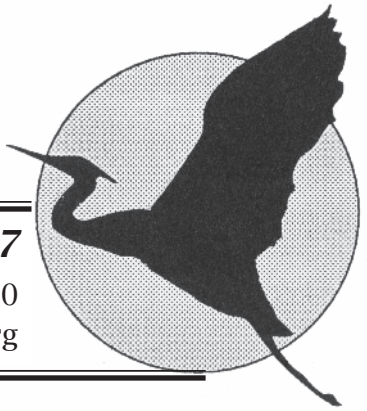


Voice of the Haw



The Haw River Assembly *December 2017*

P.O. Box 187 · Bynum, NC 27228 · (919) 542-5790
email: info@hawriver.org · www.hawriver.org



Celebrating 35 Years of Protecting the Haw

The Haw River Assembly wrapped up our 35th Anniversary at our annual meeting and dinner in November. Great music by Mahalo Jazz (with Alison Weiner, Robbie Link, Carter Minor, Beverly Botsford, and Ed Butler) and river songs by our Haw River troubadour, Cynthia Crossen, with Lea Clayton, made it a very special evening. Thanks to all our volunteers who helped make the evening a success; and to Haw River Ballroom for letting us use their beautiful venue, to Whole Foods Bakery for donating bread, and to the Orange County Solid Waste Management Department's "Fork It Over" program for loaning us reusable utensils and cloth napkins (a very cool idea to cut down on waste).

We looked back at our accomplishments over the past 35 years, including new public lands, trails and paddle access on the Haw, and the training of hundreds of volunteers to be part of stream monitoring, muddy water investigation, education programs and more. We've brought over 45,000 schoolchildren to our hands-on river programs, and hundreds of volunteers have taken part in our annual river, creek and lake trash cleanups. We've been the voice of the



river since 1982, fighting to stop pollution by demanding stronger environmental protections from developers in our watershed; investigating sources of toxins to stop them at the source; working for nutrient restrictions to save Jordan Lake; and taking on issues such as fracking, industrial contaminants in sludge, environmental justice, and more. All of this work would not be possible without the support of our members and volunteers, and our partnerships with communities and

organizations in the watershed and across the state.

Passing the Riverkeeper Torch

Elaine Chiosso, HRA's longtime Haw Riverkeeper and Executive Director, announced at the 35th Anniversary event that Emily Sutton will be the new **HAW RIVERKEEPER®**. Elaine has been the Executive Director and lead advocacy voice for the Haw River Assembly since 1997, and became **HAW RIVERKEEPER®** (licensed by the international **WATERKEEPER ALLIANCE®**) in 2008. *continued on page 2*

Photo by: Fred Tutman

New Project Tackles Industrial Contaminants

Haw River Assembly is the new recipient of a grant from NCSU's Center for Human Health and the Environment. This grant award will allow us to fund research and monitoring of **emerging contaminants in the Haw**. Our previous work has shown that industrial contaminants are present in the Haw, protected drinking water reservoirs, and in the finished public drinking water. By partnering with the scientific community, this continued research will allow us to trace where these contaminants are coming from in order to stop them at the source. We will use what we learn to inform the public about threats to drinking water in the Haw River watershed and actions we can take to restore water quality.

What are Emerging Contaminants? When Gen X was first discovered in the Cape Fear and in Wilmington's drinking water supply, it was not difficult to trace. There are few industries in that region that discharge that type of carbon chain. Perfluorooctanoic acid, or PFOA, is a toxin that was manufactured to lower the surface tension of water, used in Teflon manufacturing, waterproofing material, and other surfactants. It is an 8 chain carbon molecule, and has no known breakdown.

After civil suits against 3M and DuPont, it was phased out in the US in 2000. The subsequent replacement chemicals, such as Gen X, have a shorter carbon chain, *continued on page 3*

HRA Board of Directors

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Emily Sutton, *HAW RIVERKEEPER®*
Erin Jobe, *Watershed Education Coordinator*
Kathy Buck, *Office Manager*
Cynthia Crossen, *Newsletter Editor*

Thanks to **Jan Burger** for art throughout this newsletter: HRF Heron, Boy with Butterfly, River Watch Heron, and Clean-Up-A-Thon logo.

To join the Haw River Assembly or renew your membership, send a check to **HRA, P.O. Box 187, Bynum, NC 27228**; or go online at <http://hawriver.org/join-hra/>. All contributions are tax-deductible.

Thank you!

Individual: \$25 Family: \$40

Sustaining: \$50 Heron Circle: \$100 & above

Low Income: \$10

The Haw River Assembly is a nonprofit grassroots organization founded in 1982. Our mission is to protect and restore the Haw River, its tributaries, and Jordan Lake; and to build a community that shares this vision.

(919) 542-5790 www.hawriver.org

Notes from the Haw

As autumn turns to winter, we reflect on our past year, with new projects, changes in staffing and even a new home. Our office in Bynum, across the street from the Haw River, is a wonderful work space, and we are very grateful to our landlords, Ken and Debby Tunnell for making this possible. The view of the river expands each day as the leaves fall, and inspires our work to protect it. That work gains much capacity with our new Haw Riverkeeper, Emily Sutton, giving us greater abilities to lead the Haw River Assembly into the future.

We welcome two new members to our Board of Directors! Maribel Sierra, a former organizer with Clean Water for North Carolina, is currently a Masters degree candidate at UNC Gillings School of Global Public Health, focusing on facilitating health behavior change and reducing health inequities. She is a member of Latino Outdoors, which strives for diverse representation in the outdoors, from community spaces to national parks. Katherine Baer, of Carrboro, has been an environmental advocate for over 15 years, with River Network, American Rivers, Triangle Land Conservancy, Chattahoochee Riverkeeper, and the Center for Progressive Reform. She is currently Director of Science and Policy for River Network, leading efforts to improve policies for clean and reliable water at the local, state and national levels.

With much gratitude for their service, we say farewell to departing Board members, Tom Patterson and Raj Butalia. Tom served on our Board for many years, and was a dedicated Secretary to the Board, as well as a terrific all-round volunteer. Raj provided us much input on policy and organizational issues and stepped up, always, to help with events, moves, and more. We'll miss them both, but know they'll still have our back.

Wishing very Happy Holidays to all of you,

Elaine Chiosso,

Executive Director



Photo by Chris Carter

"Passing the Riverkeeper Torch" continued from page 1

Elaine will continue to be the Executive Director at HRA and will also work with Emily and HRA on pollution issues as a senior policy advisor. Emily Sutton joined HRA in the summer of 2016 as the Haw River Watch Coordinator for our volunteer stream monitoring program. Her work at HRA has expanded this year to lead more citizen science projects, including the re-launch of Muddy Water Watch and most recently, recruiting volunteers to help collect stream samples to be analyzed for industrial contaminants. Emily has shown herself to be a worthy heir to the title of Haw Riverkeeper – a smart and passionate fighter for clean water. We are very excited to be moving into the future with new energy and resources to fight pollution on the Haw, and to engage citizens in this important work.



Photo by Doug Wakeman

Elaine and Emily test the pH of Jordan Lake.



HAW RIVERKEEPER®

Issues in the Watershed

from Emily Sutton, HAW RIVERKEEPER®

Jordan Lake Algaecides Proposal

We have received a copy of the official proposal submitted by NC Department of Environmental Quality to US Army Corps of Engineers to treat the high levels of chlorophyll a in the Morgan Creek arm of Jordan Lake. The proposal details plans to “demonstrate the effectiveness” of algaecides and phosphorus locking chemical applications to the drinking water supply. In the proposal, DEQ repeats that a contractor to carry out the project has not officially been selected, but SePro’s proposal outline, budget, and chemicals are referenced multiple times. As you may recall, a powerful lobbyist for SePro, Harold Brubaker, also a former Republican House Speaker, reportedly used hurricane relief funding as leverage to pass his client’s contract through the General Assembly.

The SePro proposal would apply PAK®27 algaecide to a 750 acre area. This is a peroxygen-based algaecide. This technology has replaced the copper-based algaecides, and therefore is relatively new; and long term effects of application have not been assessed. Algaecide treatment is often unsuccessful. The present algae will be killed off, but if conditions are right for algae to grow, there will be no longer term successes. Peroxygen-based algae has been criticized for not treating all forms of algae, creating a prime habitat for resistant algae strains to increase. The application would be repeated eight times over 28 months.

The SePro proposal would also apply copyrighted and patent protected PhosLock, and the only scientific articles cited about this chemical are written and funded by SePro themselves. Haw River Assembly staff will be looking into this, and looks forward to partnering with other research volunteers to uncover as much information as we can about these two chemicals.

In addition to these immediate threats, our deepest concern is the impact to the ecosystem as a whole. Not only is Jordan Lake the largest drinking water supply in our watershed, but it is a haven of wild space for wildlife that have been pushed out by subdivisions and highways. The application of a chemical

that will, at best, have only temporary effects on lowering chlorophyll a levels puts that wildlife at risk. Jordan Lake has been an impaired waterbody since shortly after its creation, and legislators continue to apply bandage solutions to address specific problems, rather than tackle the source of those problems. We need to address the insufficient stormwater infrastructure, poor construction stormwater regulations, weak buffers on streams, loopholes in industrial agriculture fertilization and litter management, and so much more. The proposed project would reward SePro 1.3 million dollars from the General Assembly. How could that money be used to treat this issue proactively?

As we wait for Army Corps of Engineers to complete its own initial review of this project, we are compiling research and comments to educate lawmakers and municipalities on the effects of this project. Read full proposal at www.hawriver.org
→ River Issues → Jordan Lake.

“Emerging Contaminants in the Haw” continued from page 1

but there has not been time to study the lasting effects of these contaminants. Some contaminants are much more difficult to trace, because the contaminant released from an industrial facility may have no known risks to human health, but when combined with other contaminants present in surface water, it creates new compounds.

Pathways of Contamination Our previous work has tied these contaminants to biosludge fields, but many contaminants may have other pathways. Many industrial facilities in our watershed have National Pollution Discharge Elimination System (NPDES) permits, which allow them to discharge treated wastewater into surface water. However, some industrial facilities send their pre-treated waste to a Wastewater Treatment Plant (WWTP), where it is treated for heavy metals and nutrients before it is discharged into the surface water. The solids from these WWTPs are often combined with municipal waste to apply as biosludge used in field applications. Many of the contaminants of concern are unregulated, and could pass through the pre-treatment process, to wastewater treatment plants that are not equipped to monitor or treat them, and into the surface water, which becomes the drinking water for downstream users.

This project is in the earliest stages, but as we progress with other Riverkeepers, partners in the environmental, governmental, and scientific communities, we will need volunteers to collect samples and help with research. If you are interested, contact emily@hawriver.org. To learn about the project, emerging contaminants, and what work the Haw River Assembly and other Riverkeepers across the state have done in the past, visit the “Industrial Contaminants” page under the River Issues tab on our website (hawriver.org).

Photo by Elaine Chiosso



Kids Get to Know Their River

Photo by Elaine Chiosso



from Erin Jobe, Watershed Education Coordinator
(919) 542-5790; erin@hawriver.org

We wrapped up the 28th Annual Haw River Learning Celebration (LC) this October, and we are still feeling uplifted by the three incredible weeks along the Haw. In all we hosted over 1,230 children for day-long field trips on the river!

The LC kicked off in Bynum at the beautiful Lower Haw River State Natural Area. We were lucky to have a strong group of dedicated veteran volunteers to welcome and share the spirit of the LC with new volunteers and staff. Setup went very smoothly, and there was strong positive energy in anticipation of that first bus load of children. The weather was sunny and warm all week, and low water levels left lots of rocks exposed along the river which kids explored on

their river walk each day. The stations, concert, and puppet show were all well received by the parents and students. In the afternoons, the volunteer crew spent lots of time together swimming in the river, keeping us all refreshed! I was blown away by the knowledge, passion, and dedication of our volunteers, and I continued to be amazed by them all three weeks. Their energy and love for the river is truly contagious!

We asked teachers what was the most impactful part of the LC, and I couldn't agree more with this response: "The way in which the volunteers share information is so important. Their true respect and understanding of the eco-system in which we live is communicated through their passion about the topics shared. For that reason, the most impactful component is the message that is given to students that it is everyone's responsibility to appreciate and take care of what we have." – 4th Grade Teacher, 2017 LC

For the second week of the Learning Celebration, Lea Clayton and Donovan Zimmerman, along with many neighbors, graciously

hosted us at their property along the river in Saxapahaw. The setup crew went above and beyond to create a wooden walkway to ensure that the kids would have safe access to the river. This walkway got tons of traffic each day, as Saxapahaw was our busiest and largest week. On several days we hosted over 130 children! Luckily, we had an equally large amount of talented volunteers to ensure that all those children had a positive experience. Camp life was lively with lots of children running around and playing in the large field. It was a highlight of the week to see so many young families and children invested in the LC. Temperatures were much cooler, and we enjoyed spending the nights around the campfire with a full moon. We were grateful for another rain-free week and for the many volunteers that stuck around on Friday to help us pack up in record time.

For week three we moved upstream to Camp Guilrock in Reidsville, which is not far from the headwaters. With lots of rain in the forecast for the first day of the program, we were

faced with the tricky decision of whether to set up the program on the trail or at the rain site. We opted for the rain site. When it came time to start the program, the chance of rain had lessened, and we quickly set up the stations outside around the rain building. While we were not able to take the children down to the river, we ended up being able to do the whole program outside. The next day we armed our volunteers with emergency rain ponchos for the children and committed to keep the program outside even if there was a threat of rain. We were grateful for only a few light sprinkles the rest of the week. In the past this third program week has been lightest on volunteers, but this year we had a larger crew than ever! Volunteers spent the afternoons enjoying the trails and taking swims in this pristine section of the Haw. Many of the schools and teachers that attended this week have been coming for many years, and it was inspiring to see how strongly they believe in our work.

For the 28th year in a row, the Haw River LC brought the community together around a passion for protecting the river. The energy for this work is strong, and the LC continues to thrive year after year. We are so grateful for the volunteers, teachers, and community members that make it possible. We would like to thank the following people and organizations that make the LC possible!



Photo by Cynthia Crossen

Photo by Milada Vachudova



At the Learning Celebration

- * All of our volunteers that shared their time, knowledge, and energy with our local 4th graders
- * Executive Director Elaine Chiosso for her guidance, leadership, and passion for the Learning Celebration
- * Safety and Logistics Coordinator Lawrence Peterson for his hard work tying up loose ends, ensuring that the program sites were safe, and keeping children and adults calm when incidents occurred
- * Assistant Coordinator Rufus King for his non-stop hard work and leadership during all three weeks
- * The teachers, chaperones, and bus drivers who juggle the many details of getting hundreds of children out to the river
- * Our crowdfunder donors who helped us reach our goal of raising \$5,000 to support the Learning Celebration
- * Maia Dery and her Guilford College students who jumped in to assist with setup and on program days
- * Rob Greenberg and the Hawbridge students for adding fresh energy to our volunteer crew in Saxapahaw
- * Cynthia Crossen for her leadership and guidance, beautiful music, and passion for the traditions of the Learning Celebration
- * Ken Crossen for his hard work as kitchen manager at Camp Guilrock
- * Chris Carter for his instrumental role all aspects of the Learning Celebration including setup, breakfast and kitchen duties, and puppet show organization
- * Sam Berryhill for hauling recycling for us each day in Saxapahaw and staying extra late on Friday in Saxapahaw to finish cleanup
- * Tim, CC, and Sutton King for their positive attitudes and dedication to the LC all three weeks
- * NC State Parks for hosting us at the Lower Haw River State Natural Area
- * Clyde Jones for years of support and for his assistance in prepping our site in Bynum
- * Shakori Hills Grassroots Festival for lending us the big top tent and helping us set it up
- * Maja Kricker for three weeks of volunteering and many early mornings of critter catching
- * Emily Sutton for her three weeks of dedication to the stream watch station
- * Kevin Meehan for lending us his Use-Yer-Foot handwashing stations
- * Jason Boggs of Camp Guilrock for being an excellent and welcoming host
- * Wanda Sundermann for hosting our volunteer thank you party
- * Libby Searls-Bohs for creating beautiful frames for our volunteer thank you gifts
- * Milada Vachdova for capturing incredible memories and moments in her photography
- * Lynn Featherstone for lending his time and truck to help us get our supplies to and from Camp Guilrock
- * Landowners Lea Clayton, Donovan Zimmerman, Elizabeth England and Yolanda Lujan, the Burke family, and Janet and James MacFall for giving our program a home in Saxapahaw
- * All of the kind people that donated meals to our hungry crew.



Photo by Cynthia Crossen



Photo by Milada Vachdova

Here are a few thank you notes from the 4th Graders!

“Thank you for such an awesome field trip. I learned a lot about clay and how the river came to be and insects and bugs. It was really fun too and the puppet show was awesome. I really enjoyed this field trip and I wish that I could go a million times more again. I loved learning about nature and art! Thank you so much!”
– 4th Grade Student, 2017 LC

“Thank you for teaching me about the great Haw River and its fun features. I loved playing with the clay, walking on the rocks, doing the nature art, examining the bugs and especially the awesome play. Save the Haw!” – 4th Grade Student, 2017 LC



Standing in the Stream

Project News from Emily Sutton, **HAW RIVERKEEPER®**

(919) 542-5790; emily@hawriver.org



River Watch

This year, we had added a total of eight new monitoring teams to the River Watch community. Grants received have helped to resupply our monitoring kits and print more manuals. There are still a lot of unmonitored stream sections, and always room to add more teams! We are uploading the surveys from 2018 into the database to send to Department of Water Resources for our annual water quality report. That will be made publically available on our webpage.

Next year, we will be receiving an EPA certified meter to monitor chemical

parameters such as Nitrates, Phosphorus, pH, Dissolved Oxygen, and Alkalinity. (To better understand what those parameters tell us about water quality, visit our webpage.) With this governmentally certified meter, we will be able to collect results that can be used for violations of the Clean Water Act. The volunteers will still be a critical piece in this watchdog effort—seasonal sampling and monitoring of their site will serve as a red flag for a more thorough sampling, and the macroinvertebrate monitoring will be even more invaluable. Our organization is one of the very few across the state who regularly assess stream health through macroinvertebrate counts and visual and physical parameters on such a widespread basis.

Two organizations have looked to Haw River Assembly's program as inspiration for creating other citizen science programs, including a statewide Aquatic Datahub site, which aims to collaborate with monitoring groups throughout the watersheds of North Carolina to have a user-friendly database of water quality reporting, updated in real time. If you have experience with our River Watch program, or are interested in monitoring, NC Aquatic Datahub is still compiling surveys to create the best possible training for volunteers. To take that survey, visit their website at ncaquaticdatahub.org. Thank you so much to all of our River Watch participants!

Muddy Water Watch

After a long and dry fall, the river has stayed pretty low and clear. As we move into the winter months, I'm hoping for lots of rain to replenish the Haw. With lots of rain, however, comes the possibility for lots of mud. We have had successful Muddy Water Watch trainings in Chatham and Orange counties, and plan to move to more counties in the new year. The program is incredible simple and user-friendly, requiring only a smart phone and a free application titled "Muddy Water Watch." The application allows users to send in documentation through photos and detailed text descriptions, which gets sent directly to the Sediment and Erosion Control officer in the county, and to the Riverkeeper. In order to maintain positive relationships with the Sediment and Erosion Control teams, we ask that volunteers look through the training presentation on our webpage, or attend a scheduled training. Contact Emily Sutton about scheduling a training or getting involved, at (919) 542-5790, www.hawriver.org.



Celebrating together are (l-r) Watershed Education Coordinator Erin Jobe, new Haw Riverkeeper Emily Sutton, HRA Executive Director Elaine Chiosso, and HRA Board President Chris Carter, at The Eddy Pub on the Haw River in Saxapahaw.



Save the Date: *Saturday, March 17, 2018*



Photo by Elaine Chiosso

Join volunteers cleaning up trash from the banks of the Haw River, the creeks, and Jordan Lake on Saturday March 17, 2018 for the Haw River Assembly's 27th Haw River Clean-Up-A-Thon.

Teams will be getting out trash in the river that's harmful to water and wildlife from Guilford County down to Jordan Lake. Other teams will be working along creeks in Greensboro, Burlington, Durham, Chapel Hill, Carrboro, and Pittsboro. Join a team or start your own – youth groups with adult supervision are welcome to join. We provide the bags and gloves, you provide the people power!

Since 1991, 5,016 volunteers have cleaned up 9,121 bags of trash, 1,747 tires, and many tons of car parts, appliances, furniture and other big junk from our waterways! Some of our weirdest finds have been rubber sharks, chickens, and turtles; a 1905 NJ birth certificate; a fake eyeball; and balls from every sport imaginable! **Help us get the trash out!** For more information and to sign up, contact HRA at (919) 542-5790, or email us at info@hawriver.org.

Our 2018 "Butterfly" T-Shirt is Here!



Designed by Clyde Jones, our world famous Bynum folk artist! The shirt is soft pumpkin orange with a multi-color print (and Haw River map on the back). It is 100% organic cotton, featuring non-toxic inks. Custom printed by makers of sustainable T-shirts in Burlington-T.S. Designs.

\$25 (adult) S, M, L, XL, XXL
\$25 (ladies style) S, M, L, XL
\$20 (youth) S, M, L

To order from HRA, send check to HRA, P.O. Box 187, Bynum NC, 27228. Add \$4 per shirt for postage and transaction fee.

* HRA Holiday T-Shirt Sale *



Monday - Friday, 10 am to 4 pm, through Dec. 21

Call ahead (919-542-5790). We are in and out during the weekdays, so call before you come to make sure someone is in!

Saturdays December 2, 9, and 16, from 10 am to 2 pm

Come by the HRA office at 143 Bynum Church Road through Dec. 21 for our Holiday T-shirt and Book Sale! We have the newest 2018 Butterfly design as well as lots of vintage designs (at sale prices) to choose from.

Upcoming 2017-18 HRA Events

December 1 - 21, 2017, Annual HRA Holiday Sale at the HRA office in Bynum T-shirts galore - and books! See details on page 7.

December 16-17, or 23-24, 2017, Haw River Watch Monitoring weekend. Contact Emily at emily@hawriver.org or 919-542-5790 for more info.

Sunday, January 6, 2018, New Year's Hike along Lower Haw River State Natural Area. For more info, visit www.hawriver.org, or contact info@hawriver.org or (919) 542-5790.

Saturday, March 17, 2018, Haw River Assembly Annual River Cleanup (Clean-Up-A-Thon). See details on page 7.

March 24-25, 2018, Haw River Watch Monitoring weekend. Contact Emily at emily@hawriver.org or 919-542-5790 for more info.



A big Howdy from Learning Celebration volunteers on the Haw at Camp Guilrock.

Photo by Milada Vachudova

**Haw River
Clean-Up-A-Thon
Sat. March 17, 2018**

Address Service Requested

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