of environmental education topics through fun and engaging outdoor activities! Field trips are a perfect introduction for our youth to nature.

3RD GRADE WATER UNIT

We are currently developing a unit specific to LOCAL water issues and education to correlate with the 3rd grade standards. If you are a teacher that wants to offer input - we would greatly appreciate the help!

Email Brooke@mywaterways.org





WaterWays annual Save Water, Drink Wine fundraising party is back! Join us for an evening celebrating our area watersheds, all while enjoying local food, entertainment, and of course, wine! All proceeds will benefit our ongoing projects, including Stream Teams, educational outreach, and restoration. We had a blast at this year's event. Thank you to our sponsors and all those that attended. We can't wait to see you there next year!

BIG SPLASH 2022 AWARD RECIPIENTS

Each year, Waterways recognizes individuals and organizations who are making a **Big Splash** through their leadership, actions, and encouragement of others to have a positive impact on our environment.

presented **Community Water** This year we Champion Award to Chris and Mike Dial Wanderlinger Brewing Company for their acrossthe-board commitment environmental to stewardship. The Corporate Water Champion Award was presented to Bruz Clark and The Lyndhurst Foundation. We want to personally thank them for their leadership and visionary ideas that have truly turned Chattanooga into the Scenic City through the protection of our environment. Jenny and Nick Barsotti, our volunteers of the year. Champions of our mission, always pitching in and leading our Young Professionals Board. Thank you, winners, for making a Big Splash.







WATERWAYS

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