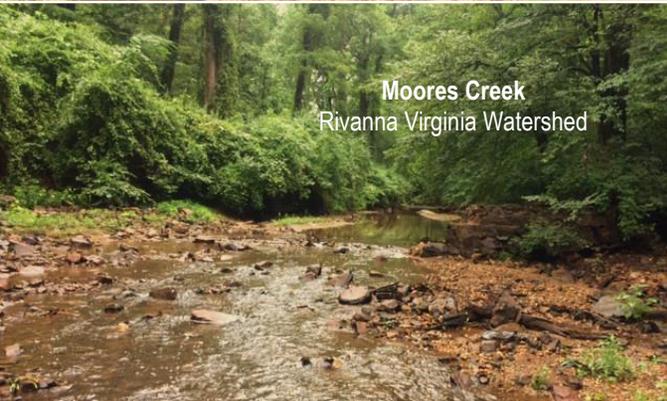




Septic Pumping



Moore's Creek
Rivanna Virginia Watershed



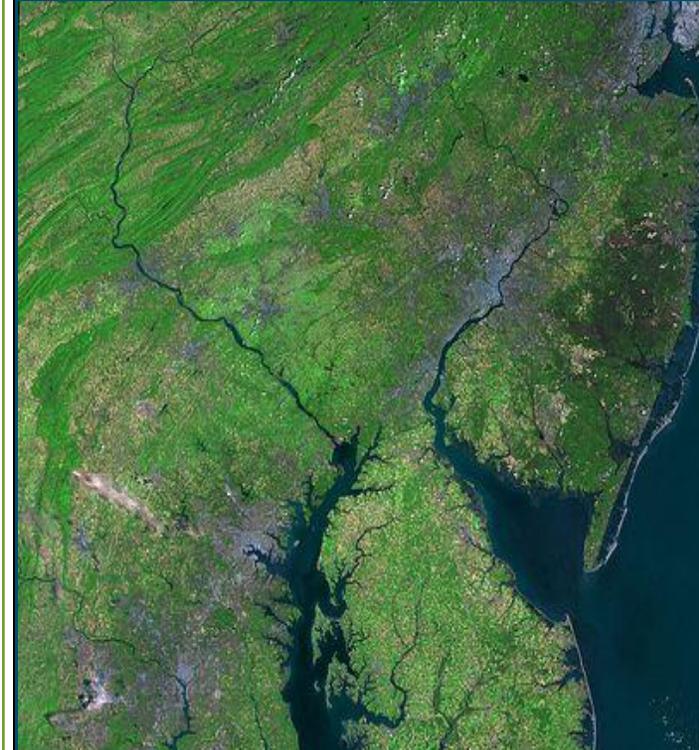
Erosion Control



Choptank Wetlands
Chesapeake Bay Watershed

Terms Cheat Sheet

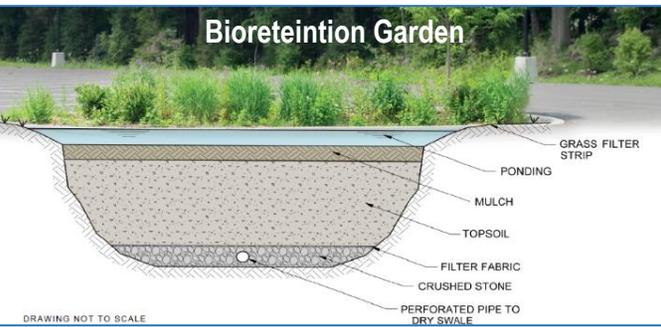
- **BMP** — Best Management Practice or engineered technique to reduce stormwater runoff pollution.
- **MS4s** — Localities which own "municipal separate storm sewer systems" and are required to obtain stormwater permits through DEQ.
- **DEQ** — Dept. of Environmental Quality administers state and federal laws and regulations for environmental quality.
- **NFWF** — National Fish and Wildlife Foundation
- **RRBC** — Rivanna River Basin Commission
- **RSEP** — Rivanna Stormwater Education Partnership
- **Stormwater-** precipitation runoff flows to storm drains or nearby water body, picking up pollutants along its path, causing stream flooding, pollution, fish & wildlife habitat loss, soil erosion, etc.
- **TMDL** — Total Maximum Daily Load is the max amount of a pollutant allowed to enter a waterbody.
- **TJPDC** — Thomas Jefferson Planning District Commission
- **TJSWCD** — Thomas Jefferson Soil & Water Conservation District
- **VDOF** — Virginia Department of Forestry
- <https://rivanna-stormwater.org/how-can-you-help/community-education/>
- **Watershed** — a land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.
- **WIP** — Chesapeake Bay Watershed Implementation Plan given to PDCs by DEQ to ensure 2525 water quality goals.



A Guide to Best Management Practices (BMPs)



Bioretention Garden



Best Management Practices (BMPs)

These are restoration activities and projects (planned and implemented) to improve local water quality and meet pollution reduction targets established in the Bay TMDL.

A Total Maximum Daily Load (TMDL) is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant.

Examples

- Forest Buffer & Planting
- Erosion & Sediment Control
- Septic Pumping & Secondary Treatment
- Bioretention/Raingardens
- Dry Detention Ponds & Hydrodynamic Structures
- Filter Strips & Street Cleaning
- Storm Drain Cleaning & Treatment
- Tree Planting – Canopy
- Wet Ponds & Wetlands
- Urban Stream & Wetland Restoration
- Forest Conservation
- Agricultural Conservation Policy

Commonly Used BMPs

Whether they are set in place in order to meet the requirements for obtaining a permit or simply to **reduce the effects of stormwater runoff** from a property, below are a few examples of commonly used BMPs for stormwater runoff.

Forest Buffer & Planting >>>

Rather than removing plants entirely, prune back limbs and roots to frame views of rivers, ponds, and lakes. The combination of plants at several heights keeps organisms safe while absorbing phosphorous and nitrogen. Virginia **DEQ publishes a list online of plants that are ideal for buffering**, as well as invasive species to avoid. Indigenous grasses and shrubs can be planted on a slight decline before access points to water sources to create filter strips, cleaning water before it reaches waterways.

Retention Basins >>>

Retention basins are artificial lakes or ponds that treat stormwater runoff by emulating the water treatment abilities of natural watersheds. Runoff that collects in the basin **undergoes natural treatment processes**: sedimentation allows for particles, organic matter, and metals to be removed, and biological uptake from plants, algae, and bacteria further remove pollutants. Retention basins maintain a constant level of water, only releasing to receiving water after large storm events.

Septic Pumping/Treatment >>>

Septic tanks must be **pumped every 3 to 5 years to maintain responsible levels of solid waste**. Careful records ensure that this timeframe is not exceeded. Additionally, water-borne pollutants can seep into soil surrounding tanks. A distribution box (**D-box**) and soil absorption system (**SAS**) are crucial to filter these pollutants and curb nitrates whose absorption spells danger for humans and animals alike. While these provisions are necessary, they are not sufficient: never dispose of industrial products into septic-connected systems.



Urban Waters >>

Urban waters carry high concentrations of pollutants to undersized capture areas. To mitigate the issue, the water must be filtered. The federally-endangered James River spiny mussel plays this role, filtering up to 10 gallons of water a day. In 2017, the state restored sections of Moores Creek where dams, which had been erected to protect businesses and homes, damaged spiny mussel habitats.

