

down to earth

Environmental Restoration Quarterly • Spring 2026

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**EARTH DAY
APRIL 22**



Spring MBSS Sampling

By: Byron Madigan, Water Resource Office Manager

Each spring between March 1-April 30, staff from the Resource Management Division collect and preserve macroinvertebrate species in accordance with the Maryland Biological Stream Survey (MBSS) protocols. The goal of the MBSS survey is to provide an inventory of biodiversity in our streams, assess the current condition, and identify the impacts of stressors on ecological resources in Maryland's stream and rivers.

This biological sampling component involves collecting benthic macroinvertebrates from riffles, leaf packs, root wads and woody debris over a 75-meter stretch of stream to assess the overall

biological health of the stream by accounting for the presence or absence of species and species diversity. In addition to the total species diversity, percent abundance of pollution-sensitive or pollution-indicative organisms, and total organism abundance of the macroinvertebrate communities all factor into the overall biological health of the watershed and the MBSS index of biotic integrity (IBI). The IBI is based on a 1-5 scale, whereas a score of 4 and above indicates a watershed with "good" biological health and a score below 1 indicates a watershed that is in "very poor" biological condition, and the map shows the results from spring 2025 sampling.

(continued on page 2)



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<https://www.carrollcountymd.gov/government/directory/planning-land-management/resource-management/>

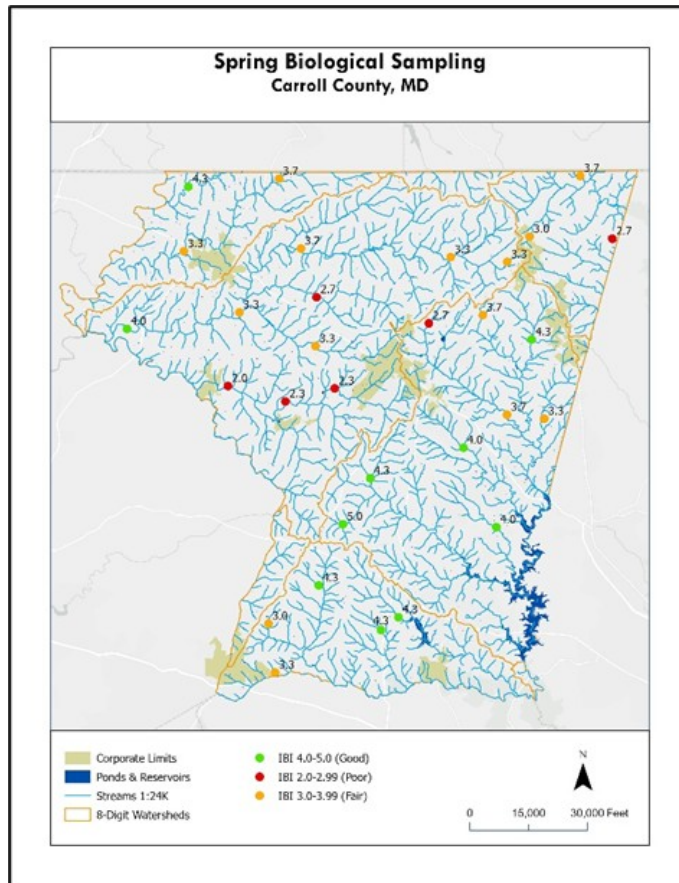
Protecting and managing Carroll County's natural resources for the pleasure and enjoyment of its Citizens

Spring MBSS Sampling Continued ...

Staff from the Resource Management Division attend the annual certification training by the Maryland Department of Natural Resources in late February to maintain familiarity with protocols and sampling techniques required to perform MBSS sampling. Annual renewal of training and a field audit every 3 years ensures consistency and accuracy for all persons who perform macroinvertebrate sampling across Maryland.

Carroll County has been macroinvertebrate sampling throughout the County since 2003. This year, approximately 28 locations will be sampled across the County. All sites were randomly selected, which is based upon biological monitoring guidelines from the Maryland Department of the Environment.

After all samples have been collected, they will be sent off to a certified taxonomic lab for sorting and identification of the taxa collected during the sampling, which will assist in determining overall stream health.



Forest Conservation Code Updates

By: Jonathan Bowman, Environmental Coordinator, Forest Conservation

The Maryland Forest Conservation Act was passed in 1991 in an effort to reduce forest loss related to development. In 1992, in accordance with the Forest Conservation Act, Carroll County implemented a local Forest Conservation Code. Over the 34 years that the County Forest Conservation Code has been in place, hundreds of acres of forest have been conserved and planted as mitigation for development. In 2023, in an effort to provide even further protection to Maryland's forests, the State adopted Senate Bill 526. This action requires Carroll County, among other jurisdictions, to incorporate new, more stringent regulations into our Code. The proposed changes can be summarized as follows:

- Certain types of forest areas are designated as priority for retention and protection. Currently priority areas include forests that buffer streams and wetlands, forests on steep slopes, and large contiguous areas of forest. The proposed changes will expand the priority forest designation to also include:
 - * Forest suitable for forest interior dwelling species
 - * Forest in Tier II high quality watersheds
 - * Forest in a water resource protection zone, reservoir watershed, or wellhead protection area
 - * Priority urban forest
- Public notification requirements have been added related to the clearing of priority forest. For projects where at least 5 acres and 75% of the priority retention area is proposed to be cleared, the County must notify adjacent property owners and provide an opportunity for written and verbal comment. For any other projects where priority retention areas are proposed to be cleared, the County must notify adjacent property owners and provide opportunity for written comment. The County must ultimately issue written findings and justification for any clearing of a priority forest retention area.
- Rules related to judicial review have been added. Specifically, a person petitioning for a judicial review of an approved forest conservation plan shall file the petition with Carroll

County not later than 30 days after approval of the forest conservation plan. Any judicial review shall be conducted in accordance with the Maryland state law and limited to the record compiled by Carroll County.

- All unforested stream buffers within a project area are required to be planted. In some cases, this will mean planting above and beyond the standard afforestation and reforestation required.
- Solar energy generating facilities, not resulting in forest clearing, do not have to provide forest mitigation.
- The standard reforestation requirement is 1 acre replanted for every 1 acre of forest cleared; however, development in cities and towns, also known as priority funding areas, will only be required 0.5 acre replanted for every 1 acre of forest cleared provided priority forest is not involved.
- The use of qualified conservation is being added as a mitigation technique. This will allow developers to purchase credit from a retention forest bank to address a portion of forest mitigation owed.
- Stream buffer is being redefined as, all lands lying within 50 feet of an intermittent stream and 100 feet of a perennial stream. This change is exclusive to the Forest Conservation Code. The Carroll County Water Resource Management Code (Chapter 154) will continue to employ a variable width stream buffer.
- The new State Forest Conservation Technical Manual will replace the current County Manual.

The proposed changes will be reviewed by the Board of County Commissioners this spring. Through this review process it is possible that additional changes are made. The goal is to have the new code adopted by July 1, 2026.

Meet the Staff

Caleigh Mullinix
Environmental Inspector



Caleigh grew up in Woodbine where she currently lives with her parents and younger sister. She is a class of 2025 graduate of St. Mary's College of Maryland where she received her B.A. in environmental studies. During her college career, she was an active member of the offshore sailing club and took many classes involving a wide range of hands-on outdoor work. Outside of work, Caleigh enjoys birdwatching, baking, creative writing, and crocheting.



**Save the
Date
March 13th
2027**

Restoration News

By: Claire Hirt, Watershed Restoration Manager

Our design engineers have been steadily working on plans for upcoming stormwater restoration projects. We expect to begin construction in the next couple of months on a new surface sand filter at the Hampstead Valley 4 site. Currently, stormwater runoff discharges directly to the stream channel without any stormwater controls. Decades of urbanized flows have severely degraded the stream. Through this project, the steep, eroded banks and a dense bamboo stand will be reworked into a stable, healthy system. Infrastructure will be repaired and upgraded, and the new facility will provide the appropriate flow controls and pollution treatment systems to better protect the stream system at this site and in downstream reaches as well.

The County was awarded \$600,000 from Maryland's Chesapeake & Atlantic Coastal Bays Trust Fund towards the construction of this project.



Hampstead Valley 4 Restoration

Upcoming Events

Spring brings a fresh batch of opportunities for celebrating and caring for our natural resources. The Carroll County Water Resource Booth will be at three upcoming community events. Please stop by with any questions and to learn about your watershed and what you can do to help protect it. In addition to our booth, here are a few local events to help get you and your family outside!



Water Resource Booth Events

- Saturday, April 18 - Earth Day at Bear Branch Nature Center (10 a.m. to 2 p.m.)
- Thursday, April 30 - Community Resource Fair at Union Bridge Fire Hall (4:30 p.m. to 7:30 p.m.)
- Saturday, May 9 - Westminster Flower and Jazz Festival (10 a.m. to 4 p.m.)

Additional Spring Events (may require registration)

- Friday, April 24 - City Nature Challenge Bio Blitz at Charlotte's Quest (8 a.m. to 8 p.m.)
- April 25, May 2, May 16 - Planting Parties at Piney Run Park (10 a.m. to 11 a.m.)
- April 26, May 10, May 24 - Ranger Led Kayak Trips at Piney Run Park (12:30 p.m. to 2 p.m.)
- Sunday, April 26 - Henry Lysy Kid's Fishing Rodeo at Westminster Community Pond (8 a.m. to noon)
- Sunday, May 17 - Krimgold Park Kid's Fishing Rodeo (8 a.m. to noon)
- Saturday, June 6 - Youth Fishing Derby at Piney Run (7 a.m. to 11 a.m.)