



*Carroll County  
Stormwater Management  
Retrofit Program*

*Bureau of Resource Management  
Department of Land &  
Resource Management*



The BRM protects and manages natural resources for use and enjoyment by the citizens of Carroll County.





The Bureau is responsible for meeting the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system permit requirements of the Clean Water Act.



NPDES permit requirements include implementing comprehensive stormwater management programs for addressing runoff from new and redevelopment projects, restoring urban areas where there is currently little or no stormwater management, and working toward meeting stormwater waste load allocations for local water resources and the Chesapeake Bay.



The County is required to mitigate the equivalent of **1,614** acres per requirements in the current permit. As of December 2019, a total of **2,034** acres have been mitigated.

As of December 31, 2019, the County has achieved the following reductions:

- 32,316 lbs. of Nitrogen
- 2,606 lbs. of Phosphorus
- 64,309 tons of Sediment

Projects are designed, managed, and implemented through a capital improvement program entitled, “Watershed Assessment and Improvement (NPDES)” in the Carroll County Community Investment Plan.

The actual expenditures for the permit term – December 2014 to December 2019 – are approximately \$27,540,034. These expenditures include approximately \$9,285,106 for operating and approximately \$18,254,928 in capital improvement costs.



# What is a stormwater management retrofit?

Installation of stormwater best management practices (BMPs) in areas where none previously existed, or improvement of existing stormwater management practices so that they provide a water quality function.





Rain Barrel



Rain Garden



Bio-Retention  
Facility





Dry Well



Landscape Infiltration



Surface Sand  
Filter





*Stream  
Restoration*





Wet  
Pond



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## Installation of BMPs:

- reduce sediment and nutrient loads, especially nitrogen, phosphorus, and suspended solids
- reduce thermal impacts to streams and local waterways
- provide significant amounts of natural habitat
- reduce erosion
- improve local water quality which directly impacts the wellbeing of local residents, as well as the health of the Chesapeake Bay

Since 2007, the BRM has managed the construction of many non-point source pollution control projects, including:

- 11 new stormwater management facilities
- 3 ESD BMP installations (rain barrel, dry well, rain garden)
- 48 stormwater management facility retrofits

Currently, the Bureau has 6 stormwater management facilities under construction, including a stream restoration. The Bureau manages all project phases, including design, permitting, obtaining landowner permission, providing land protection and construction management, and performing appropriate maintenance.





The Bureau actively pursues grant opportunities to assist in funding projects to meet our NPDES permit requirements. As a recipient of these awards, the BRM is able to expand upon the quality and quantity of its programs.

These grant resources have funded important community improvements such as tree plantings, stream restorations, installation and retrofits of stormwater management facilities, K-12 educational experiences, rain barrel programs, and storm drain stenciling.





*Blue Ridge Manor  
New Windsor*







Elderwood Village  
Eldersburg







Langdon Property  
Westminster







*Whispering Valley  
Manchester*





Trevanion Terrace  
Taneytown







*Hampstead Valley  
Restoration  
Hampstead*



For more information about the Bureau of Resource Management, visit our website at:

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

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