down to earth

Environmental Restoration Quarterly • Summer 2025

Monocacy River Board - Little Pipe Creek Float

By: Byron Madigan, Water Resource Supervisor

The Monocacy River Board spent the last Saturday in June exploring along 9.5 miles of the Little Pipe Creek water trail within the Monocacy River Watershed. The put-in for the Little Pipe Creek water trail starts in Union Bridge at Locust Street, and winds approximately 9 miles before its confluence with Big Pipe Creek just above the take-out at Double Pipe Creek Park in Detour.

This water trail is one of two Carroll County water trails within the Monocacy Watershed, with the other being the Big Pipe Creek Water Trail, which starts at Hape's Mill Road, and winds approximately 7 miles in length before its confluence with Little Pipe Creek.

Additional information about these water trails, including guidance on proper flow conditions and links to local USGS gauges can be found on the Carroll County Government Recreation and Parks' page, Carroll County Water Trails.

(continued on page 2)

Bureau of Resource Management (BRM)
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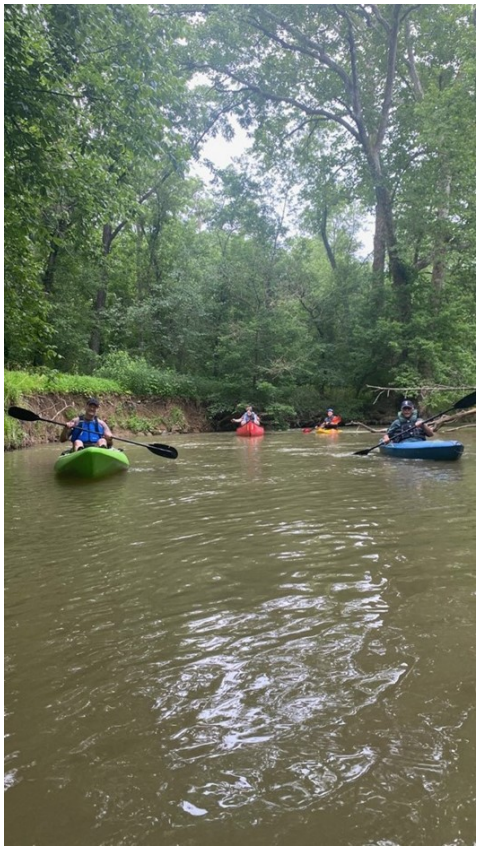
https://www.carrollcountymd.gov/government/directory/planning-land-management/resource-management/

Protecting and managing Carroll County's natural resources for the pleasure and enjoyment of its Citizens

Monocacy River Board - Little Pipe Creek Float (continued)

If you would be interested in promoting the enhancement of natural resources within the Monocacy River Watershed, the board currently has an opening for a volunteer who is looking to serve and participate. The River Board has an overall goal of serving as an advocate for the Monocacy River, its watershed and the varied resources contained within, meeting once per month in the evenings. For additional information contact Byron Madigan at 410-386-2167.



Restoration Update

By: Claire Hirt, Watershed Management Coordinator

In June, the Bureau kicked off construction at the Melstone Valley restoration project in Eldersburg, where we are upgrading an existing stormwater facility to a submerged gravel wetland. Our contractor, Magstone, has installed the baseflow diversion pipe that allows baseflow to bypass the facility, providing constant, stable flow for the stream below while separating stormwater for treatment in the new facility during storm events. Following this, we will remove the two riser structures, line storm drain pipes through the roadway, and construct the new facility.

The next project to break ground will be a retrofit of the stormwater facility at Century High School in Eldersburg. We are converting the existing shallow marsh to a surface sand filter to provide improved water quality treatment, a more easily maintained design, and an update to stormwater infrastructure. Working with Kibler Construction Co, the process will involve installing storm drain, relocating sanitary sewer, modifying the existing weir wall, and installing the sand filter. We expect the project to start this summer and continue through the fall.

Century High School

This project is funded in part by Maryland's Chesapeake & Atlantic Coastal Bays Trust Fund

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Melstone Valley

This project is funded by the Fiscal Recovery Fund

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Resource Management in the Community

By: Claire Hirt, Watershed Management Coordinator

For our staff, community engagement is one of the best parts about our jobs with the County. Spring and summer often bring a number of outreach opportunities, and this year was no exception!

Gerstell Academy held their annual school-wide Earth Day celebration at the Carroll County Farm Museum, and the Bureau hosted two stations for students. At the stormwater station, we practiced the detective work that goes into tracking and eliminating pollution and explored how stormwater management keeps waterways clean. At the stream ecology station, we learned what stream critters can tell us about water quality, demonstrated how to do the "bug shuffle," and hunted bugs from the onsite stream.

We also had the opportunity to lead a workshop with the Girl Scout troop at the Montessori School of Westminster. As part of a Silver Award project, we were invited to participate as part of their Troops for Environmental Action (TEA) Week. The scouts learned about some of the environmental features at their own school, including how stormwater is managed in an underground infiltration facility. They also completed an amateur entomologist activity to learn more about stream health metrics.

Other recent events included hosting the Water Resource Booth at the Westminster Flower and Jazz Festival, organizing a staff litter cleanup along Copps Branch, and leading a stream exploration with preschool students at Celebree School of Westminster.

Where can you find us next? Join us at Children's Day at the Carroll County 4H Fair on Tuesday, July 29th or at the Taneytown Harvest Festival on Saturday, September 27th!

From Drought to Deluge - The Sudden Shift that Ended the Late 2024-2025 Drought

By: Zachary Neal, Hydrogeologist

With the seemingly never-ending string of storms we've been experiencing in recent weeks, drought might seem a distant memory. Just over two months ago, however, conditions were looking bleak, and water resources managers were strategizing more stringent conservation measures in preparation for summertime operations.

In our Fall 2023 Newsletter, we covered the making of a drought, and the balance between precipitation and evapo-transpiration rates as they relate to groundwater storage and water resources. Droughts don't occur overnight, and their start dates can be tricky to pin down, but this most recent one began in October 2024, when we received significantly less precipitation than normal for the month. That trend of additional monthly precipitation deficits generally continued through the winter and early spring, deepening the drought and increasing its intensity. By mid-November, Carroll County was classified as experiencing moderate drought, and by mid-to-late March, we were classified as experiencing severe drought. While many people discuss calendar years, water resource managers focus on water years, which begin October 1st and run until the end of September. During the worst of the drought, Carroll County was at around a 10-to-12-inch rainfall deficit relative to normal since the start of the water year.

The winter and early spring months are critical times of precipitation and recharge to Carroll County's water resources; this is the time of year when evapotranspiration rates are lowest, and groundwater levels rise and are replenished after the natural declines observed over the summer and fall months. With the lack of rainfall, water levels in most locations leveled off around their lows from the fall and remained near those levels going into spring, a less-than-ideal prospect going into Summer 2025.

But what does it take to end a drought? Rainfall, sure, but not a single event, and not all at once. In early May, when evapotranspiration rates were increasing but were still lower than summer highs, weather patterns shifted, and we started to receive steady storms. Not only were the storms numerous in quantity, but the majority brought large rainfall totals at steady precipitation rates, limiting stormwater runoff and maximizing groundwater recharge. The County received 8-10 inches of rainfall in May alone, which was far in excess of evapotranspirative losses, and was 3.5-6.5 inches above normal depending on location within the County.

While the majority of wells in the County's observation network were rated below to well below normal in April, water levels rapidly rose in May and June, quickly bringing well level ratings back into and above their normal ranges and effectively ending the drought. While this drought might be over after seven months, others could begin anytime we receive extended periods of drier than normal conditions. While conservation measures are helpful any time of year, they become critical best practices during those periods of unusually dry weather or drought.