



# ENVIRONMENTAL — PORTFOLIO —



[patapsco.org](http://patapsco.org)

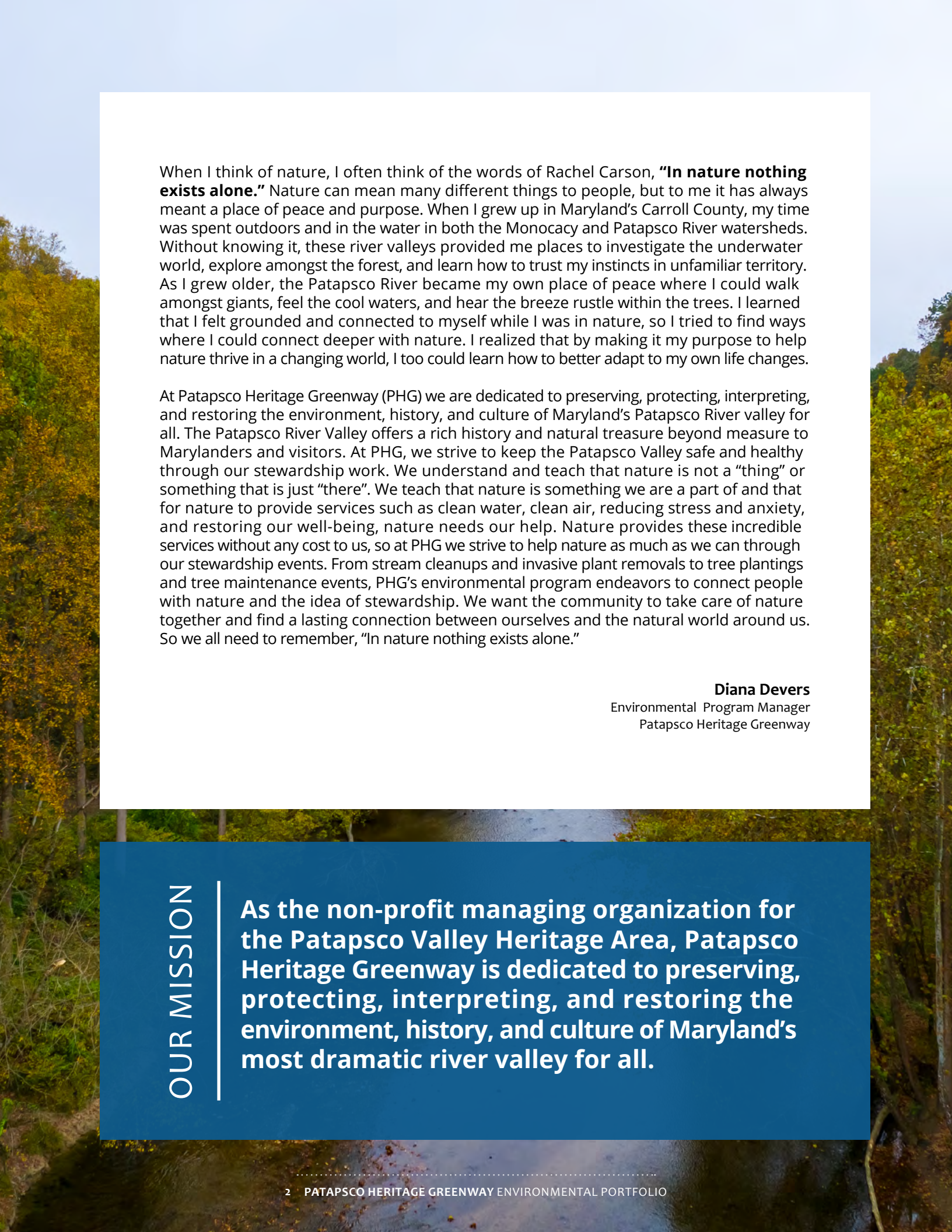


[@patapscovalleyheritage](https://www.instagram.com/patapscovalleyheritage)



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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 2022 DATA



**600**

VOLUNTEERS



**1,222**

VOLUNTEER  
HOURS



**32,268**

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 2022 DATA



**420**

VOLUNTEERS



**1,218**

VOLUNTEER  
HOURS



**735,216**

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  
Aquatic Macroinvertebrates  
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 holbrookii)*

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 2022 DATA



**184**

VOLUNTEERS  
INCLUDING 33  
TRAINED MONITORS



**736**

VOLUNTEER  
HOURS



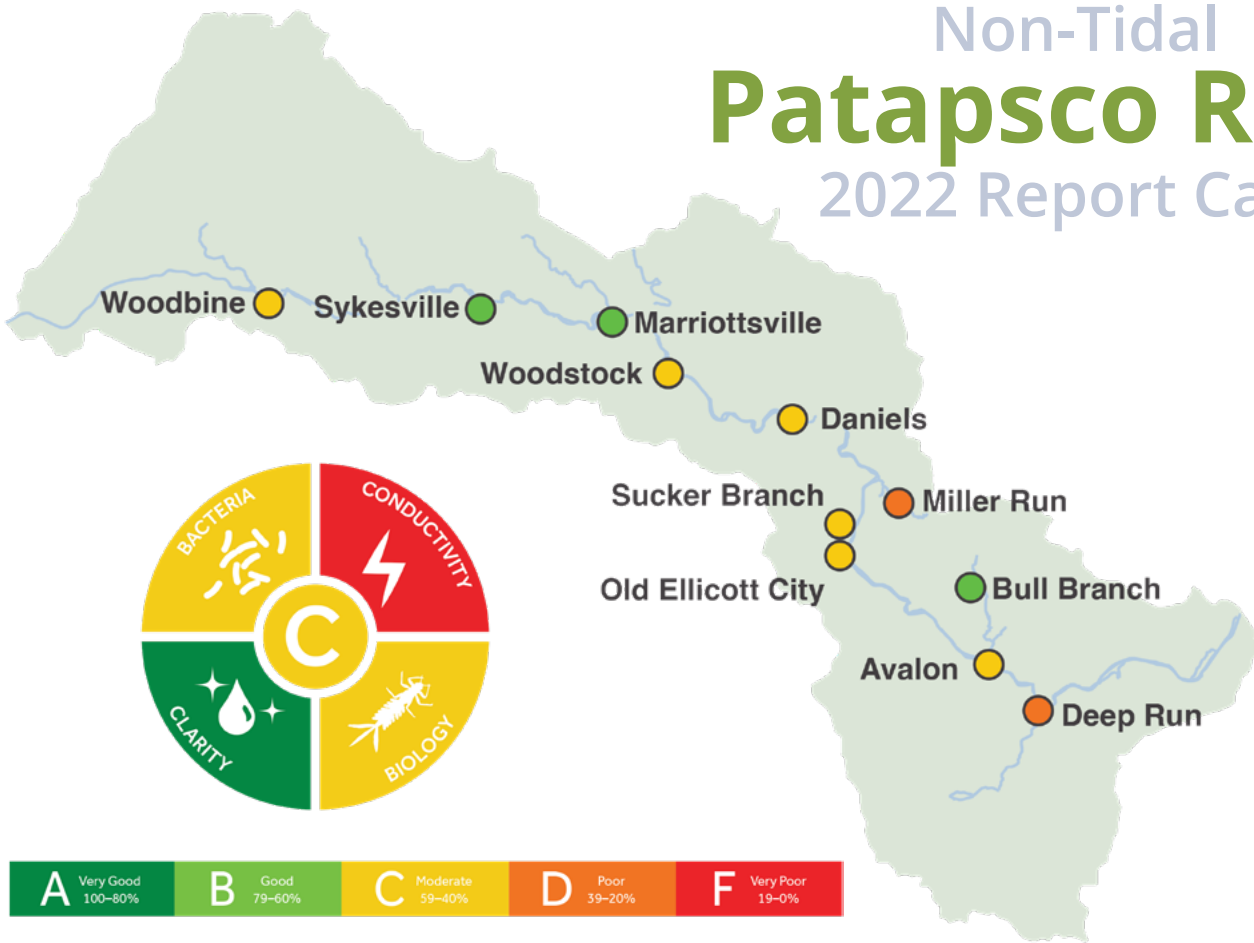
**92**

MONITORING DAYS



# Non-Tidal Patapsco River

## 2022 Report Card



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



### Biology

The biology indicator is an assessment of the benthic macroinvertebrates that live on the stream bottom—organisms such as mayfly nymphs, worms, and snails. A diverse and pollution sensitive community is an indicator of a healthy stream. This watershed earned a C for benthic biology.



### Clarity

Clear water is important for the growth and survival of aquatic plants and animals. Sediment in the water can smother benthic organisms living on the bottom of the stream. Turbid water can be caused by stream erosion, runoff from agriculture or construction sites, stormwater, or excess algal growth. All sites received an A or a B for this parameter.



### Conductivity

Conductivity is a measure of the number of charged particles in the water. When conductivity levels are high, the organisms in the ecosystem can experience severe stress. The main sources of conductivity are road salts, wastewater treatment plants, stormwater runoff and human waste pollution. Conductivity levels across the region are high, yielding a failing grade at all sites.



### Bacteria

Most of our sites have moderate to moderately poor bacteria levels. This means that there is some risk of getting sick from swimming in this water. Our regional grade is a C for this parameter. Bacteria can come from sewage treatment plants, leaking septic systems or sewage pipes, human or animal waste. High-intensity storm events can carry bacterial runoff into our waterways, making them unsafe for swimming.

Scan to view the full Report Card  
or visit [bit.ly/2022patapscoreport](https://bit.ly/2022patapscoreport)







## 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 citizen science programs and value the opportunity to closely collaborate with the community in the shared goal of preserving our cherished resources.

CY 2022 DATA



22

ACTIVE STREAM  
WATCHERS



18

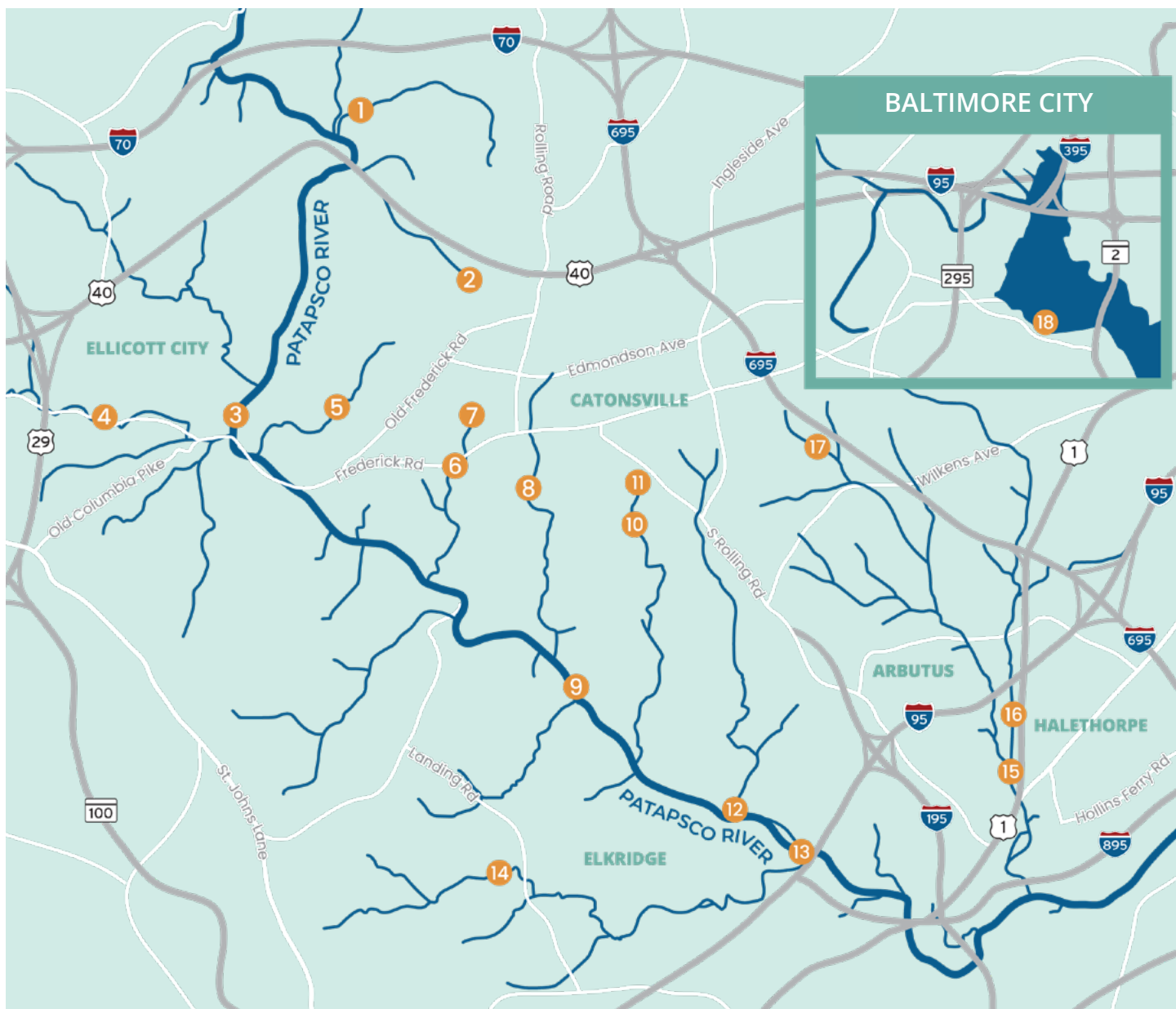
SITES WITHIN  
THE PVHA



550

POUNDS OF  
TRASH REMOVED





## 2022 STREAM WATCH SITES

1. Cedar Branch near Inwood Ave
2. Miller Branch near Nuwood Drive
3. Patapsco River, Ellicott City
4. Hudson Branch near Frederick Road
5. Cooper Branch on the Trolley Trail #9
6. Thistle Stream near Thistle Road
7. Thistle Stream near Devere Lane
8. Sawmill Branch near Cainewood Court
9. Patapsco River, Avalon Area
10. Santee Branch near McCurley Ave
11. Santee Branch near Hilton Terrace
12. Patapsco River near Rockburn Hill Road
13. Rockburn Run, Rockburn Branch Park
14. Rockburn Run near Landing Road
15. Herbert Run, East Branch near Oakland Ave
16. Herbert Run, East Branch near Francis Ave
17. Herbert Run, West Branch near South Paradise Ave
18. Middle Branch near West Patapsco Ave



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# ADDITIONAL

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## COMMUNITY SCIENCE PROGRAMS



### WATER QUALITY WATCHERS

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The Water Quality Watchers program empowers volunteers to collect valuable data on the health of waterways within the Patapsco River Watershed. The program trains volunteers on how to properly collect and analyze water quality data, including temperature, pH, and macroinvertebrate identification. The data is collected twice a year and then easily uploaded to 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.

### SALT WATCH

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PHG has partnered with the Izaak Walton League of America to launch our 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 Watch and Salt Watch can be incorporated into events and other programs.**





# CY 2022

## ENVIRONMENTAL PROGRAM

### AT A GLANCE

51

STEWARDSHIP  
EVENTS

3,864 VOLUNTEER HOURS



1,524  
VOLUNTEERS

32,818  
POUNDS OF TRASH  
REMOVED



23

EDUCATION WORKSHOPS

50

STORM DRAINS LABELED



735,216  
SQUARE FEET OF  
INVASIVE PLANTS REMOVED



130

TREES PLANTED

+

276

TREES MAINTAINED

WANT TO GET  
INVOLVED?

LEARN MORE  
ON THE NEXT PAGE








# JOIN OUR TEAM

## OF ENVIRONMENTAL STEWARDS

### HOW TO GET INVOLVED

#### 1 CONNECT WITH US

Sign up for email updates and follow us on social media for the latest information on upcoming environmental events.

patapsco.org   @patapscovalleyheritage  @PatapscoValley

#### 2 REGISTER FOR AN EVENT

Browse and register for environmental events on Patapsco Heritage Greenway's Eventbrite page by visiting: [bit.ly/patapscoevents](https://bit.ly/patapscoevents)

#### 3 BECOME A COMMUNITY VOLUNTEER

Get more information on how to get involved with Stream Watch or the Water Quality Monitoring program by filling out the volunteer request form at: [patapsco.org/contact](https://patapsco.org/contact)

#### 4 ORGANIZE A CORPORATE EVENT

PHG's corporate events offer businesses and organizations an opportunity to actively contribute to the preservation of the Patapsco watershed while fostering stronger relationships among team members, the local community and the environment.

Interested? Email Rachel Pierson at [community@patapsco.org](mailto:community@patapsco.org)

#### QUESTIONS? CONTACT:

**Diana Devers**  
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