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Spring 2022

NewsStreams

Because Clean Water Can't Wait



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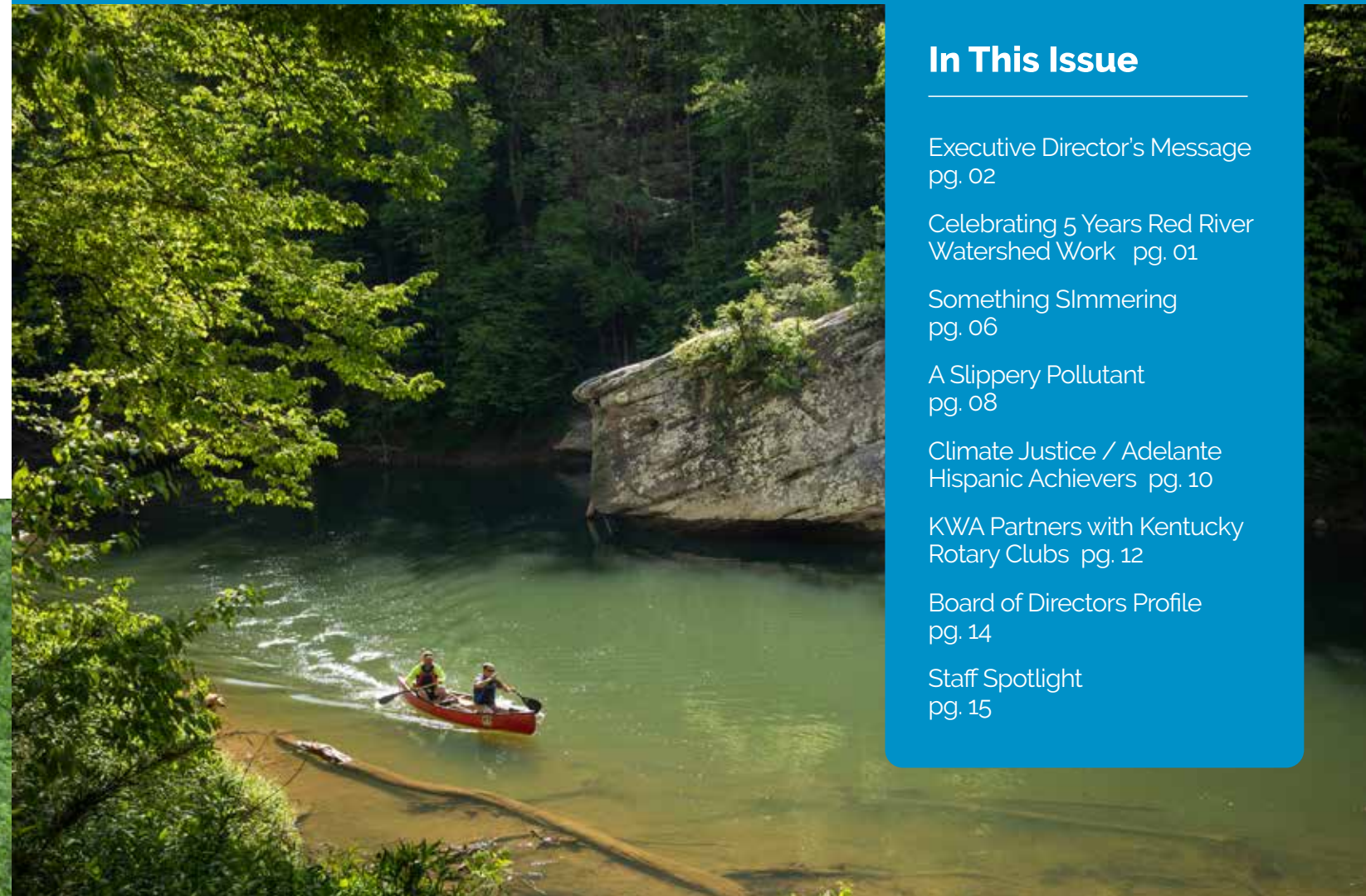
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NewsStreams

Because Clean Water Can't Wait - Spring 2022

KWA Celebrates Five Years of Red River Watershed Work

By Laura Gregory

The Red River Gorge is a national treasure that is sometimes referred to as the

"Grand Canyon of the East". This unique and scenic natural area occurs within the boundaries of the Daniel Boone National Forest in eastern Kentucky. The gorge is known for its free-flowing streams, abundant natural stone arches, unusual rock formations, and spectacular sandstone cliffs. State and federal designations

within the area include the Red River Gorge Geological Area, National Wild and Scenic River, State Wild River, Outstanding National Resource Water, Clifty Wilderness, National Natural Landmark, National Archaeological District, and a National Scenic Byway.

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A Message From Ward Wilson

Executive Director, Kentucky Waterways Alliance

Dear Friends,

Spring is coming! As I write this, the weather is cold, but it won't be long till we see that spring green tint in the woods. The KWA staff and board are well into our year, setting an ambitious plan to build our financial reserves, hiring new staff, and planning to celebrate the 50th year of the Clean Water Act.

In 1972, Congress and President Nixon fought over the Water Pollution Control Amendments of 1972, the name of the bill that became the Clean Water Act. It was not an easy victory. The President vetoed the bill due to concerns about the cost. But the two houses of Congress debated furiously and over-rode the veto with large and bipartisan majorities. Congress took that extraordinary step because the people that cared about their rivers, lakes, and streams demanded that something be done. And the costs of the Clean Water Act have been great, but the benefits far outweigh the expenses – many of us would say the investments - to clean up our waterways.

We could cite many examples of how clean waters are invaluable, but we would like to hear from you. Please write to us at info@kwalliance.org (or by mail) and tell us what you love about your favorite waterway. Send us photos, art, poems, whatever expresses your feelings. Post on social media with #kentuckyiswater and tag us @kwalliance. And get involved! Pick up trash that might otherwise end up in a creek, vote for the brave candidate that stands up for our environment, or join a watershed group that works to make a stream healthier for us and future generations. It feels good to be a part of the solution.

Have a safe and happy spring,



Upcoming Events and Important Dates!

Visit www.KWAlliance.org for details and registration!

April 16 - 10:00 am-1:00 pm.
Harrods Creek Cleanup

April 22
Earth Day: Sand Island & Lewis and Clark Island Canoe Trip and Clean Sweep

April 23
Rotary Club of Louisville & KWA Storm Drain Marking Volunteer Project

April 2022
Aveda Earth Month

May 14
26th Annual Upper Red River Cleanup - only very experienced paddlers - must contact laura@kwalliance.org to register

May 21
Wild & Scenic Red Riverfest

May 2022
Red River Watershed Mural Part II in Powell County

June-September
Red River Cleanups
3rd Saturdays, (6/18, 7/16, 8/20, 9/17), weather/river levels permitting – open to the public – limited loaner boats available

Summer 2022
Salt River Collaborative Exhibit at Louisville Free Public Library

June 2022
KWA Annual Board Meeting

September 16
Wild & Scenic Film Fest

October 18
Clean Water Act 50th Anniversary - 1972-2022



Board of Directors

Executive Committee:

Martin Hjalm - President
Gordon Garner - Past President
Caitlin Johnson - Vice President
Marcia Boone - Secretary
Pamla Wood - Treasurer

Emeritus Board Members:

Hugh Archer
Frank Elsen
Beverly Juett
Bruce Scott

Board Members:

Kay Harker - Kentucky River Watershed
Tom Vierheller - Big Sandy River
Bob Johnson - Jackson Purchase
Linda Cowan - Salt River
Travis Murphy - Salt River

Celebrating Five Years of Red River Watershed Work

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These designations guide the management and protection of watersheds, wildlife, archaeological resources, and spectacular geologic features in the gorge. The Red River is also a priority watershed under Kentucky's Watershed Management Framework. The river was given this designation to protect it from several threats.

The Red River Gorge is visited by an estimated half-million people per year from around the world. This high level of visitor use is putting a heavy burden on the natural resources.

The Forest Service maintains a network of 67 miles of trails, but users have created an additional 194+ miles of unauthorized trail. In addition, users have developed hundreds of campsites, vistas, and rock-climbing routes. User developed trails, campsites, and highly impacted areas are not maintained by the Forest Service and as a result are causing erosion and stream sedimentation.

The Red River Gorge is downstream of privately owned land, small towns, and farms. Streams in these headwater areas are mostly in good condition but are threatened by illegal dumps, loss of streamside vegetation, runoff from towns, agriculture, and rock quarries. Pathogens in several creeks threaten public health and drain into the Red River Gorge. Swift Camp Creek and one of its unnamed tributaries, upstream of the gorge, are listed as impaired in the Kentucky 2010 Integrated

Report to Congress (KDOW, 2010) for sewage disposal, sedimentation, loss of riparian, and other unknown causes.

Historically, efforts to improve and protect water quality have been implemented on a piece-meal basis and did not examine entire watersheds. This project was originally designed to create the Watershed Plan, written in 2014 with the help of an EPA 319(h) grant, then implement that plan which we have been doing since 2017. This project occurs in both the upper and lower portions of these watersheds and reduce impacts to water quality from non-point source water pollution. Specifically, the project goals and objectives that were listed in the project are:

Goals & Objectives:

- 1 Reduce erosion from recreation in the Red River Gorge.
- 2 Reduce long-term erosion in the Red River Gorge through education.
- 3 Reduce bacteria, nutrient, and sediment levels in the headwaters of Swift Camp Creek.
- 4 Continue community involvement.

**The above is taken(/edited) from our Final Report to KDOW 2019. Please visit KWAlliance.org for a detailed report of KWA's accomplishments in the Red River Watershed.*



Racers splash down the Red at Red RiverFest 2022

Environmental education Annual events include:

- Bioblitz
- Make A Splash Water Fest
- Trout in the Classroom
- Mollusk Center + Water Quality Cruise
- High School stream sampling & green infrastructure project



Reduced Erosion

- 358 eroding user-developed camp sites rehabbed
- Erosion reduced on 84 miles of trail
- Implemented Best Management Practices on 845 acres
- Restored 3.5 miles of straightened stream



Monitoring and mapping the watershed environment



Middle and High School art students collaborate, combining art and science, in their watershed mural at Campton City Park Mural

Public awareness of water quality issues. Hosted septic workshops, and repaired/replaced 25 failing septic systems



Red River Cleanups, 6,000+ volunteer hours cleaning TONS of garbage from 82 miles of stream



RRGU public meeting, February 2020

There's Something Simmering in Kentucky (and it's not your local bourbon distillery)

By Portia Bharath and Ward Wilson



Algal bloom in the Anderson County pond
Photo: Jeffrey Lehmkuhler,
University of Kentucky College of
Agriculture, Food and Environment

This article is the result of a collaboration between National Wildlife Federation (NWF) and KWA. Originally published on National Wildlife Federation's blog, the article is edited for this space. The full article is located at KWAlliance.org. KWA is proud to be an affiliate of NWF.

The Ohio River, which is legally owned by Kentucky and supplies drinking water to almost five million people, is home to over 160 species of fish, and supports countless other wildlife. This ecologically and culturally important river passes through or borders six states, making it a precious resource in need of protection. Over the past few years, however, the Ohio River has been experiencing some pretty awful effects of environmental and climate changes.

Harmful Algal Blooms

In 2015 and 2019, Kentucky experienced harmful algal blooms (HABs) on its portion of the Ohio River. The HABs were so intense that recreation advisories and cautionary statements were issued - you weren't even supposed to let your dog get into the water.

Cyanobacteria is a type of phytoplankton, not a "true" algae but looks pretty similar and can harm people (and animals!) when it produces the toxin microcystin.

Sometimes called blue-green algae, this is what's mostly found along the Ohio River. Unfortunately, many of the conditions that encourage algal growth are becoming more frequent as environmental conditions fluctuate due to climate change.

Phytoplankton growth is increased by factors like more nutrients entering bodies of water from nearby farms, increases in water temperature, low and slow water flow (such as during a drought), water



Phytoplankton algal blooms can produce microtoxins harmful to wildlife

conditions, and overall changes in local ecology. HABs not only threaten public health, but they typically take a toll on aquatic life as well.

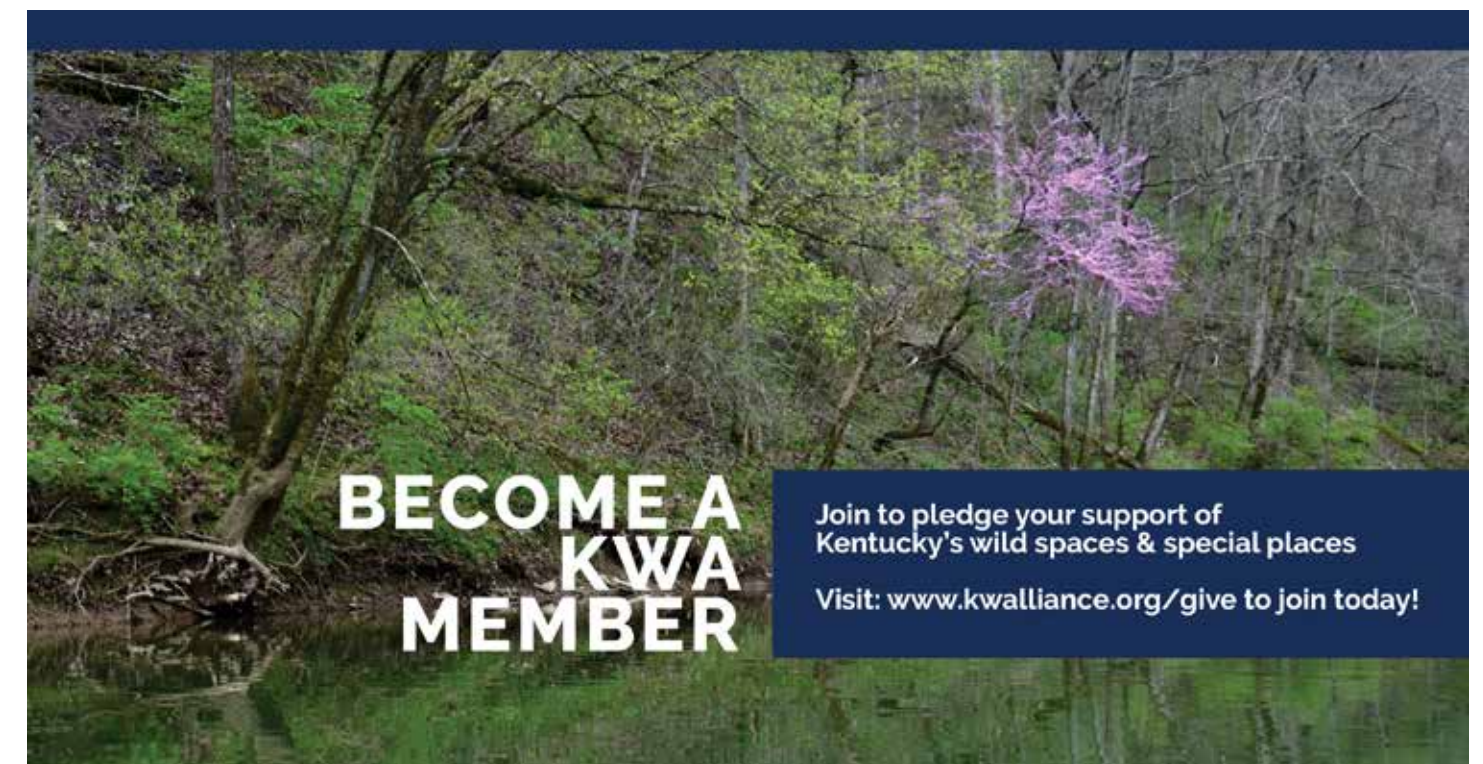
HABs hinder recreational and tourist activity in our waterways. HABs are an eyesore — a bloom could resemble foam, scum, mats, or paint floating on the water's surface — and a health risk. Public safety and health advisories are sure to drive people away.

The Domino Effect

The Ohio River receives nutrient-dense runoff every time it rains. Sources include farms, lawns, and even air pollution. Higher water temperatures and droughts are becoming more frequent from the increase in average global temperature, or climate change. Think of it as a domino effect: the ongoing use of fossil fuels is raising the average global temperature, which increases the risk of more frequent and long-lasting droughts and raises water temperatures, which are factors that contribute to the growth of phytoplankton. In other words, climate change is likely to bring us more frequent, intense, and longer-lasting harmful algal blooms.

This phenomenon isn't unlike the way climate change is causing more frequent and intense weather events across the country and the world (also contributing to more HABs — everything is connected). These destructive climate-fueled weather events could be called unnatural disasters because they simply would not be this bad if the climate was stable.

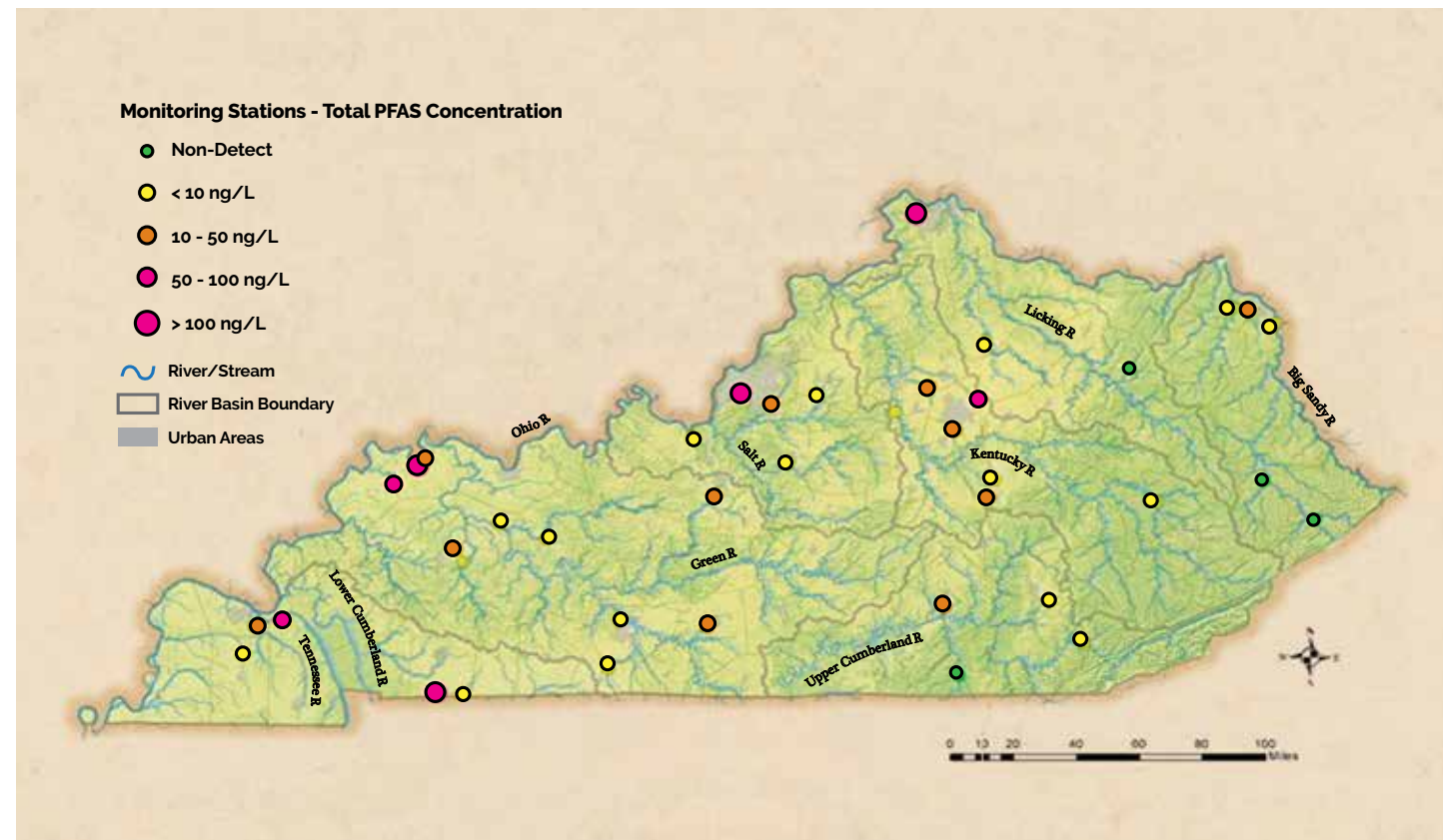
Unless the U.S. takes bold action on climate change, HABs and other events — ranging from moderately inconvenient to highly fatal — will only continue to plague the world. Learn more about unnatural disasters across the U.S. and how they impact humans and wildlife through NWF's Unnatural Disasters Storymap.



A Slippery Pollutant

By Tom Vierheller, Ph.D., KWA Board member and Chair of KWA Water Policy Committee

We have known about mercury and PCBs as water pollutants for generations. But, for many Newstreams readers, our first knowledge of PFAS pollution came from news stories about this type of chemical in Parkersburg, West Virginia. Every year, we become even more aware of this group of manufactured compounds found to be now nearly ubiquitous in our world. More citizens in Kentuckians became aware of these chemicals with the accounts of the PFAS air and water contamination in Henderson, Kentucky in fall of 2021.

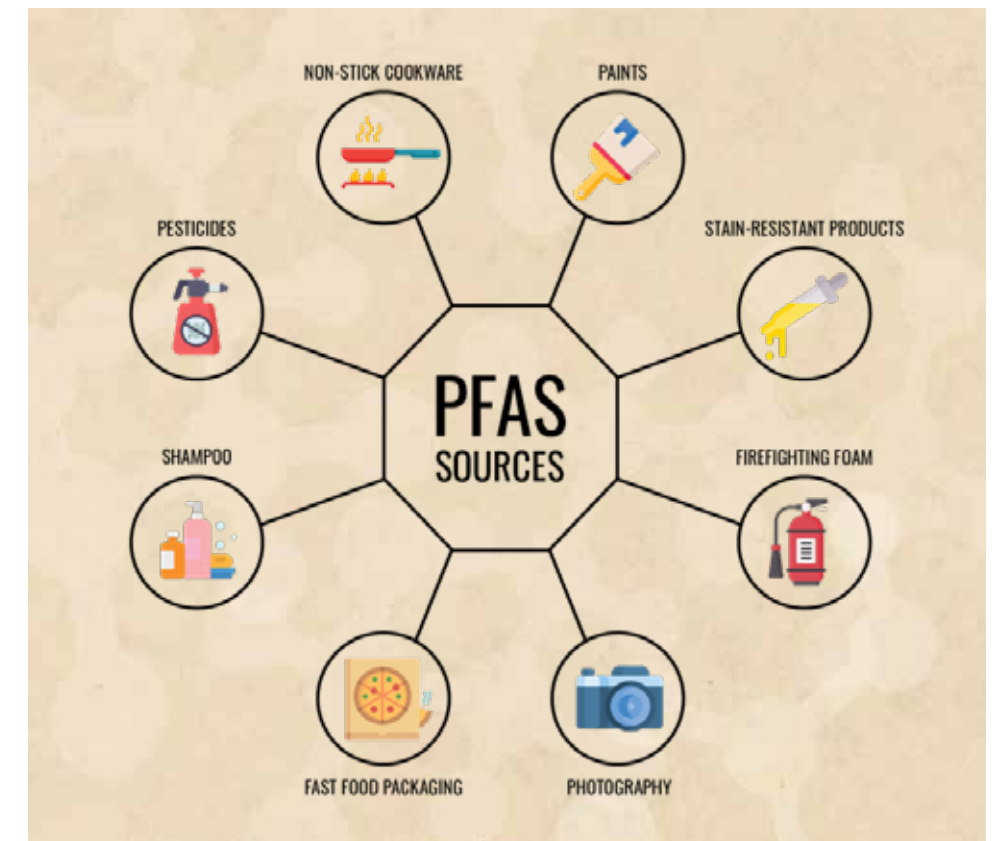


PFAS (Per- and Polyfluoroalkyl Substances) are a group of manufactured chemicals introduced by industry and in consumer products since before WWII. Because of their useful properties, consumer demand and a post-WWII mindset of manufactured chemicals offering “better living,” production of PFAS chemicals expanded massively. There are thousands of different PFAS chemicals, with tremendous variation in use and monitoring. Thus, we have a group of synthetic organic chemicals, measured in only parts per trillion (a sand grain in an Olympic swimming pool), and remaining persistent in people, animals and the environment to the extent that these are referred to as “forever chemicals.”

Studies on the effects of PFASs on animal and human populations have included both laboratory and

epidemiological research. The C-8 Health Project is an epidemiological study resulting from the West Virginia fluoro-chemical plant releases. This study and others have found probable associations between PFASs exposure and the following illnesses: high cholesterol, thyroid disease, testicular and kidney cancers. The need to test for ultra-low exposures, the diversity of specific PFAS chemicals and the wide range of disease types has made conclusive evidence related to human and animal health effects difficult to demonstrate.

The Kentucky Division of Water has conducted studies for the presence of PFASs at water treatment plants and in surface water. All the public water treatment systems sampled showed levels below the EPA-recommended Health Advisory limit. With the surface water study, PFASs were detected in 36 of 40 monitoring stations; the concentrations were considered generally low. But, the EPA limits for drinking water has only established voluntary limits for just 2 of the PFAS forever chemicals. Multiple toxicology studies indicate that even these voluntary limits for drinking water are far too high. For environmental scientists, understanding what an acceptable level of PFAS in surface water is far from being established.



At KWA, we will continue to review this monitoring data. In addition, we will closely follow agency responses to the PFAS situation in Henderson. We also will be following the U.S. EPA’s “PFAS Strategic Roadmap” plan announced fall 2021. According to Administrator Michael Regan, “EPA’s PFAS strategic roadmap is our plan to deliver tangible public health benefits to all people who are impacted by these chemicals—regardless of their zip code or the color of their skin.” Evidence of PFASs pollution to our waterways and the risk to human health has been mounting for years. The time has well passed for EPA to take solid action.

KWA Explores Climate Justice with Adelante Hispanic Achievers

by Susan Griffin Ward

Kentucky Waterways Alliance staff met with 75 middle and high school students who are part of the Adelante Hispanic Achievers organization in a Zoom workshop to discuss and learn about climate change, climate justice and resilience. Staff also shared KWA's work in Kentucky to ensure clean water for all communities



Adelante Hispanic Achievers is a non-profit organization in Louisville, Kentucky devoted to empowering Hispanic and Latinx youth. This organization engages student Achievers and parents in long-term academic, mentoring, and personal enrichment programs and believes that with proper guidance and support, every student can achieve, whatever that means for them. Their programs are designed to encourage the holistic development of every Achiever in close partnership with parents and families, focusing on five core pillars: educational preparedness, career exploration, community service, cultural awareness, and personal and social development.

In the two-hour workshop, Ward Wilson, Executive Director of KWA, gave an overview of the importance of clean water and how KWA works with groups across the state to protect and restore this critical natural resource. Lauren Neal, KWA's Community Engagement intern and a University of Louisville Law School student, presented information about climate justice and resilience to the students sharing how low-income and communities of color will be impacted the most by climate change. In small group discussions, led by KWA staff and Adelante leaders, students shared how climate change has impacted their lives and brainstormed how they personally could create change. For example, one student shared that his father works outside, and how much harder that is in extreme temperatures. Students committed to expanding the goals of their environmental clubs and making choices to reduce use of plastic bottles and plastic bags. KWA staff closed the conference by encouraging the students to use their voices through activism and to demand a seat at the table in the fight for environmental justice.

Al Gorman The Art of Transformation

by Susan Griffin Ward



Al Gorman, Kentucky Waterways Alliance's artist in residence, shows us through his art the possibility of imagining a different future. Al takes what humans have discarded, dumped, and destroyed to create delight as well as awareness through the process of transformation.

The Falls of the Ohio has been the focus of Al's art since 2003. In an article written by Moriah Harrod, for the IU Southeast *The Horizon*, Al said, "I haven't purchased art materials in twenty years. The river provides it, and supplies get easier to find every year... like an eerie plastic graveyard."

Al takes "trash" or found objects at the Falls of the Ohio State Park like lighters, pieces of coal, Styrofoam, children's toys, and shows us another way of seeing through his artistic vision. One example of this is the large collection of lighters he has amassed into a rainbow of light. Al said, "Lighters represent fire, the most crucial of human discoveries. We just toss that to the side."

This year is the 50th anniversary of the Clean Water Act. Because of the future imagined 50 years ago, our waterways are healthier. Much has been accomplished, but much work remains, as demonstrated in the endless supply of material for Al's art. Members of Kentucky



Light Rainbow at the Falls

Waterways Alliance envision our lakes, rivers, streams, and wetlands with thriving aquatic ecosystems, healthy fish and wildlife populations, abundant recreation opportunities, and a dependable, clean water supply for future generations. Al's art shows us transformation is possible.

You can learn more about Al Gorman at his website, www.ArtistatExit0RiverBlog.com.



Plastic Quackery

KWA Partners with Kentucky Rotary Clubs to **SAVE OUR RIVERS**

By Susan Griffin Ward



At the end of July 2021, Kentucky Waterways Alliance (KWA) and the Rotary Club of Louisville (part of Rotary District 6710) signed a memorandum of understanding to protect our vital waterways. This local commitment from the Rotary Club of Louisville (RCL) aligns with Rotary International's global commitment to environmental issues that include preserving biodiversity by protecting and restoring habitats, conserving native species, removing invasive plant and animal species, conserving, and protecting endangered species as well as supporting initiatives to improve aquifer and groundwater recharging, water conservation, water quality, sanitation, and watershed management. Local Rotarians also understand clean and healthy waterways is important for recreation, tourism, and economic development.



Ward Wilson, KWA Executive Director, with Jean West, President of Louisville Rotary Club, and Gail Story, 6710 District Governor, at the launch of the American Duchess.

The result of KWA's partnership and RCL commitment was the launching of "Saving Our Rivers", a five-year collaborative effort between Rotary Clubs, the American Queen Steamboat Company and communities along the Ohio and Mississippi rivers.



Rotary members left port in Louisville on the American Duchess, to begin their journey down the Ohio River to with stops in Owensboro, Louisville, Paducah, Brandenburg and Henderson in Kentucky, and Cape Girardeau, Missouri, and Alton, Illinois. With assistance from students from

Western Kentucky University's Center for Human and GeoEnvironmental Studies and KWA, Rotary Club members joined communities across the Ohio River Valley in raising awareness of the importance of keeping the Ohio River clean. Activities included testing water quality in Brandenburg, KY, planting native flower beds in Owensboro, KY, physically removing garbage from the river in Henderson, KY, to marking storm drains in Paducah, KY.

KWA is looking forward to many more Rotary projects including an April Earth Month project in Crescent Hill to help protect Beargrass Creek. Louisville Rotarians and students from Interact, the Rotary service club for young people ages 12 to 18, will affix curb stickers to storm drains to alert citizens that materials flowing into the drains empty directly into Beargrass Creek.



Left: Rotarian Bernie Strenecky hard at work at the Ohio River cleanup in Henderson

Above: Gail Story digs in planting native flower beds in Owensboro



Educating visitors about storm drain effluence, WKU students perform water quality testing in Brandenburg



Storm drain marking with a real message in Paducah

Board of Directors Profile: Meet Travis Murphy

Travis Murphy joined the KWA Board of Directors at the end of 2021, and serves on the Resource Development Committee.

Why is KWA's mission is meaningful to you?

I had the opportunity to work in Indonesia and a few of the more memorable experiences were water related. The tap water there was not potable, and everyone drank bottled water as a result. In addition, it was common to see open sewage trenches dug right beside a roadway or sidewalk. Homes along there would simply run a plastic tube from their toilet out to the ditch and the trench transported the sewage to the nearest creek or stream. People downstream often used this water source for doing their laundry or washing their dishes. It made me realize just how fortunate we are that we can take a vital resource like water for granted.

I reached out to Ward Wilson, KWA's Executive Director, soon after returning from that trip because KWA's mission of protecting, restoring, and celebrating Kentucky's waterways was something that really resonated with me. I saw firsthand how water can make such a large difference in the quality of people's lives and wanted to help the organization working towards those goals in my community.

What kind of work do you do?

I've worked for Michelin for almost eight years now in a variety of roles, mostly supply chain related. I recently accepted a position as a Process Engineer responsible for deploying supply chain related software at multiple Michelin manufacturing sites in North America.

Tell us about yourself.

I grew up in the greater Cincinnati area and attend the United States Air Force Academy. I majored in European Area Studies and minored in German and Philosophy. After the Air Force, I attended graduate school at the University of Illinois, Champaign-Urbana, where I received my MBA, and met my amazing wife, Jessie! We have a 13-year-old son, Rustin, and a 12-year-old daughter, Hazel.



Travis Murphy and family at Red River Gorge

How do you like to spend your free time?

I have a backpacking group that has been slowly section hiking the Sheltoewe Trace southbound. We're all dads, and finding free weekends is tough, so we tend to make it out about twice each year. We're 260 or so miles in – all the way down to the Big South Fork about to cross into Tennessee. In addition to the beautiful changes in landscape we've seen hiking along the trail, it also traverses some of the largest watersheds in the state – the Licking River, the Kentucky River and the Upper Cumberland.

What is your favorite Kentucky waterway and why?

War Fork Creek in the Daniel Boone National Forest. I took my kids on their first overnight backpacking trip there, camping close to Resurgence Cave. The War Fork goes underground for a brief distance and re-emerges at this cave - the water there is ice cold! The day we hiked in it was over 95 degrees out, but the creek created such an enjoyable micro-climate that being outside in the heat was a pleasure. The cool refreshing water, as well as a small cave to explore, made it a memorable experience for Rustin and Hazel.

Staff Spotlight:

Susan Griffin Ward

Director of Community Engagement
Susan@kwalliance.org

Susan joined the KWA team in October of 2021. She is a native of Louisville and graduate of the University of Dayton where she studied social work and English literature. Her professional career has been dedicated to nonprofit service at social service and environmental organizations in Louisville. She has served in a variety of roles including social worker, disability rights advocate, program administrator, director of development and communications, and CEO. Susan is also a photographer and author of the book, *Looking for the Sun at Merton's Corner, a collection of portraits*.

Susan and her husband, David, raised their family in Louisville, and have two adult sons and a granddaughter. Over the years she has spent as much time as possible canoeing, kayaking, and boating on Kentucky's beautiful rivers and creeks. These waterways have been a source of endless inspiration for Susan's work as a photographer. She has been donating her photographs to KWA for several years and her work has been often used in our newsletters, communications, and website.

The Director of Community Engagement is a new position at KWA developed with the goal to expand our reach and impact across the state. Susan is looking forward to furthering KWA's mission by increasing our engagement with current and future volunteers, donors, partners, and communities. If you want to partner with KWA to protect, restore, and celebrate your favorite Kentucky waterway give Susan a call or send her an email. She will be happy to talk with you about how we can work together!

