

A woman with brown hair and sunglasses on her head is smiling in the foreground. Behind her is a river with a rocky bank, a dense green hedge, and a wooden bridge with a metal railing. The scene is outdoors with trees and foliage in the background.

Middle Anacostia Community Science Water Quality Report 2025

Introduction

The Anacostia River and its tributaries flow through densely populated areas in Montgomery County, Prince George's County, and Washington, DC, providing recreation opportunities and natural respite within an ever more urban landscape. In the past, the watershed has experienced poor health due to extensive pollution, damaged ecosystems, and lost biodiversity in its streams. In recent decades, however, the watershed and its streams have undergone a resurgence, due to the combined efforts of local residents, nonprofits, institutions, government agencies, and businesses.

As part of its mission to protect, restore, and connect people to the Anacostia River, Anacostia Riverkeeper (ARK) has led a water quality monitoring program across the watershed for the past five years. Our community science program in Maryland trains residents to collect water samples and measurements at various sites across the Anacostia River's tributaries in Maryland during the summer months. These sites are picked for their recreational potential- locations that families, cyclists, hikers, or boaters frequent as they enjoy the watershed, as well as areas with a history of degradation. As development continues throughout the watershed and as stakeholders continue to invest in restoring the Anacostia River and its tributaries, collecting this data is essential to improving water quality. This kind of hands-on programming not only provides recreators with up-to-date information on the water they enjoy, but also empowers local residents to become community scientists and informed river stewards.

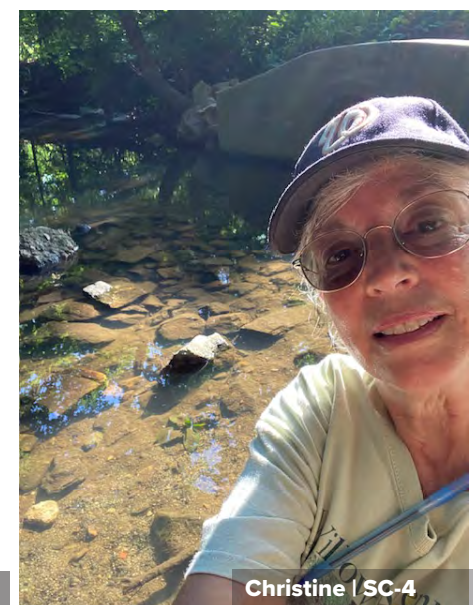
In 2025, our monitoring efforts in Montgomery County were funded through the Clean Water Montgomery grant by Montgomery County Department of Environment in partnership with the Chesapeake Bay Trust (CBT). In the absence of consistent funding, our work in Prince George's County was partially funded by generous individual donors and local watershed groups. In both counties, we relied on strong community partners to complete our monitoring and broaden the impact of our outreach.



Michael with his sample | NEB-1



Night heron visiting LB-1



Christine | SC-4



Visit anacostiariverkeeper.org to learn more about the program.

| What are we monitoring?

Community science monitors collect water samples and measurements biweekly on Wednesday mornings from 15 sites across the upper Anacostia watershed from May to September. These parameters help paint a picture of the recreational water quality and ecological health of these streams.



Fecal Indicator Bacteria (*E. coli*)

What is it?

E. coli is a bacteria that lives in the intestines of warm blooded animals, like humans, dogs, and birds. While *E. coli* can cause sickness in humans, it also is used as an indicator species letting us know when other harmful pathogens might be present.

How much is safe?

Below 410 MPN

E. coli is measured in Most Probable Number of Coliform Forming Units (MPN) per 100mL for sample.



Turbidity

Turbidity is a measure of how clear the water is. Suspended sediment blocks light to aquatic plants and can also act as a vector for bacteria and other pollutants, so higher turbidity is thought to be associated with higher bacteria.

Below 20 NTU

Turbidity is measured in nephelometric turbidity units (NTUs).



pH

pH is the acidity or alkalinity of the water. Naturally, the pH of stream water is close to neutral at 7. However, pollution can drive pH either way and create unsafe conditions.

6-8

The pH scale ranges from 0 (very acidic) to 14 (very alkaline).

**Other ecological water quality parameters, including conductivity and dissolved oxygen, were also measured at most sites on a monthly basis.*



Robyn sampling in the rain | NWB2



Dry day at NWB-4

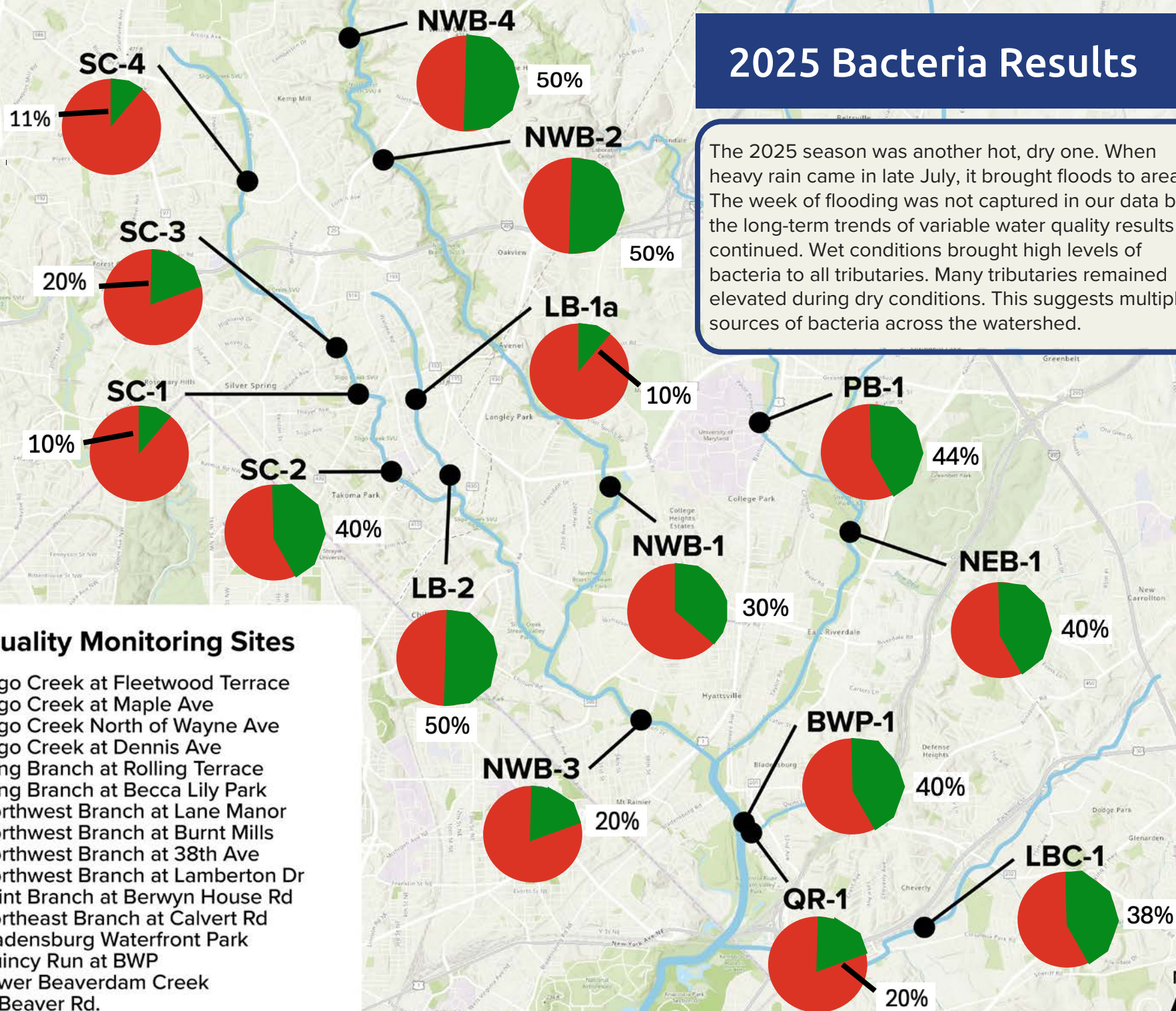
2025 Bacteria Results

The 2025 season was another hot, dry one. When heavy rain came in late July, it brought floods to area. The week of flooding was not captured in our data but the long-term trends of variable water quality results continued. Wet conditions brought high levels of bacteria to all tributaries. Many tributaries remained elevated during dry conditions. This suggests multiple sources of bacteria across the watershed.



Water Quality Monitoring Sites

- SC-1: Sligo Creek at Fleetwood Terrace
- SC-2: Sligo Creek at Maple Ave
- SC-3: Sligo Creek North of Wayne Ave
- SC-4: Sligo Creek at Dennis Ave
- LB-1a: Long Branch at Rolling Terrace
- LB-2: Long Branch at Becca Lily Park
- NWB-1: Northwest Branch at Lane Manor
- NWB-2: Northwest Branch at Burnt Mills
- NWB-3: Northwest Branch at 38th Ave
- NWB-4: Northwest Branch at Lamberton Dr
- PB-1: Paint Branch at Berwyn House Rd
- NEB-1: Northeast Branch at Calvert Rd
- BWP-1: Bladensburg Waterfront Park
- QR-1: Quincy Run at BWP
- LBC-1: Lower Beaverdam Creek at Beaver Rd.



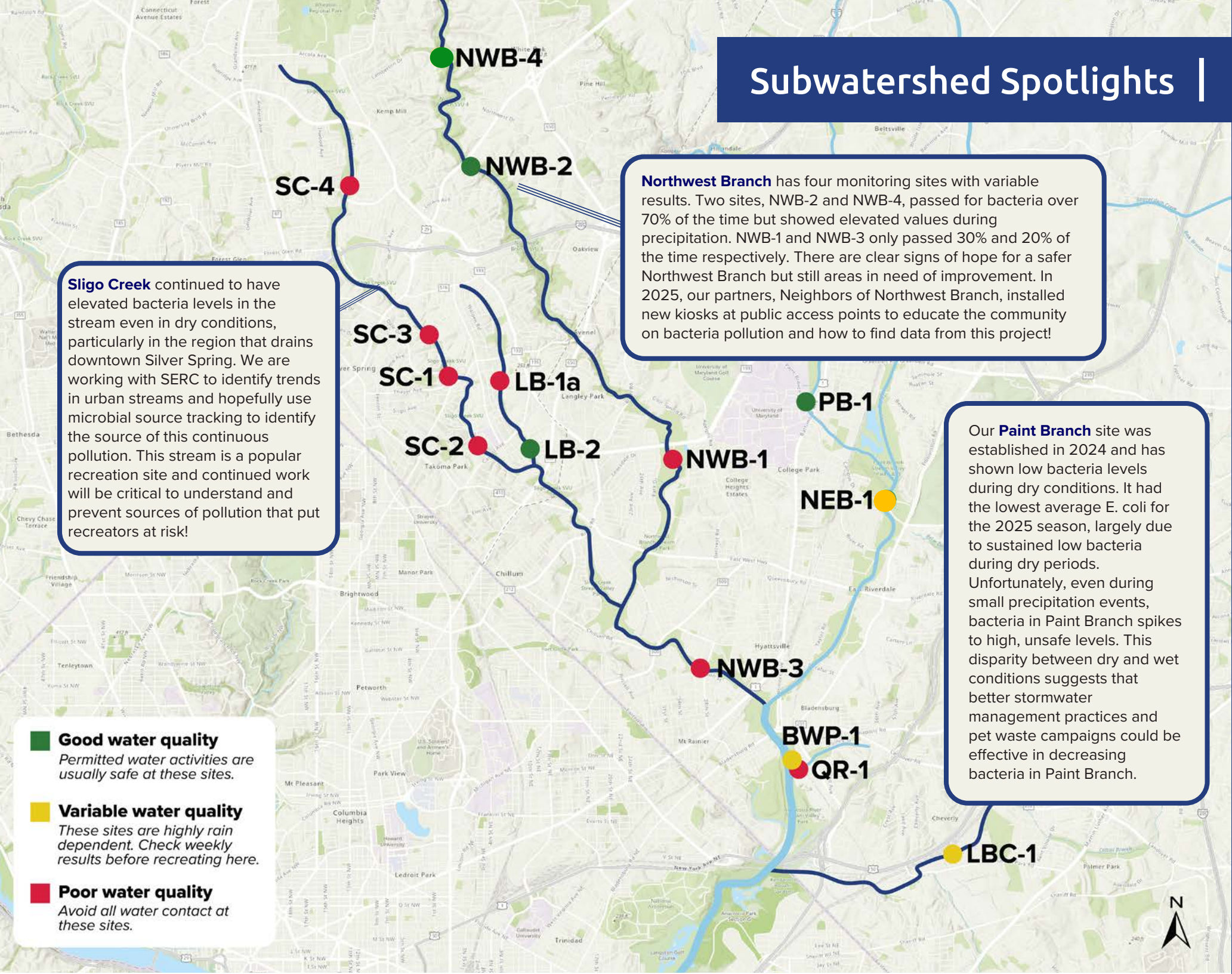
Subwatershed Spotlights |

Northwest Branch has four monitoring sites with variable results. Two sites, NWB-2 and NWB-4, passed for bacteria over 70% of the time but showed elevated values during precipitation. NWB-1 and NWB-3 only passed 30% and 20% of the time respectively. There are clear signs of hope for a safer Northwest Branch but still areas in need of improvement. In 2025, our partners, Neighbors of Northwest Branch, installed new kiosks at public access points to educate the community on bacteria pollution and how to find data from this project!

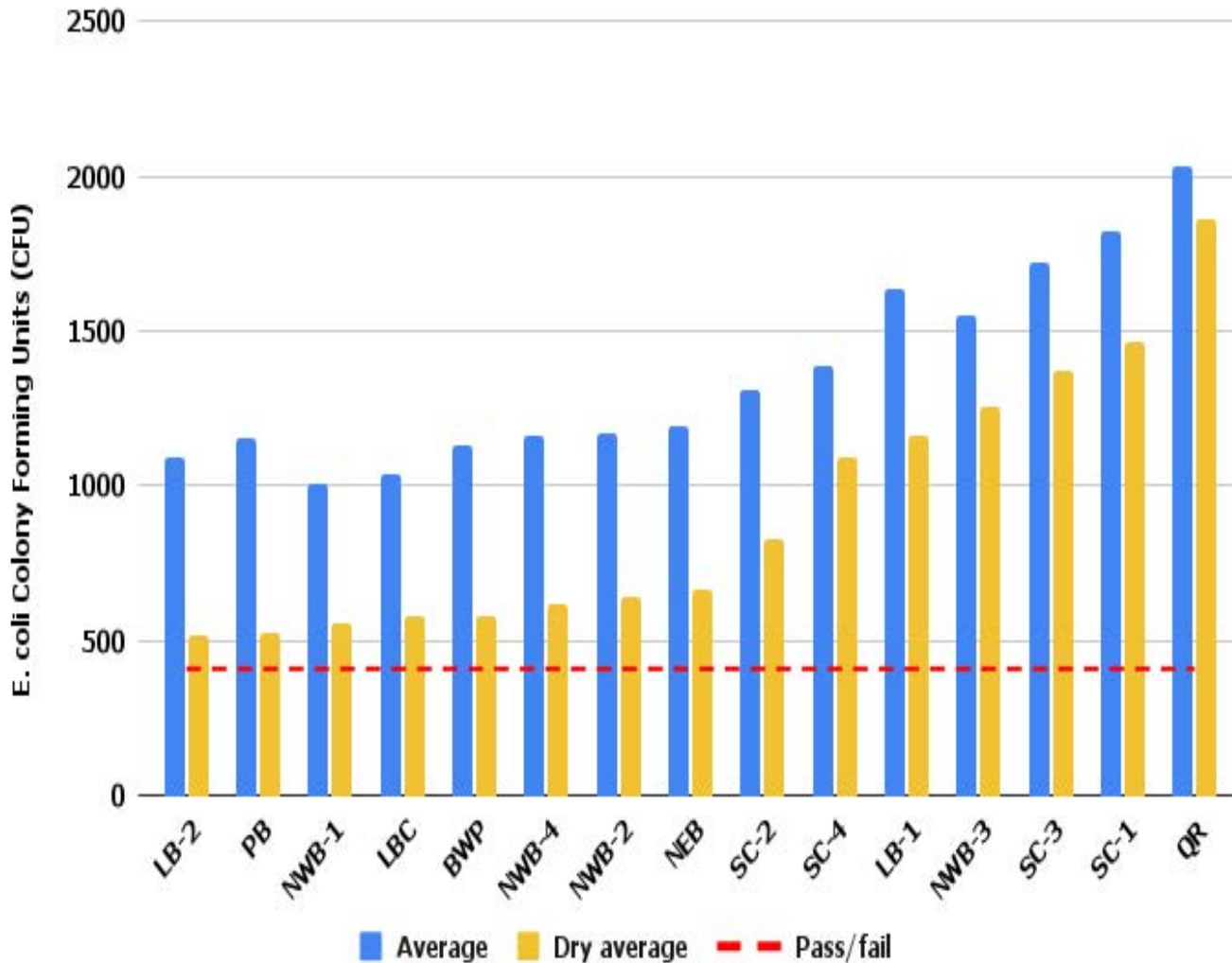
Sligo Creek continued to have elevated bacteria levels in the stream even in dry conditions, particularly in the region that drains downtown Silver Spring. We are working with SERC to identify trends in urban streams and hopefully use microbial source tracking to identify the source of this continuous pollution. This stream is a popular recreation site and continued work will be critical to understand and prevent sources of pollution that put recreators at risk!

Our **Paint Branch** site was established in 2024 and has shown low bacteria levels during dry conditions. It had the lowest average E. coli for the 2025 season, largely due to sustained low bacteria during dry periods. Unfortunately, even during small precipitation events, bacteria in Paint Branch spikes to high, unsafe levels. This disparity between dry and wet conditions suggests that better stormwater management practices and pet waste campaigns could be effective in decreasing bacteria in Paint Branch.

-  **Good water quality**
Permitted water activities are usually safe at these sites.
-  **Variable water quality**
These sites are highly rain dependent. Check weekly results before recreating here.
-  **Poor water quality**
Avoid all water contact at these sites.



What We Learned In 2025



Dry average = mean CFU when sampling with <0.5 inches of 72-hour precipitation

Stormwater Sites

All sites were impacted by rain events which can dog and avian waste into streams. Sites like **LB-2** and **PB** returned to relatively low bacteria during dry weather. Stormwater remediation and dog waste campaigns could be effective in these areas.

Wastewater Sites

As you can see, rainfall doesn't tell the full story. **QR, SC-1, SC-3 and others** remain elevated in dry conditions. Human waste is another significant source of E. coli, and this could suggest wastewater infrastructure needs to be addressed.

What's the source?

Our new **Tier 3 status** allows our bacteria data to be used for legal action! **Microbial source tracking** data, which we expect in 2026, will help identify what contaminates our sites during dry weather!

Looking Ahead

Our data shows that water quality in the Upper Anacostia remains highly irregular, and major improvements need to be made to allow local residents to enjoy their waterways safely. Montgomery and Prince George's Counties need to continue to invest in green infrastructure and enforce stormwater, erosion, and sediment control regulations. Our commitment to supporting microbial source tracking will help to inform better management decisions and policy across both counties.

Our monitoring program not only helps us protect the river for all who live and play in the watershed, but also build a collaborative coalition of water stewards who can take ownership of their watershed for years to come. We expanded our outreach efforts this year to share water quality information with more of our community by attending events like farmer's markets and local festivals. Thanks to Neighbors of Northwest Branch and Friends of Sligo Creek, you can now also find fliers on the program and general water quality tips at their public access kiosks. Look out for them next time you're out on the trails!

Want to get involved?

Visit anacostiariverkeeper.org for more information on community science water quality monitoring in the Anacostia watershed. Full data can be found on the Chesapeake Monitoring Cooperative's [Data Explorer](#) and, during the summer, weekly results can be found on [Swim Guide](#) and [social media](#). Training for the new wave of volunteers will begin in April 2026. If you'd like us to speak to your community group or attend a local event, don't hesitate to reach out.

Email monitor@anacostiariverkeeper.org with any questions.

Thank you to our volunteer monitors!

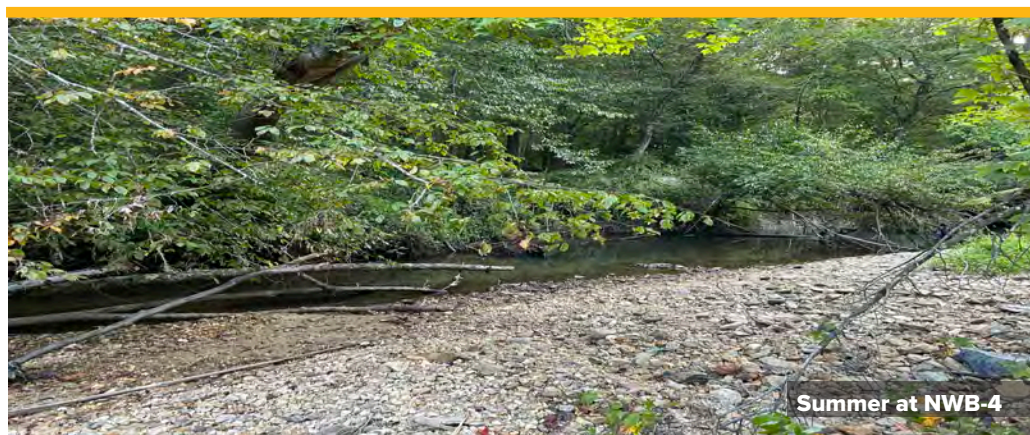
We are so thankful for our coalition of volunteers across Montgomery and Prince George's Counties, who ventured out to sites during rain and hot weather all summer long. These volunteers are our boots on the ground and eyes on the watershed, often reporting pollution or other irregularities so we at Anacostia Riverkeeper can respond and take action. Our program would be sample-less without this cohort of hard-working community scientists, and we are thankful for their service to us and their communities.



Alan sampling Northwest Branch



Lauren & Corey at LB-1



Summer at NWB-4