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## **POLLUTED RUNOFF PROJECTS IN HOWARD COUNTY IN FY2014**

The funds collected from the stormwater utility fee will allow Howard County to undertake many projects needed to reduce localized flooding, improve public infrastructure, restore streams, and improve water quality. Using the estimated \$8.9 million in new revenue from stormwater management fees, the County is able to repair badly deteriorated and inadequate storm drain systems across the County, restore streams and shorelines, create stormwater management ponds and wetlands, and monitor water quality in local waters. Some of the projects being designed and implemented by Howard County in FY2014 in part through the stormwater utility fee are listed below, along with their environmental and community benefits.

### **IMPLEMENTING PRACTICAL AND PROVEN SOLUTIONS**



Stream Restoration in Howard County  
Photos by Howard County Department of Public Works

Ponds help retain and in some cases filter polluted runoff to lessen the quantity of water that is entering a stream or river at one time. The first inch of rainfall is most likely to be carrying pollutants washed from the streets, parking lots, and rooftops (impervious surfaces). These stormwater ponds and retrofits ensure that this polluted runoff is allowed to soak into the ground to filter pollutants before they reach streams and tidal waters.

Storm drains collect the fast-moving surges of storm water and carry it to receiving waters. During storm events, trash, debris, and polluted runoff is transported through the storm drain, often causing clogging that results in local flooding and the discharge of sediment and other pollutants. Storm drains can be fitted with filters to remove pollutants, raised in elevation to slow down the volume of polluted runoff, or cleared to reduce flooding impacts.

Stream restoration usually involves installation of stone structures and vegetation that reduces erosion of the stream bed, and reconnecting the stream to the surrounding floodplain. These projects can provide a large number of benefits, including flood control, habitat for fish, amphibians, insects and other aquatic organisms, stabilized stream banks, better protection of wetlands, higher quality stream valley trail systems for recreation such as walking, birding, and biking, and reducing pollution flowing downstream to the Chesapeake Bay.

Shoreline stabilization can help reduce the load of suspended sediment in the stream when done in conjunction with upstream runoff reduction practices. A stabilized stream bank is also much healthier for fish and invertebrates than a highly eroded bank.

Street sweeping reduces the amount of suspended sediment, nitrogen from atmospheric deposition and phosphorus. EPA estimates of street sweeping efficiency are 30% reduction in Total Suspended Solids, 15.4 pounds of Nitrogen per impervious acre per year and 2 pounds of Phosphorus per impervious acre per year.

Tree planting on re-stabilized stream banks can have a very beneficial effect on temporary nitrogen storage, long term phosphorus and sediment reductions as well as cooling water temperatures and attenuating flows. Once trees mature, fallen limbs and trunks provide excellent fish habitat.

## **ELLICOTT CITY**

Due to the extensive impervious surface in Ellicott City, Howard County is planning several projects in and around the area. One such project will be to improve and expand stormwater management in Lot D, near the post office and Main Street. The Tiber-Hudson stream corridor, part of the Patapsco River watershed, is currently channelized through Lot D. The County has recognized the potential for the Tiber-Hudson to be improved as a natural and visual amenity and public gathering space. Funded in part by the revenue raised by the stormwater utility fee, the County has planned to address and control polluted stormwater runoff, create a public amenity space for the community, and improve parking conditions on the lot. Stormwater utility fees will also fund several stormwater management projects such as stormwater management ponds, detention basins, and streambank restoration. Project locations include Newcastle Court in west Ellicott City and Tiller Drive near Mt. Hebron High School. Stream restoration projects will also be taking place near the Bonnie Branch middle school, the Our Lady of Perpetual Help church, and near St. Johns Lane Elementary School.

## **COUNTYWIDE**

Howard County is also using stormwater utility fees to undertake much needed stormwater management retrofit projects for existing facilities. Some of the locations include Misty Woods Lane pond, Paul Harris Court pond, Waverly Woods pond, Ashton Woods pond, Patapsco Park Estates pond, Turf Valley Overlook pond, County Lane pond, Hearthstone Road pond, Whitworth Way pond, and a project at Stevens Forest Elementary school.



**CHESAPEAKE BAY FOUNDATION**  
*Saving a National Treasure*

Founded in 1967, the Chesapeake Bay Foundation is a nonprofit 501(c)(3) conservation organization dedicated to saving a national treasure—the Chesapeake Bay and its rivers and streams. Its motto, Save the Bay, defines the organization's mission and commitment. With headquarters in Annapolis, MD, offices in Maryland, Virginia, Pennsylvania, and the District of Columbia, and 17 field centers, CBF works throughout the Chesapeake Bay's 64,000-square-mile watershed to build an informed citizenry, advocate pollution-reduction strategy, and enforce the law. CBF is supported by more than 200,000 active members and has a staff of 170 full-time employees. Approximately 80 percent of CBF's \$23.6 million annual budget is privately raised.

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