

# down to earth

Environmental Restoration Quarterly • Summer 2024

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## FEMA Updates FIRM's

By: Patrick Varga, CFM, Environmental Review Supervisor  
Floodplain Management/GIS Specialist

From time to time, the Federal Emergency Management Administration (FEMA) updates Flood Insurance Rate Maps (FIRM's). These are the maps that show the risk any given structure or property has of being inundated by a 100-year flood. Carroll County received FIRM's in 1981, which were then updated in 2015.

Over the last few years, Frederick and Howard Counties were issued new FIRM's by FEMA, and Carroll County's FIRM's are being updated to match those of its neighboring jurisdictions. The study area includes portions of unincorporated Carroll County, as well as portions of the Towns of Mt. Airy, New Windsor, Sykesville, and Union Bridge. Earlier this summer, FEMA

provided new preliminary FIRM's for parts of Carroll County. All of the maps can be viewed [here](https://hazards.fema.gov/femaportal/prelimdownload/) (<https://hazards.fema.gov/femaportal/prelimdownload/>).

For the entire county, the proposed map changes show 10 structures being newly mapped into the FEMA floodplain and five structures being newly mapped out of the floodplain. To see all of the areas where the floodplain will expand or contract based on the new engineering analysis, please click <https://arcg.is/1L4TG1>.

(continued on page 2)



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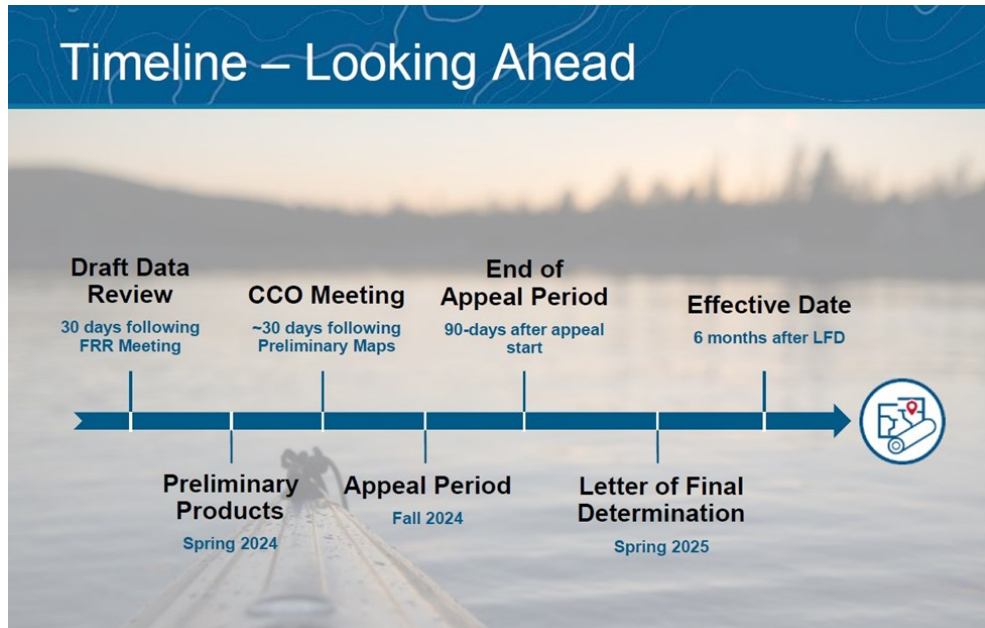
<https://www.carrollcountymd.gov/government/directory/land-resource-management/resource-management/>

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

## FEMA Updates FIRMs (continued)

Any property owner can purchase flood insurance. However, if a structure is located in the floodplain, and the property is paid for using a federally-backed mortgage, flood insurance must be purchased to comply with Federal law. For specific questions about flood insurance, policies, rates, and coverage, please click [here](https://insurance.maryland.gov/Consumer/Pages/flood-insurance.aspx) (<https://insurance.maryland.gov/Consumer/Pages/flood-insurance.aspx>).

Later this month, FEMA will meet with staff and elected officials from Mt. Airy, New Windsor, Sykesville, and Union Bridge as well as Carroll County, to discuss the process of revising FEMA floodplain maps. This will also begin the appeal period for the map changes. The new maps are expected to become official in the fall of 2025 at the earliest. Residents, property owners, and the local development community are encouraged to review the maps and reach out to [Patrick Varga, CFM](#) with any questions.



## Stormwater Tour By: Claire Hirt, Watershed Management Coordinator

Each Spring, the Carroll County Water Resource Coordination Council (WRCC) hosts a stormwater tour for municipal and County staff highlighting restoration projects. This year, they also extended the invitation to staff from Maryland Department of the Environment (MDE).

The theme of the tour for 2024 was surface sand filters, a type of structural stormwater management facility. These facilities are designed to collect stormwater, percolate it through a filter layer to remove pollutants, and release it at a rate that is protective of downstream waterways. Many surface sand filters also infiltrate water back into the ground, recharging groundwater supplies.

Over decades of stormwater projects, Carroll County staff have fine-tuned the surface sand filter design to maximize pollutant removal and facility function. Features include a deeper two-foot media layer comprised of a 4:1:1 mix of sand, soil, and green wood chips, which allows for turf coverage on the facility surface. The turf helps soak up some of the water and also provides root structures that maintain openings in the filter media.



Additionally, all inflow pipes to the facility discharge level to the facility (i.e. at a 0% slope) into plunge pools that are below the facility elevation, dissipating erosive flows before they reach the filter media.

Over the course of the day, the group visited four different restoration sites, exploring the history of development,

the restoration designs chosen, and outcomes at each location. Bureau of Resource Management staff also discussed their monitoring program, which supports the use of this design for reducing peak temperatures from storm events during the warmest part of the year, protecting downstream waterways from thermal impacts caused by stormwater runoff.



## Stormwater Construction Updates By: Claire Hirt, Watershed Management Coordinator

Stormwater restoration projects are kicking up again this summer with the start of the Saint George's Gate retrofit project, located on Wheatfield Road off of Deer Park Road in Finksburg. We are working with Magstone as our construction contractor to convert the existing dry stormwater facility into a surface sand filter, which will bring it up to current stormwater management standards. A new weir wall will serve as the control structure for the facility and the bottom will be excavated out to install an underdrain system and filter media. Biochar will also be mixed into the top foot of filter media to support research through the Center for Watershed Protection. We expect construction to wrap up this fall.

Another upcoming project will be an outfall stabilization located upstream of the Oklahoma stormwater retrofit in Eldersburg. The existing channel is deeply eroded and generates heavy sediment transport during storm events. A new storm drain system will be installed to connect the existing outfall directly to the stormwater facility, and a vegetated swale on the surface will safely convey surface runoff to the facility as well. Century Engineering is the design engineer for the project, and

C.J. Miller will be the construction contractor. The project is anticipated to begin late summer and run through the fall.

Lastly, we will be working at Century High School to retrofit a shallow marsh stormwater facility to a surface sand filter. This conversion will provide additional stormwater management for

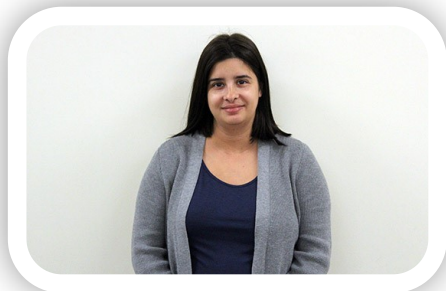
the high school as well as nearby Linton Springs Elementary School. The design engineer, CLSI, is finalizing plans, and we plan to put the project out for bid shortly. Funding for this project is supported by a grant for \$550,000 from the Department of Natural Resources Chesapeake & Atlantic Coastal Bays Trust Fund.



*Saint George's Gate*

## Meet the Staff

**Catarina Erbe**  
Environmental Review Technician



*Catarina grew up in Howard County and received her B.S in Biology and minor in Environmental Science from Stevenson University and her M.S in Biology from Towson University. During her academic career, she conducted research that focused on forest regeneration throughout central Maryland, Emerald Ash Borer impacts on Western New York forests, small reforestation efforts, and white-tailed deer forest preference. She is excited to start this new chapter at the Bureau of Resource Management and being able to apply her knowledge in her new role as an Environmental Review Technician. Outside of the office, Catarina enjoys landscape photography, being in nature with her husband and dog, and baking.*

**Sarah Kowalski**  
Stormwater Review Technician



*Sarah grew up in Berks County, PA, but currently lives in Hanover with her husband and dog. She is in her final year at Oregon State University's Ecampus where she is majoring in Environmental Science with a specialization in Environmental Water Resources. When she isn't spending all of her time working or doing schoolwork, she likes visiting national parks, reading, and growing heirloom tomatoes and peppers.*

Carroll County Department of  
Planning & Land Management

## 3RD ANNUAL ENVIRONMENTAL SYMPOSIUM

- Rain Barrel & Compost Bin Giveaway
- Recycled Art Contest
- UMD Insect Zoo
- Library Storytime Express
- Piney Run Critter Time



Carroll County Ag Center  
October 26, 2024  
9 am - Noon



**THIS EVENT IS FREE AND OPEN TO THE PUBLIC**



Carroll County Government will be holding a

## Compost Bin & Rain Barrel ON-LINE SALE

**Order deadline: October 20, 2024**

Orders will only be taken online. Debit and Credit Cards are accepted.

**Orders must be picked up on**

**SATURDAY, October 26, 2024 9 AM - 11:30 AM**

Carroll County Environmental Symposium at the C.C. Agriculture Center  
706 Agricultural Center Drive, Westminster, Maryland 21157

Order today: [www.envioworld.us/carrollcountymd](http://www.envioworld.us/carrollcountymd)

\$120 value  
**\$60**

- Large 11 cubic foot/311 liter capacity
- Manufactured of 100% recycled content
- Oversized easy-access top opening
- Strong unibody construction
- Fits easily in an average sedan
- Reduce your waste



- Unique square shape and attractive neutral color
- Large 55 gallon (208 liter) capacity
- Easily accommodates existing downspouts
- Includes overflow spout and 4' hose to easily link two or more barrels for multi-barrel installations or to redirect overflow away from foundations
- Elevated spigot accommodates watering cans
- Insect resistant stainless steel filter

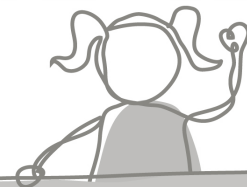
\$140 value  
**\$70**

For more information on this event, contact:

**410-386-2566** or visit [www.envioworld.us/carrollcountymd](http://www.envioworld.us/carrollcountymd)

For more information on the products offered, visit [www.envioworld.us](http://www.envioworld.us)

Carroll County  
Water Resource Team



Invites you to check out  
these events:

### July

7/20 - Nature Fest at Charlotte's Quest Nature Center (5-9 pm)

7/30 - Children's Day at the Carroll County 4H Fair (9 am-2 pm)

### August

8/19 - Stream Searchin' at Bear Branch Nature Center with Rec and Parks (1-2 pm)

8/23 - Camp Hashawha for Adults at Hashawha with Rec and Parks (multi-day)

### September

9/28 - Taneytown Harvest Festival at Memorial Park (11 am-3 pm)

### October

10/19 - Household Hazardous Waste & Shredding at Carroll County Maintenance Center (8 am-12 pm)

10/20 - Carroll County Fall Compost Bin & Rain Barrel Sale (online order deadline)

10/26 - Environmental Symposium at Carroll County Agriculture Center (9 am-12 pm)