RIVER WATCH

The Official Newsletter of POTOMAC **RIVERKEEPER®** NETWORK

AUTUMN/WINTER 2024
VOLUME 21, ISSUE 2

Meems Bottom Covered Bridge over the North Fork Shenandoah River in Shenandoah County, VA

Bridge to 2025 and Clean Water

All across our watersheds, your Riverkeepers made a colossal difference in 2024 - they deserve our gratitude. Your year-end gift would be a fabulous way to show your appreciation and your commitment to their work in 2025. Their successes in 2024 completely reflect our approach to protecting and defending our rivers and waterways – assessment, advocacy, enforcement, and engagement.

Mark Frondorf, Shenandoah Riverkeeper, introduced hard science through the placement of the Xylem sensor buoys, which test water quality all day, every day and will use some of that data, as well as his intimate knowledge, as a member of the stakeholder advisory group for the creation of metrics to assess whether Virginia is meeting its Chesapeake Bay cleanup objectives. Read more on page 5.

Brent Walls, Upper Potomac Riverkeeper, is among the leaders in the growing movement to protect our habitats and ourselves from the harm of PFAS – toxic "forever" chemicals in our water, our food, and our bodies. His concern is so profound that he is launching a broad based legislative advocacy campaign to combat the threat presented. Read more on page 4.

Dean Naujoks, Potomac Riverkeeper, made history and the news as a result of his enforcement actions against the Navy over the harm caused by its century-old weapons testing in the Potomac River. Read more on page 3.

Taken together, the impact of their work is immeasurable. Support it and them with your year-end gift – the health of our precious rivers is too vital. If all of us together do not take action, who will?

Thank you.

SPUR LOCAL 24 CRITICAL NONPROFIT

WATERKEEPER® ALLIANCE

A LETTER FROM THE PRESIDENT

Trash clean up volunteers get the job done!

Our Volunteers – They Make Possible What We Do to Protect and Defend Our Rivers

Our beautiful watershed covers more than 14,000 square miles and we have three Riverkeepers who, as vigorous and dedicated as they are, cannot be in all places at all times.

So we rely on an ever-growing group of volunteers to be eyes, ears, hands, and boots on the ground and in the water to achieve our mission of protecting and defending precious waterways.

Through their commitment and eagerness, vitally important work is possible. Cleanups everywhere help to keep riparian areas tidy and free of trash, including an unbelievable amount of single-use plastics. Water quality monitoring is such a key component of what we do and can be accomplished only with a vast amount of volunteer help, especially as we expand to more sites every year.

Monitoring began with a handful of sites in the Potomac back in 2019 following the donation to PRKN of Sea Dog, our research vessel, and the creation of detailed training protocols for our volunteers. Thanks to our volunteers, we are now able to test at 30 sites and we have every expectation of growing that number.

We have expanded into the Upper Potomac, where Brent Walls, again thanks to his volunteers, has been able to initiate programs to test DNA in order to learn sources of pollution. (DNA testing helps to identify whether bacteria is from human or agricultural sources which in turn can pinpoint sources of contamination.) His acid mine drainage testing, also requiring the aid of volunteers, is helping to create the data required to ameliorate a pollution problem which plagues locations where current and historic mining operations foul vital aquatic habitat.

All these programs happen thanks to the 655 volunteers who take time out of their days to multiply – exponentially – what we can do. I speak for all of us when I thank them. And if you have not yet come out to join them, I encourage you! You will be glad you became part of a fabulous team.

Let's do some great things together!

Sincerely,

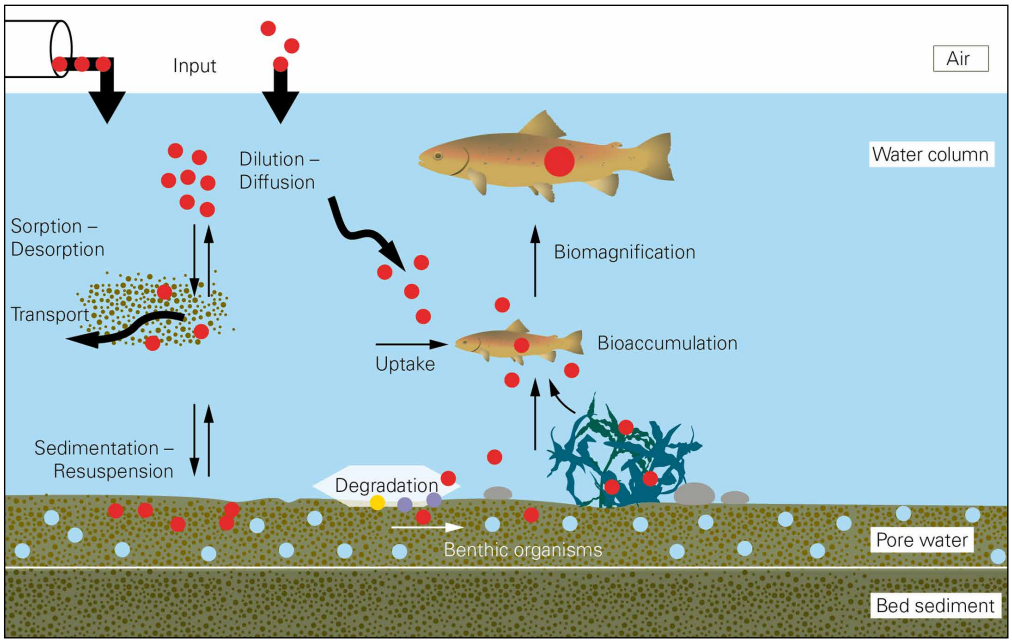
Nancy Stoner, President

Dean instructing eager volunteers

Potomac Riverkeeper Network is a proud member of both EarthShare Mid-Atlantic and Combined Federal Campaign (CFC). Employees can choose to designate a portion of their paycheck to Potomac Riverkeeper Network. Our EarthShare and our CFC number are the same – #87828.

NAVY WEAPONS TESTING – IMPORTANT WORK STILL TO BE DONE

Dr. Tyler Frankel



Biomangnification graphic describing the conceptual model of contamination in the sediment and in the food chain. — credit Oekotoxzentrum / Peter Penicka, Eawag

After Potomac Riverkeeper Dean Naujoks settled historic litigation against the Navy for its unpermitted weapons testing in the Lower Potomac, he knew there was still going to be work to do to protect the river. A key aspect of the settlement requires the Navy to obtain a Clean Water Act permit to continue the testing.

The Navy claims it has never tested samples of water or sediment to determine the extent, gravity, and impact of the substances the exploded ordnance leaves behind. Maryland's Department of the Environment (MDE) is the agency responsible for issuing the permit, but in the absence of data, drafting the permit so that it adequately protects water quality and aquatic life is nearly impossible.

Dean's approach is always based on law and science, so when Dr. Tyler Frankel from the University of Mary Washington – a noted conservation ecotoxicologist – offered some help on the science side, Dean did not hesitate to accept.

While the Navy has noted that testing activities release a variety of toxic contaminants into the river, including heavy metals such as lead and cadmium and explosives such as RDX and TNT, they have also asserted that the contaminants pose no environmental threat and are "buried" in sediments and diluted.

The problem, according to Dr. Frankel, is that things may not always stay buried. Changing environmental conditions such as shifts in water chemistry or physical disturbances, including normal river currents, can cause contaminants to be released back into the water column where they become more dangerous to wildlife. They can also make their way into food webs and become more concentrated through biomagnification, resulting in potentially harmful effects on oysters, sportsfish, endangered species, and other river inhabitants. Dr. Frankel has begun sampling to determine the potential impact of the munitions testing on the river and its biota.

Dr. Frankel and one of his students prepare a Kemmerer water sampler, used to collect deep water samples

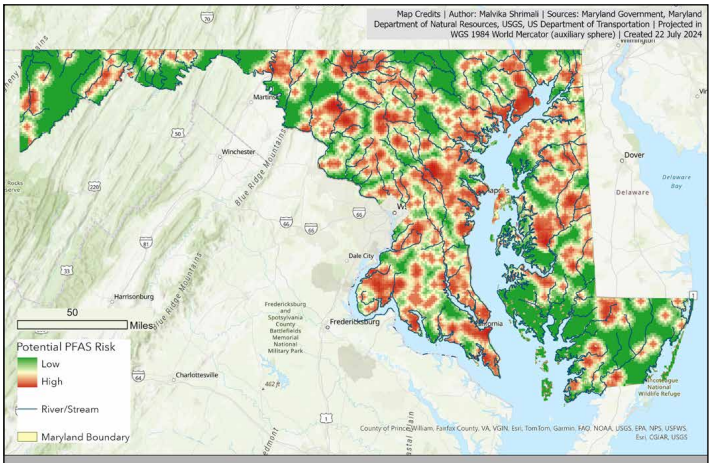
UPPER POTOMAC RIVERKEEPER BRENT WALLS ANNOUNCES CAMPAIGN TO PROTECT POTOMAC RIVER COMMUNITIES FROM PFAS TOXIC "FOREVER" CHEMICALS

The Potomac Riverkeeper Network is leading an initiative to inform and protect communities throughout the watershed from the impacts of PFAS – toxic "forever" chemicals – by promoting public education of the adverse human health impacts and by taking and promoting efforts to reduce the sources of these harmful chemicals.

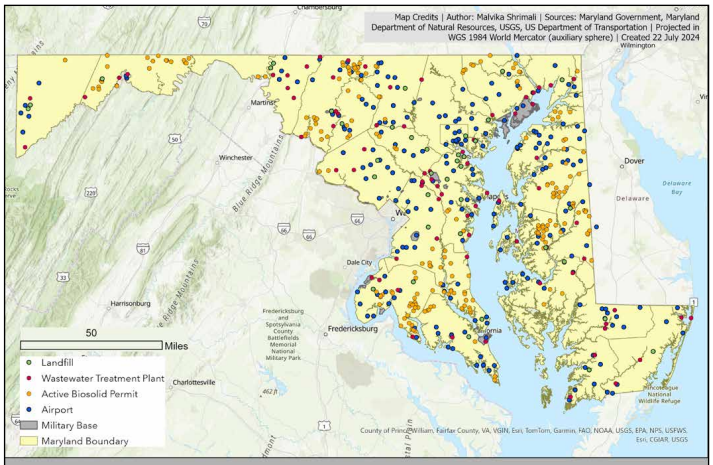
Brent Walls, Upper Potomac Riverkeeper, is the tip of that spear through his efforts to address the sources of PFAS through advocacy, legislation and litigation.

Why are they harmful to humans?

PFAS "forever" chemicals are persistent and do not break down in the natural environment. With repeated exposure over time, these chemicals accumulate in human tissues and may cause a range of health issues including developmental effects to fetuses and to infants, immune effects, kidney and testicular cancers, fertility issues, and other serious health problems.



Potential PFAS Risk in Maryland



Potential PFAS Sources in Maryland


PFAS sampler on Opequon Creek

What are the sources of Forever Chemicals?

These chemicals enter the environment from a number of sources, and they have become widespread in some areas within the Potomac river watershed. The major sources are "hotspots" (including military facilities, airports, and landfills), public wastewater, industrial wastewater, sewage sludge applications to fertilize agricultural crops, and from application of pesticides and herbicides.

Private wells near some hot spot locations such as military bases and industrial areas that have historically used PFAS products have already been found to have significant PFAS levels.

What is Brent Planning?

To stop the PFAS cycle from worsening, Brent will push our state regulatory agencies to assess PFAS levels in all sources and develop pollution standards for those sources. He will also seek to require PFAS removal and pre-treatment technologies at both publicly owned treatment plants and private industry sources; these are the currently most identifiable and discrete locations for meaningful action. In addition, he will work to require standards for the use of sewage sludge on farms to diminish the spread of PFAS in our foods.

To make offenders "clean up their mess", Brent plans to prioritize military hot spots, which have a high incidence of PFAS, and to advocate for the development of action plans to clean them up. His goal of promoting community support for protecting local water resources and education for communities to protect their families from further exposure is part of grassroots organizing he has implemented in his broad watershed before, so he is a skilled hand at it. And specifically, to reach those who are considerably at risk, he will disseminate fish consumption advisories to protect vulnerable communities that rely on harvesting fish for sustenance.

What can you do to help?

Become a member and help our collective voice to protect our water resources and our communities.

Minimize your exposure and reduce your PFAS foot print by purchasing PFAS-free products.

Test the water at your home and protect your family by using filtering technology that removes PFAS.

STATE-OF-THE-ART TECHNOLOGY ALREADY MAKING A DIFFERENCE IN THE SHENANDOAH

Sensor buoy in the water — doing its thing!

Last spring, we reported that because of the generosity of Xylem Analytics, a global company focused on solving the world's most challenging and fundamental water issues, Mark Frondorf, Shenandoah Riverkeeper, was poised to be able to gather important water quality and river health data for the Shenandoah. Two floating and anchored sensor buoys, located at boat ramps for ease of access and visibility, once installed, would test round the clock for blue-green algae, dissolved oxygen, chlorophyll A, temperature, pH, conductivity, biological oxygen demand, and fluorescent dissolved organic matter, all key indicators of water quality and river health.

Those sensors have now been installed – one in the North Fork and one in the South Fork. Every 15 minutes, the sensors capture data which is then available, in real time as a result of satellite telemetry, "Hydrosphere", Xylem's database. Anglers and paddlers can now access that information online to determine water quality for a day's outing.

The information, in its broadest future use, will be an amazing baseline for further research in a wide array of study. Mark emphasizes the importance of records concerning the lack of oxygen and the risks associated with it – information not previously available and certainly not to the degree of specificity and completeness provided by the sensors.

Another bonus? The data the sensors capture and record is of considerable interest to US Geological Survey and Interstate Commission on the Potomac River Basin, and, as a result, our collaboration with those organizations is increasing.

And Xylem's generosity and commitment to our watershed continues – plans are for three additional sensors to be installed at locations to be determined.

The future is now at Potomac Riverkeeper Network.

Calibrating the buoy

POTOMAC RIVERKEEPER NETWORK JOINS LAWSUIT AGAINST EPA'S INACTION ON TOXIC "FOREVER" CHEMICALS

Potomac Riverkeeper Network is battling the threat of PFAS – toxic "forever" chemicals – in many ways – assessment, advocacy, and now enforcement.

The numbers tell the story —
Betsy and her team lined up the votes for the CWJA!

Betsy's testimony is broadcast on TV

Betsy Nicholas, VP of Programs & Litigation, meets with our champion, Sen, Sara Love, in Annapolis

Last August, we joined farmers in Texas, organic farmers in Maine, and a Texas county in a lawsuit against the Environmental Protection Agency (EPA) over its failure to regulate per- and polyfluoroalkyl substances (PFAS), a group of toxic chemicals, known as "forever chemicals" because they do not degrade, which are present in sewage sludge widely used as fertilizer on farm fields and home gardens.

The Clean Water Act requires EPA to identify and regulate toxic pollutants in sewage sludge, but EPA has failed to act on the widespread contamination of sewage sludge with PFAS. PFAS chemicals pose a serious threat to public health and to aquatic ecosystems, including the Potomac River, and we are glad to join with concerned farmers and Johnson County, Texas to press EPA to restrict such toxic chemicals in sewage sludge used on cropland.

The Clean Water Act requirement for EPA to identify and to regulate toxic pollutants in sewage sludge hinges on whether there is scientific evidence that shows they may harm human health or the environment. EPA has failed to fulfill both portions of this mandate regarding PFAS chemicals. First, scientific studies show that there are at least 18 PFAS chemicals in sewage sludge that adversely impact public health but which EPA did not identify in the agency's most recently published biannual report. Second, sufficient scientific information is available for EPA to promulgate regulations for at least 12 PFAS it has previously identified in sewage sludge, but EPA has failed to act.

EPA's failure to regulate these toxic pollutants in sewage sludge allows these chemicals to continue to be spread as fertilizer on farms, pastures, home gardens, and yards, contaminating our rivers and the nation's food and water supply. We will work with our partners in this case to make sewage sludge safe, as the Clean Water Act requires. And we will also work within our watershed to address the PFAS threat – read on Page 4 what Upper Potomac Riverkeeper Brent Walls is doing.

PRKN and the other plaintiffs in the suit are represented by Public Employees for Environmental Responsibility (PEER).

MARYLAND'S NEW CLEAN WATER JUSTICE ACT

Protecting Our Waters: The Clean Water Justice Act and Maryland's Role

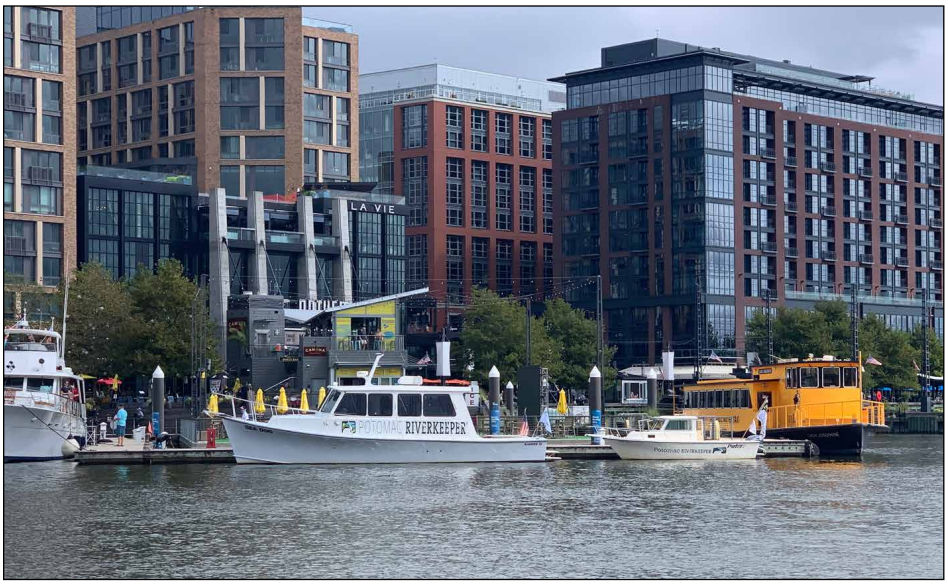
After the Supreme Court's 2023 decision in *Sackett v. Environmental Protection Agency,* which threatened past and future progress in water quality by stripping Clean Water Act protections for many small streams and wetlands, we realized that we needed legislative action to help to restore what was lost. We started our effort in Maryland in the 2024 session of the Maryland General Assembly. We worked with Senators Sara Love and Malcolm Augustine, who sponsored the Clean Water Justice Act, to achieve that goal. The Clean Water Justice Act gives Marylanders the power to join our State regulatory agency in enforcing our water pollution and wetland laws. Reinstating the ability for the public to enforce our clean water laws will move Bay restoration efforts forward and correct a longstanding problem with the actual implementation of the many bills we pass to improve waterways, public health, and environmental justice.

Those Senators share our strong commitment to environmental justice and our understanding of the deep connection Marylanders have with their waters. Those waters are not just an economic asset of major importance to the State but also a core part of our identity, providing habitat, recreation, and clean drinking water to millions of residents.

The Clean Water Justice Act restored this right by allowing public enforcement actions under State law. The law empowers communities to act against pollution affecting smaller, isolated wetlands and intermittent streams. It ensures every Marylander has the power to defend their local environment when other avenues fail.

HELP US MAKE AN EVEN BIGGER DIFFERENCE NEXT YEAR

A beautiful scene — even more so with clean water



The Sea Dog takes advantage of the DC Wharf's Marina — on parade

Some of PRKN's fleet — for patrolling and the floating lab

We fight pollution, and we are winning! To ensure this vital work continues in 2025, we need your support. Please consider giving a year-end donation to Potomac Riverkeeper Network.

You care about the state of our rivers because you rely on the Potomac or Shenandoah for your drinking water. And now more than ever, we all enjoy these rivers as a playground for boating, fishing, birding, and other recreation and as a refuge for quiet reflection.

Your Riverkeepers are undeterred. Working smart, and using state-of-the-art technologies, such as drone surveillance, they go where others cannot or will not – to find and stop illegal pollution and protect the rivers we love.

The threats to Potomac and Shenandoah water quality are ever-present.

Together with your support, we will make real progress in 2025, and for future generations, to protect the rivers you cherish.

With a small, dedicated staff, and low overhead, you can be sure your contribution to Potomac Riverkeeper Network is going where it should: to safeguard the health of the Potomac and Shenandoah Rivers.

What Your Gift Can Do for the River

Your tax-deductible donation is vital to protecting the Potomac and Shenandoah Rivers from pollution and ensuring access to resources that enrich the lives of so many across the watershed.

- $100 supports the purchase of 4 water quality monitoring kits.
- $250 provides materials for volunteers to complete river clean-ups.
- $500 provides fuel for an entire year of on-water patrol!
- $1,000 provides drone accessories for pollution monitoring!

On behalf of all of us at Potomac Riverkeeper Network, Happy Holidays and thank you for your commitment to the fight for clean water.

Our next generation deserves clean water too.

POTOMAC
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NETWORK

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