



ENVIRONMENTAL

PORTFOLIO



When I think of nature, I often think of the words of Rachel Carson, **“In nature nothing exists alone.”** Nature can mean many different things to people, but to me it has always meant a place of peace and purpose. When I grew up in Maryland’s Carroll County, my time was spent outdoors and in the water in both the Monocacy and Patapsco River watersheds. Without knowing it, these river valleys provided me places to investigate the underwater world, explore amongst the forest, and learn how to trust my instincts in unfamiliar territory. As I grew older, the Patapsco River became my own place of peace where I could walk amongst giants, feel the cool waters, and hear the breeze rustle within the trees. I learned that I felt grounded and connected to myself while I was in nature, so I tried to find ways where I could connect deeper with nature. I realized that by making it my purpose to help nature thrive in a changing world, I too could learn how to better adapt to my own life changes.

At Patapsco Heritage Greenway (PHG) we are dedicated to preserving, protecting, interpreting, and restoring the environment, history, and culture of Maryland’s Patapsco River valley for all. The Patapsco River Valley offers a rich history and natural treasure beyond measure to Marylanders and visitors. At PHG, we strive to keep the Patapsco Valley safe and healthy through our stewardship work. We understand and teach that nature is not a “thing” or something that is just “there”. We teach that nature is something we are a part of and that for nature to provide services such as clean water, clean air, reducing stress and anxiety, and restoring our well-being, nature needs our help. Nature provides these incredible services without any cost to us, so at PHG we strive to help nature as much as we can through our stewardship events. From stream cleanups and invasive plant removals to tree plantings and tree maintenance events, PHG’s environmental program endeavors to connect people with nature and the idea of stewardship. We want the community to take care of nature together and find a lasting connection between ourselves and the natural world around us. So we all need to remember, “In nature nothing exists alone.”

Diana Devers

Environmental Program Manager
Patapsco Heritage Greenway

OUR MISSION

As the non-profit managing organization for the Patapsco Valley Heritage Area, Patapsco Heritage Greenway is dedicated to preserving, protecting, interpreting, and restoring the environment, history, and culture of Maryland’s most dramatic river valley for all.



STREAM CLEANUPS

Patapsco Heritage Greenway is dedicated to protecting the health and quality of our waterways. As part of our efforts, we organize multiple stream cleanups every year in locations throughout the Patapsco Watershed. We believe that these events are crucial in preventing litter and pollution from contaminating our waters all the way to the Atlantic Ocean.

Litter that ends up in our streams and rivers is not only an eyesore, but also poses a serious threat to the aquatic ecosystems and the diverse wildlife that call them home. By participating in PHG cleanup events, volunteers help preserve and protect the natural resources of the valley and create a cleaner and safer environment for everyone.

Our stream cleanups are fun and engaging events that are open to people of all ages and abilities. They provide an opportunity for individuals and groups to come together and make a difference in their communities. In addition to cleaning up trash and debris, volunteers also learn about the importance of watershed conservation and the role they can play in keeping our waterways healthy.

CY 2023 DATA



560
volunteers



1,424.5
volunteer
hours



25,365
pounds of
trash removed



INVASIVE PLANT REMOVAL

Invasive plants can quickly spread and overtake an ecosystem, causing devastating effects on native species. The Patapsco Valley is no exception, and the threat of invasive plants is a serious concern. At Patapsco Heritage Greenway, we understand the importance of protecting our local ecosystem and are committed to combating this threat.

Our invasive plant removal events are a significant part of our efforts to save the trees and protect the natural resources of the valley. Volunteers work alongside us to identify and remove invasive species that threaten the health of the local environment. We focus on a range of invasive plants, from vines like English Ivy that suffocate and weaken trees, to aggressive grasses that threaten the preservation of landmarks such as the historic Oella Cemetery.

Our goal is to not only remove these harmful plants but also to educate the community on the importance of preventing the spread of invasive species and the benefit of planting and maintaining native plants. Through our efforts, we hope to promote a more sustainable environment for all who live and visit the Patapsco Valley.

CY 2023 DATA



673
volunteers



1,481
volunteer
hours



512,729
sq ft of invasive
plants removed



TREE PLANTINGS & MAINTENANCE

At PHG’s tree planting events, volunteers have the opportunity to get involved in a variety of tasks, including digging holes for the native tree saplings, placing trees in the ground, and securing protective structures around the newly planted trees. Planting trees is crucial for the environment, as they absorb carbon dioxide and provide oxygen. Trees also play an important role in preventing soil erosion, stormwater runoff and providing wildlife habitat.

However, planting trees is just the beginning. Proper tree maintenance, such as periodic watering, weeding, and mulching, is essential to ensure the survival rate of newly planted trees. By participating in our tree maintenance events, volunteers help to increase the likelihood of the trees’ survival, which leads to the long-term benefits of a healthier environment and greener community.

Partnerships are essential to the success of our tree planting and maintenance initiatives. We work closely with organizations like Patapsco Valley State Park and the Catonsville Tree Canopy Project to identify sites in need of tree planting, coordinate volunteer efforts, and provide resources and expertise.

At PHG, we are committed to contributing to the Maryland 5 million trees initiative, which aims to plant 5 million trees across the state by 2031. The trees we plant and maintain will continue to provide benefits to the ecosystem and the community for years to come.





EDUCATIONAL WORKSHOPS

At PHG, we understand the importance of educating our community about the Patapsco Valley's natural resources. Our environmental education programs help to inspire the public to take action and make a positive impact on the environment. We offer a diverse range of educational opportunities, including workshops, guided hikes, family days and lectures. Workshops cover topics such as water quality, invasive species removal, and sustainable practices. We believe that small but impactful changes, such as planting a tree or native wildflowers in your yard or community, can have a positive effect on the environment.

We are proud to have established partnerships with local schools, scout groups and other community organizations, allowing us to engage with young people and instill a love and appreciation for the environment from an early age. By working with these groups, we aim to inspire the next generation of environmental stewards who will play a critical role in the preservation of the Patapsco Valley.

We also recognize the importance of engaging with populations for whom English is not their first language. Working with groups such as Defensores de la Cuenca, we offer environmental education programs and materials in Spanish to ensure that the community has access to this valuable knowledge. As part of its current five year strategic plan, PHG is focused on engaging diverse communities in the Patapsco Valley.

At PHG, we firmly believe that education is one of the key ways of creating a more sustainable future for the Patapsco Valley. By providing educational opportunities and fostering a community that is passionate about protecting the natural resources, history, and culture of the valley, we can work together to ensure a healthier and more resilient Patapsco Watershed.

WORKSHOP TOPICS

Invasive Plant Identification
Native Plants of the Patapsco Valley
Native Plant Gardens
Native Plants for Pollinators

Water Quality of the Patapsco
Macroinvertebrate Discovery
Planting Trees in the Patapsco Valley
Where the River Flows



VERNAL POOL GUIDED HIKES

Vernal pools are temporary wetland habitats that play a vital role in supporting aquatic species, such as wood frogs and spotted salamanders. However, these pools are increasingly threatened by human activities and pollution. Because of their temporary nature, vernal pools are an unprotected wetland. To address this issue, PHG is dedicated to safeguarding vernal pools through awareness and action.

Our key initiative involves organizing vernal pool guided hikes during early spring. These hikes provide an opportunity to learn how to identify vernal pools, understand their ecological importance, and collect data for conservation purposes. PHG equips participants with the necessary tools to identify pools in their own communities, encouraging them to report locations and other data. This information enables us to offer resources and support for the protection of vernal pools in the Patapsco Valley. By inspiring individuals to become citizen scientists and contribute data from their own backyards, we aim to foster a community-driven approach to preserving and protecting the Patapsco Valley and its natural resources.

WILDLIFE FOUND IN PATAPSCO VALLEY VERNAL POOLS

Marbled Salamander
(*Ambystoma opacum*)

Spotted Salamander
(*Ambystoma maculatum*)

Jefferson Salamander
(*Ambystoma jeffersonianum*)

Blue-spotted Salamander
(*Ambystoma laterale*)

Wood Frog
(*Lithobates sylvaticus*)

Eastern Spadefoot
(*Scaphiopus holbrooki*)

Fairy Shrimp
(*Eubranchipus spp.*)

Spring Peeper
(*Pseudacris crucifer*)



WATER QUALITY MONITORING

PHG's water quality monitoring program recognizes the importance of the Patapsco River and its tributaries to the environment and surrounding communities. Committed to understanding the health of these waterways, the program's team of staff and trained volunteers collect data on various parameters, including air and water temperature, dissolved oxygen, pH levels, conductivity, nitrite, phosphorus, turbidity, and E. coli bacteria counts. By consistently gathering and analyzing data from 11 sites along the non-tidal portion of the Patapsco River, the team gains insight into the overall water quality of the watershed and detects potential issues or trends that may affect the ecosystem.

In addition to assessing traditional water quality parameters, the program places emphasis on collecting macroinvertebrate biological data twice a year. Benthic macroinvertebrates, such as insects, crustaceans, and mollusks, inhabit the streambed and are sensitive to changes in water quality. The presence of a diverse population of pollution-sensitive macroinvertebrates indicates a healthy and thriving stream ecosystem, whereas their absence or decline can serve as an early warning sign of potential water quality issues. Through active monitoring of water quality, the program provides critical information that guides long-term planning, ensuring the protection of both human health and the conservation of wildlife reliant on the Patapsco River.

CY 2023 DATA



172

volunteers

including **28** trained monitors



809

volunteer
hours

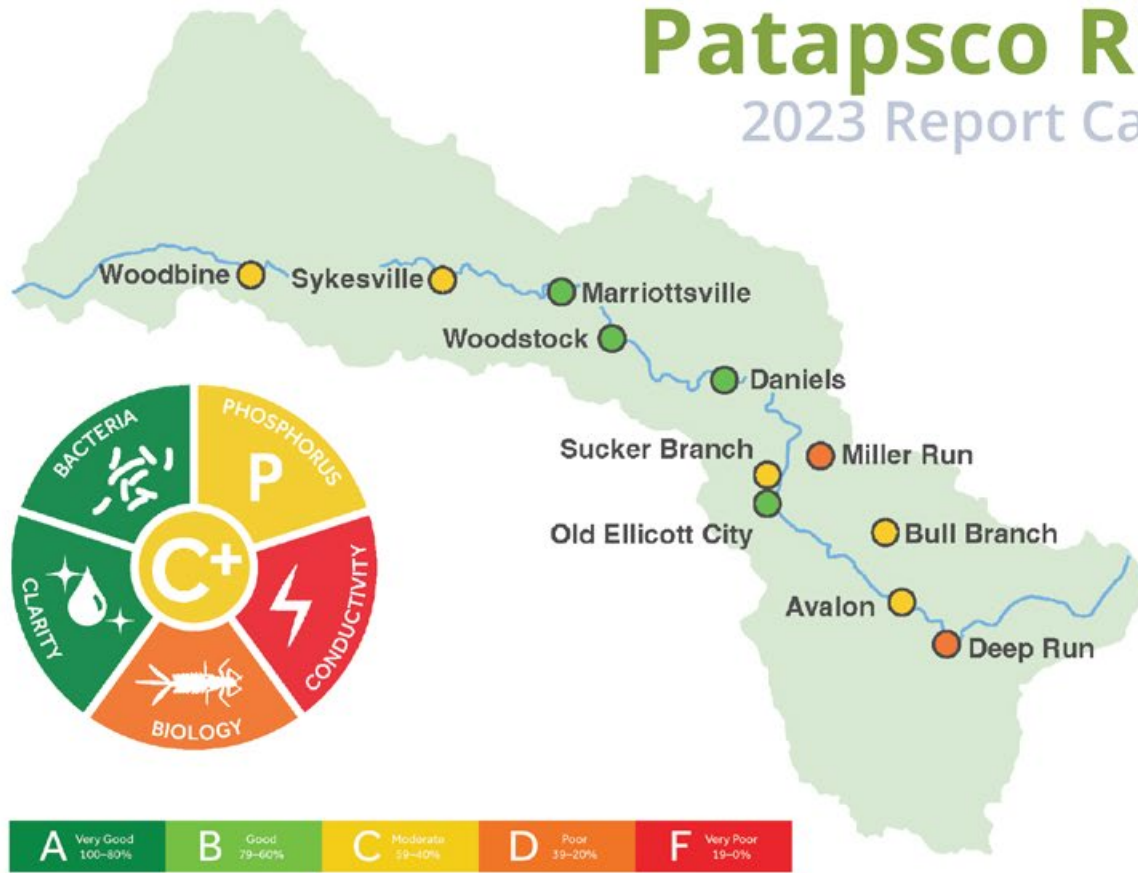


118

monitoring days

Non-Tidal Patapsco River

2023 Report Card



The Patapsco River earned an overall C+ grade, reflecting moderate health.

⚡ Conductivity

Conductivity is the ability of the water to conduct electricity and is based on the number of charged particles in the water column. Excessive conductivity causes organisms stress and can affect their ability to regulate their internal chemistry.

P Phosphorus

Phosphorus is a critical nutrient in our aquatic food web, but too much can be a problem. Even a modest increase can cause a chain of undesirable events including accelerated plant growth, algae blooms, low dissolved oxygen, and the death of some aquatic animals.

💧 Clarity

Particles in the water cause it to appear cloudy and when they collect on the bottom of the stream, they can smother aquatic plants and animals. Particles can come from various sources of erosion and runoff.

🐛 Biology

A diverse and pollution sensitive benthic macroinvertebrate community is an indicator of a healthy stream. Conversely, finding only organisms that are tolerant to pollution tells a different story. All these organisms (dragonfly nymphs, worms, snails, fly larvae) are also an important foundation for a healthy aquatic food web.

🦠 Bacteria

Bacteria are everywhere in our environment, but some bacteria can make water unsafe for contact. We measure E. coli bacteria in the water because some kinds of E. coli are pathogenic and high numbers represent an increased risk of becoming sick after coming in contact with the water.

Scan to view the full Report Card

or visit patapsco.org/water-quality-monitoring





STREAM WATCH

Stream Watchers are volunteers who play a critical role in maintaining the health of waterways within the Patapsco Watershed. Adopting a 1/4-mile section of a stream, volunteers commit to regularly monitoring, cleaning, and walking along the stream banks.

Whether you live, work, or simply enjoy recreational activities near the streams that flow into the Patapsco River, you can get involved in this important effort. Once assigned a section, Stream Watchers are responsible for reporting any issues observed, such as litter accumulation, erosion, or pollution. In addition to monitoring, Stream Watchers help keep their section clean by arranging quarterly cleanups, either individually or as part of a volunteer group. The Stream Watch program provides a more thorough monitoring of areas within the watershed and increased reporting of issues in the river and streams. It also allows community members to take an active role in the protection and conservation of environmental resources.

Volunteers are encouraged to report any points of information, such as damage or potential restoration opportunities, to PHG through an online data sheet. This information helps PHG evaluate where additional resources are needed within the watershed. At PHG, we recognize the significance of community science programs and value the opportunity to closely collaborate with the community in the shared goal of preserving our cherished resources.

CY 2023 DATA



42

Stream Watchers



37

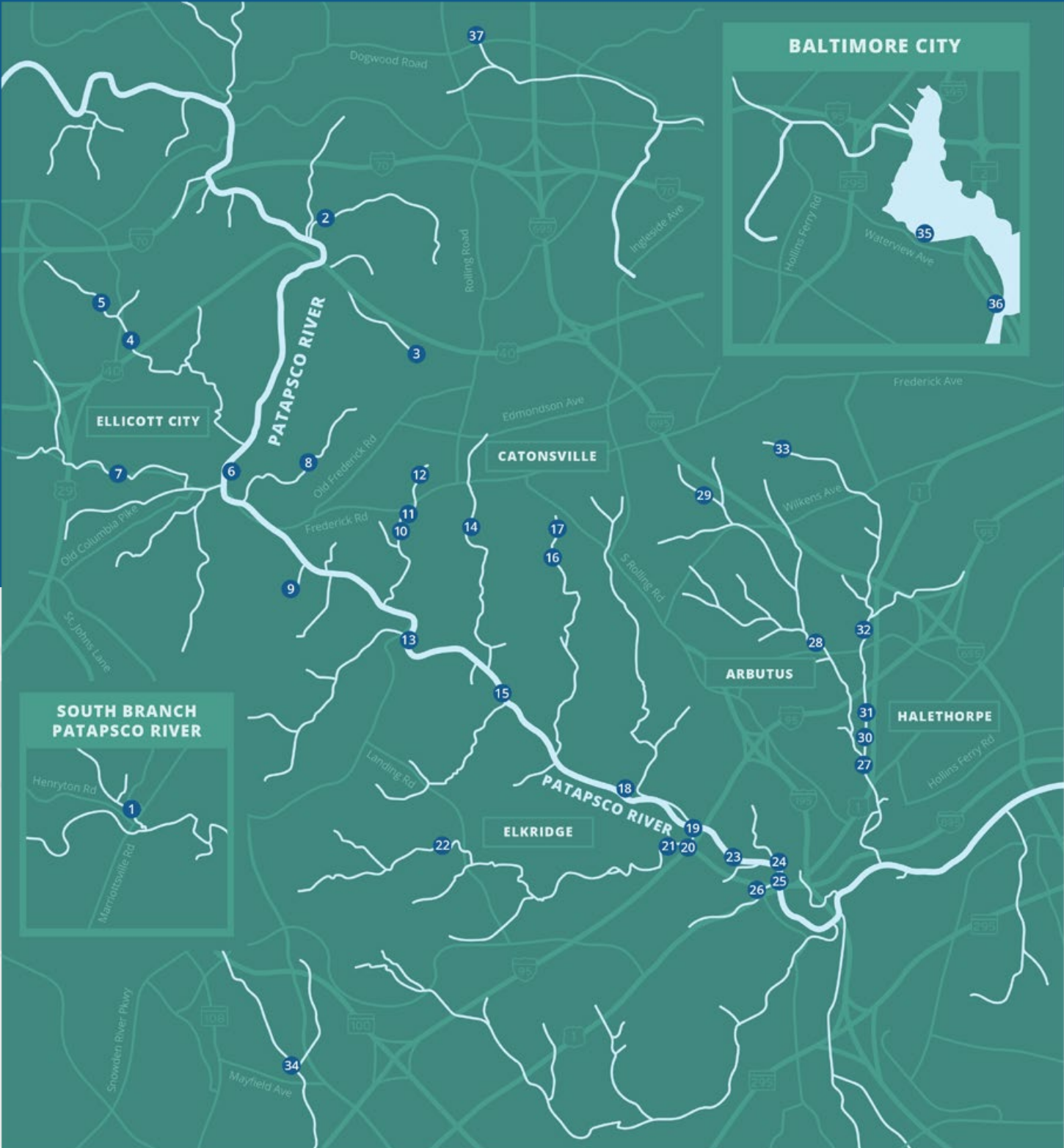
sites within
the PVHA



715

pounds of
trash removed

STREAM WATCHER SITES



Stream Watcher Site Key

1. Piney Run near Marriottsville Road
2. Cedar Branch near Inwood Ave
3. Miller Run near Nuwood Drive
4. Sucker Branch near Normandy Shopping Center
5. Sucker Branch near Town and County Boulevard
6. Patapsco River, Ellicott City
7. Hudson Branch near Frederick Road
8. Cooper Branch on the Trolley Trail #9
9. Patapsco Tributary near College Avenue
10. Thistle Stream near Frederick Road
11. Thistle Stream near Thistle Road
12. Thistle Stream near Devere Lane
13. Patapsco River near Grist Mill Walking Bridge
14. Sawmill Branch near Cainewood Court
15. Patapsco River near the Swinging Bridge
16. Santee Branch near McCurley Avenue
17. Santee Branch near Hilton Terrace
18. Patapsco River near Soapstone Branch
19. Patapsco River near Rockburn Hill Road
20. Rockburn Run near Rockburn Hill Road
21. Rockburn Run, Rockburn Branch Park
22. Rockburn Run near Landing Road
23. Patapsco River near the Thomas Viaduct
24. Patapsco River near Park Entrance Road
25. Patapsco River near Park Entrance Road
26. Patapsco Tributary near Levering Avenue
27. Herbert Run, East Branch near Oakland Ave
28. Herbert Run, West Branch near Sulphur Spring Road
29. Herbert Run, West Branch near South Paradise Avenue
30. Herbert Run, East Branch near Southwest Boulevard
31. Herbert Run, East Branch near Francis Ave
32. Herbert Run, East Branch near Arbutus Volunteer Fire Dept.
33. Herbert Run, East Branch near Charlestown Senior Living
34. Deep Run near Mayfield Avenue
35. Middle Branch near West Patapsco Avenue
36. Patapsco River near Potee Street
37. Gwynn Falls Stream near Dogwood Road

ADDITIONAL COMMUNITY SCIENCE PROGRAMS

Salt Watch

PHG has partnered with the Izaak Walton League of America to launch the community water quality program, Salt Watch. This program aims to increase awareness of the harmful effects of excessive road salt on water quality and stream health in the watershed and surrounding regions. Through our Salt Watcher training program, participants receive education on road salt pollution and its impacts on the environment. Using the provided testing kit, volunteers collect and analyze water samples from streams and waterways. This valuable data will be used to identify areas where excessive road salt application is a problem within the Patapsco Watershed.

Water Quality Watchers

During Water Quality Watchers workshops, participants learn how to collect data on the health of waterways within the Patapsco River Watershed. The program instructs volunteers how to properly collect and analyze water quality data, including temperature, pH, and macroinvertebrate identification. Workshop participants are encouraged to collect data twice per year and then fill out the data collection form on PHG's website. This program enables community members to participate in scientific research and helps to identify potential water quality issues in order to work towards finding solutions to improve our local waterways.

Water Quality Watch and Salt Watch can be incorporated into events and other programs.



CY 2023

ENVIRONMENTAL PROGRAM

AT A GLANCE

72
stewardship
events

4,674 volunteer hours



1,884
volunteers

26,080
pounds of trash
removed



36
education workshops



50
storm drains labeled

512,729
square feet of
invasive plants removed



212
trees planted



298
trees maintained

REWIND TO CY 2022

1,524
volunteers

3,864
volunteer hours

51
stewardship events

23
education workshops

32,818
pounds of trash removed

735,216
sq ft of invasive plants removed

130
trees planted

276
trees maintained

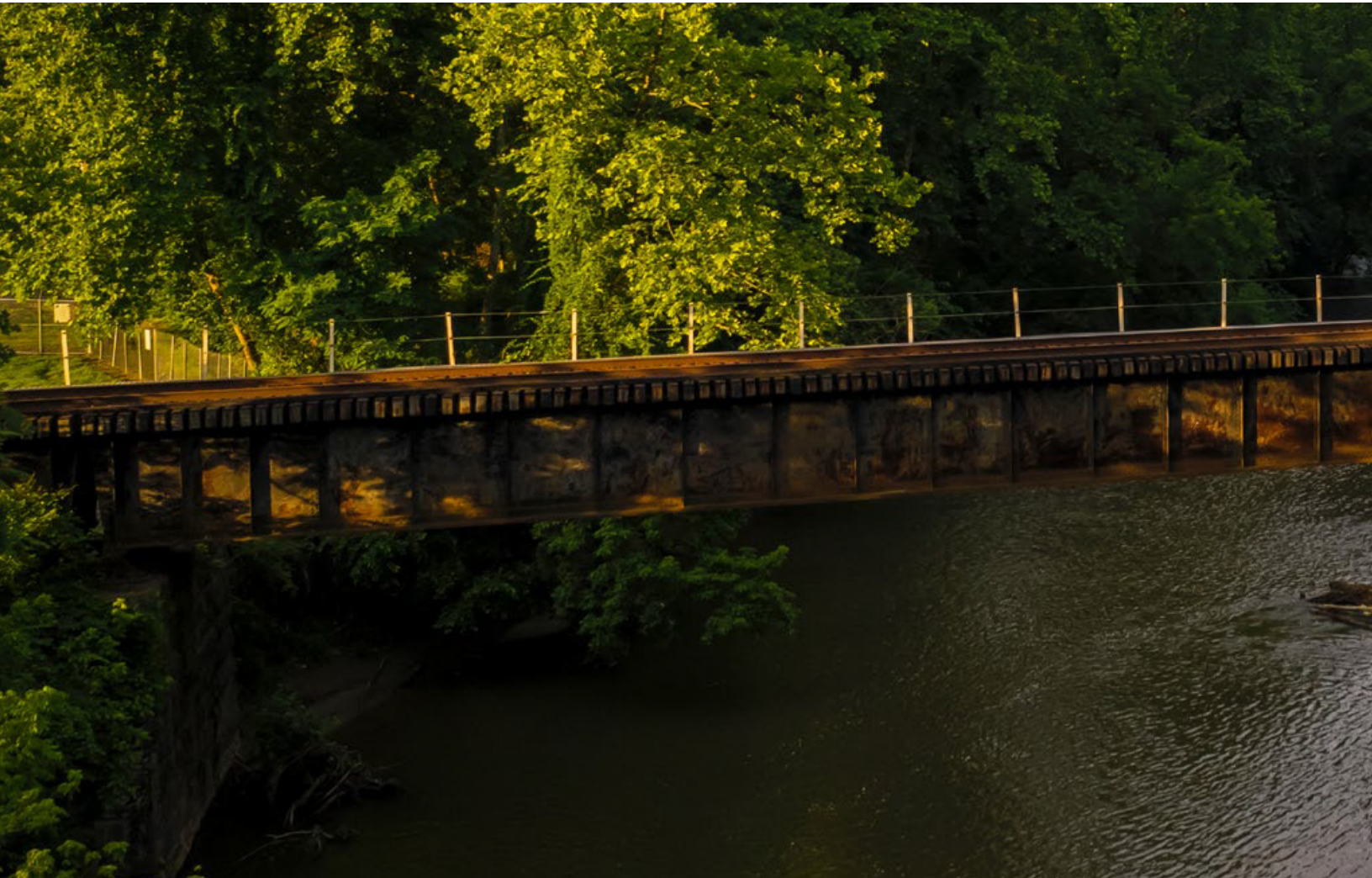
JOIN OUR TEAM OF ENVIRONMENTAL STEWARDS!

Find out how you can get involved at:
patapsco.org/stewardship/environmental-programs



QUESTIONS? CONTACT:

Diana Devers
Environmental Program Manager
environment@patapsco.org



THE CITIZENS OF
BALTIMORE COUNTY