



down to earth

Environmental Restoration Quarterly • Fall 2018

1 Forest Banking in Carroll County

2 National Flood Insurance Program Community Rating System

3 Merridale Stormwater Management Facility

4 EAC Tree Planting

4 Chesapeake & Atlantic Coastal Bays Trust Fund Awards



Forest Banking in Carroll County

By Jonathan Bowman, Forest Conservation Specialist

Since 1992, there have been regulations in Maryland that attempt to reduce development related forest loss. This means that proposed development plans and building permits are reviewed to ensure forest conservation regulations are implemented. Mitigation relating to Code requirements is addressed in the following priority order: replanting trees on the development site, on an off-site property, or purchasing credit from a forest bank. Forest banking is a popular option because many times on-site planting is not feasible and no off-site planting option exists.

A forest bank is an open area that is planted with trees for the express purpose of selling credit to developers who need it. Establishing a forest bank involves the following steps:

First, an interested property owner submits an application and a site map showing the proposed location of the bank. County staff review the size, location, and suitability of the site. If found to be satisfactory, the site is approved.

Second, a bank establishment plan is developed by a qualified professional. This plan shows the physical features of the property and describes the proposed planting area in detail.

Third, the bank is planted and a forest conservation easement is recorded.

Finally, in order to be certified to sell credit, a bank must be bonded or successfully shepherded through a three year maintenance period.

There is a large upfront cost to creating a forest bank and the easement that is recorded is quite restrictive. Consequently, forest banking is not a good fit for everyone. However, given the right property and the right owner, forest banking can be a lucrative venture. In Carroll County, an acre of forest bank credit currently sells for about \$14,000.

To date, 761 acres of forest banking have been planted in the County. The success of the program can be attributed to the benefits that the different stakeholders have realized. Forest banking provides developers a fast and predictable mitigation solution. It also allows property owners to generate income while reforesting their property. Finally, forest banking helps the County ensure regulatory compliance with the State Forest Conservation Act. If you have questions about establishing a forest bank or would like more information about the Carroll County Forest Bank Program, contact Jonathan Bowman at 410-386-2133 or jbowman@carrollcountymd.gov.

National Flood Insurance Program Community Rating System

By Patrick Varga, Floodplain Management Specialist



According to the National Flood Insurance Program, flooding causes hundreds of millions of dollars in damage to businesses and homes every year. Flooding is the Nation's most common and expensive natural disaster. Homeowner's insurance policies do not typically cover flood damage which is why flood insurance is so important to anyone living near a stream. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to assist homeowners who have been impacted by flooding.

The NFIP is a voluntary program that requires jurisdictions to meet minimum regulatory requirements. In order to have flood insurance available to residents, the jurisdiction must meet the NFIP standards, including such things as reviewing building permits for impacts to the floodplain and ensuring development is "reasonably safe from flooding."

Flood insurance is required for any homeowner with a Federally-backed mortgage living within the FEMA floodplain; however, anyone can purchase a flood insurance policy if they reside in a participating community. If a jurisdiction enforces regulations that exceed the NFIP minimums, they can join the Community Rating System (CRS). The CRS is a voluntary program within the NFIP that provides flood insurance premium reductions to eligible policyholders within the community. A number of risk reduction activities qualify for credit. Credit is provided for activities that a community implements such as preserving open space or providing mapping information for citizens. Flood insurance premium reductions are dependent upon the number of points that a community accumulates within the program. A 5% discount in insurance premiums is provided for every 500 points that a community earns. A CRS Class 1 community would receive a 45% premium reduction, while a CRS Class 9 community would receive a 5% premium reduction.



Carroll County (Unincorporated Areas), is viewed by FEMA as a community independent of the incorporated cities and towns within the County, and has a total of 178 flood insurance policies. The County joined the CRS as a Class 8 in 2006 and based on work completed by staff in 2017, the County has improved to a Class 7, which took effect on May 1, 2018. As such, eligible policy holders within the County will receive a 15% discount on their flood insurance policies. Improving from a Class 8 (\$73 discount per policy) to a Class 7 (\$111 discount per policy) equates to an average additional savings of \$38 per policy, per year. However, the average discount increases from \$211 savings to \$317 savings for policies within the FEMA floodplain. The total premium discount for all flood insurance policies, as a Class 7 Community, exceeds \$20,000. Staff is currently working on additional creditable activities to improve their rating to a Class 6 Community.



*Pat Varga
Floodplain Management Specialist*

Merridale Stormwater Management Facility

By Janet O'Meara, Watershed Management Coordinator

In 2014 Carroll County partnered with the eight municipalities through a Memorandum of Agreement (MOA) to perform restoration to treat currently untreated impervious area. With the assistance of the municipalities, the Bureau of Resource Management identified projects in each jurisdiction. These projects will meet the goals set forth by the National Pollutant Discharge Elimination System (NPDES) Permit and Total Maximum Daily Load (TMDL) requirements associated with the Chesapeake Bay.

The Merridale Gardens stormwater management facility is located within the Town of Mount Airy. This facility was identified as an opportunity to convert a shallow marsh facility to a surface sand filter while bringing the facility up to current State and County stormwater management standards. The County contracted with Carroll Land Services to perform the design work for this project. Throughout the design process, community meetings were held with the residents at the Mount Airy Library, and the project was presented to the Town Council.

The Merridale retrofit involves the following: the slopes will be no steeper than 3:1 to allow

for efficient machine mowing; the existing sewer line which runs parallel to the facility will be replaced; a retaining wall and weir wall will be constructed as part of this project; inlets will be added along Ridge Avenue to convey drainage into newly installed storm drains which will discharge flows into the facility in a non-erosive manner; and existing storm drains will be combined to minimize the number of discharge points into the facility. Upon completion, the County will meet with adjacent property owners to discuss a planting plan to replace vegetation which

was removed in order to complete this retrofit. Construction of the facility was awarded to Conewago Enterprises, Inc. Construction began in August, but has been delayed due to recent rain events. We anticipate construction wrapping up in early Spring of 2019.

Partial grant funding for this project provided by:



pond prior to construction



clearing for the sewer replacement



grading the slope along Ridge Avenue

Environmental Advisory Council Tree Planting Honored Award Winners

By Brenda Dinne, Special Projects Coordinator

The Board of County Commissioners and the Carroll County Environmental Advisory Council (EAC) honored the 2018 Environmental Awareness Award winners by planting trees at Carroll Community College on Friday, September 28, 2018. Frank Vleck, Chair of the EAC, led off the ceremony. The program included a few words from Commissioner Weaver and Alan Schuman, Vice President of Administration at Carroll Community College. Tiffany VanDerwerker, EAC member, shared the accomplishments of each award winner. The award winners, speakers, and EAC members proceeded to toss on the first shovels of dirt for one of the donated trees. The program closed with the unveiling of the new sign donated to designate the tree grove.

The trees were planted in the grove located between the K Building and MD Route 97. Wakefield Valley Nursery donated a native American Elm, and Clear Ridge Nursery donated a red maple.

For more information about the awards process or the EAC, please visit the EAC webpage at <http://ccgovernment.carr.org/ccg/eac/>.



Chesapeake & Atlantic Coastal Bays Trust Fund Awards

By Kelly Martin, Watershed Grants Technician

On March 29, 2018, the Bureau of Resource Management (BRM) submitted multiple applications to the Maryland Department of Natural Resources (DNR) Chesapeake & Atlantic Coastal Bays Trust Fund Cost-Effective Non-Point Source Pollution Reduction Grant.

As part of the application review process, DNR and BRM staff made site visits to the various project locations.

In early June, DNR offered FY 2018 Natural Filters Program funding of \$150,000 for one of these applications, the Carroll County Stream Buffer Initiative. This funding will be used for approximately 25 acres of streamside tree plantings on private properties in the Double Pipe Creek and South Branch Patapsco watersheds, addressing nutrient reduction requirements associated with the County's National Pollutant Discharge Elimination System (NPDES) Permit.

These plantings will take place in the fall of 2018 and 2019.

The BRM was also awarded \$1,900,000 for the construction of the Willow Pond Stormwater Management Facility located in the Eden Farm subdivision adjacent to Sunshine Way and opposite Eden Farm Circle in Westminster.

This funding will be used to retrofit the existing pond and reconnect the 1,700 linear foot stream channel with the existing floodplain. This project addresses nutrient reduction and impervious area treatment requirements associated with the County's NPDES permit.

The Willow Pond retrofit will implement an innovative "gravel lens" system in the pond that will filter water through gravel and underdrains. In theory, this process will decrease water temperature of the ponded water before it is discharged into the stream. The gravel lens and restoration of the stream and floodplain will provide functional uplift of the overall stream corridor, improving both the quality of the water and the natural habitat.

