



down to earth

Environmental Restoration Quarterly • Summer 2022

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COMING SOON

Environmental Symposium coming this Fall...look for more information on our Facebook Page... [Carroll Environment](#)



Reforestation Efforts Continue to Grow

By Jonathan Bowman, Forest Conservation Specialist

In 2015 the Carroll County Bureau of Resource Management partnered with the City of Westminster to reforest three areas along the Route 31 corridor. The first area planted was the grassed hillside that sits above the soccer field at the intersection of Route 31 and Uniontown Road. The second area planted was the hillside above the walking path that runs between Crossbridge Drive and Tahoma Farm Road. The third area planted was along the walking path a little east of Long Valley Road. In total, 7.5 acres were reforested. The plantings were funded by grant monies received from the Department of Natural Resources.

Reforesting an open field or grass lawn results in a real transformation. The visual transformation is obvious (see the before and after photos), but this is only one of the changes that takes place. As they grow, the trees improve the water quality in our local streams and ultimately the Chesapeake Bay by filtering sediment and nutrients from stormwater runoff.

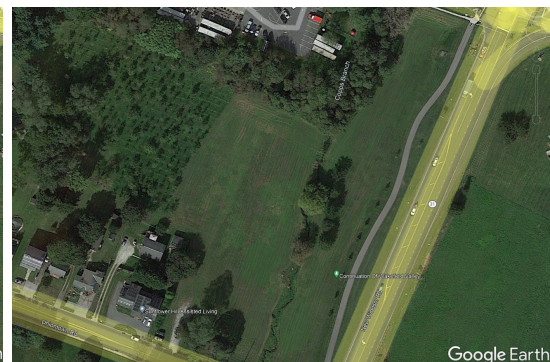
In addition, their roots help stabilize the soil thus decreasing erosion. Native trees provide food and shelter for wildlife. Something often overlooked is that the biodiversity found in an acre of native forest is many times greater than an acre of lawn. Last but not least, it is important to consider the air quality improvements that will result from these trees sequestering carbon dioxide and producing oxygen. In a small, very local way, these trees are relevant to the efforts to combat global climate change.

Seven years after these trees were planted, the City of Westminster no longer has to mow these areas. Maintenance time and cost have been reduced, ecosystem services improved, wildlife is thriving, and users of the walking path are enjoying a whole new aesthetic. The work that helped transform the Route 31 corridor is just the tip of the iceberg. Since 2012, Carroll County has partnered with private property owners and the County's eight municipalities to reforest over 200 acres.

Before (2014)



After (2018)



Project Spotlight: Trevanion Terrace Stormwater Management Facility

By Elizabeth Spencer, Watershed Restoration Engineer

The Carroll County Bureau of Resource Management, in conjunction with the City of Taneytown, recently completed a retrofit of the Trevanion Terrace Stormwater Management Facility. Construction of this facility began last June by CJ Miller. Funding for this project included a grant from the Maryland Department of Environment's Bay Restoration Fund.

The facility is located in an open space parcel adjacent to Taneytown Elementary and Northwest Middle Schools. The original facility was a dry detention pond that provided no water quality treatment. The goal of this project was to retrofit this facility to provide water quality benefits while also bringing the facility up to current stormwater management standards.

This project encountered several environmental challenges, including the limited area available for stormwater treatment within the watershed. The proximity to the adjacent stream channel, water lines, and sanitary sewer lines also impacted the site design. The elevations of the existing stream channel and storm drain network relative to the topography also added some complexity to the design. A concrete diversion structure collects stormwater at Kings Drive, bypasses the normal baseflow of the stream channel, and carries storm flows to the facility. The storm drain network from Trevanion Terrace and Taneytown Elementary are also routed to the facility.

This watershed contributes to the Upper Monocacy River and is regulated as a cold water watershed for trout habitat. Thus, maintaining the cold water habitat is important. In order to maintain the aquatic habitat and reduce thermal impacts to the stream, the baseflow from the channel passes through a slot in the diversion structure to continue within the existing stream channel, bypassing the stormwater facility.

As the wet pond facility fills up during a rain event, water at the bottom of the facility is pushed through a gravel lens, where it is collected by a slotted pipe underdrain. The underdrain pipe brings the water to the riser control structure, where it then outfalls into the existing stream channel. The intent of this design is to limit the thermal impacts of the discharge from the ponded water.

This project was engineered by Brudis and Associates and will count towards the County and Town's requirements to improve water quality by treating the stormwater runoff from impervious area.

Trevanion Terrace

Grant funding



Maryland
Department of
the Environment



Carroll County Tree Planting Program

If you are interested in participating in Carroll County's tree planting program, please contact **Byron Madigan** at **410-386-2167** to discuss your property. This completely volunteer program focuses on streamside plantings, as well as upland plantings that are greater than 1 acre.

Plantings implemented through this program include a 3-year maintenance term, which consists of mowing and shelter maintenance. Reestablishing and enhancing forests help provide bank stabilization, improves water quality through nutrient uptake and trapping sediment, as well as providing structurally complex habitats for terrestrial wildlife.

Meet the Staff

Chad Wasileski Stormwater Program Engineer

Chad grew up and went to school in Newark, Delaware and received his bachelor's degree in Environmental Engineering from the University of Delaware. For the past 8 years he has worked for Century Engineering in Hunt Valley as a water resources engineer. Chad was involved in numerous projects for MDOT SHA designing stormwater management facilities, storm drains, outfall rehabilitation, and erosion and sediment control. Prior to Engineering, Chad went to trade school and worked for 14 years as a Machinist making mostly aircraft parts on various CNC and manual machines in Delaware and Pennsylvania. He has lived in Freeland since 2015 and loves the area. Chad has been married to his wife Gabriela for 20 years this August. He loves to spend time with her doing just about anything as she is the funniest and best person he has ever met. They love to take country drives/road trips to parks and interesting places to sightsee and walk. During the winter they like to ski at Roundtop and Liberty and will take a trip somewhere north or west if time and money allow. They have also been experimenting growing a vegetable garden for the past 4 years. Chad has always been interested in cars and motorcycles and loves to go to races and shows. In the 1990's and early 2000's he roadraced motorcycles as an amateur and was fortunate enough to race at tracks all over the east coast, eastern Canada, and raced several times in California and Washington state.



Ashley Caine Intern

Ashley is going into her junior year at University of North Carolina Wilmington and is planning to major in Environmental Science. She graduated in 2020 from Manchester Valley High School and is a resident of Hampstead. This is her second summer working as Intern for the Land and Resource Management Department. She is planning to study abroad in Sorrento, Italy next fall. In her free time, she enjoys reading, hiking, and travelling.



Stormwater Update

By: Ed Singer, Watershed Management Coordinator

The **Locust Wetland** facility will treat rainfall from an almost 40-acre drainage area that was previously untreated in Union Bridge. The project is a collaboration between Carroll County Government, the Town of Union Bridge, and citizens in the community. Construction has been ongoing and the contractor, Kibler Construction, Inc., has been busy excavating the forebay and main pond in preparation to install the liner. They have also installed structures within the facility which will collect and direct rainfall entering and exiting the facility. After the excavation is complete, the liner will be installed, and storm drains will be constructed in the neighboring roads.

Locust Wetland



The project has not been without challenges as the geology in the area is underlain by limestone. We have encountered almost a dozen sinkholes, to which this geology is prone, which have required Resource Management Staff to work closely with the contractor to repair. We also encountered bedrock which will require extensive hammering to remove.

When the project is completed, there will be wetland plants planted in the basins gradually transitioning to forested plantings on the upper banks. The Town of Union Bridge will own and maintain the facility which is an important part of the County and Municipalities' National Pollutant Discharge Elimination System (NPDES) Permit.

The **Stone Manor Stormwater Management Facility** is in a residential neighborhood and a submerged gravel wetland facility is being constructed to improve the water quality leaving the facility. The site treats stormwater from a 19.4-acre drainage area with 5.6 acres of impervious area. The size of this site is small and bordered by residential houses, constraining the area in which the contractor, Hamilton Site Construction, Inc., can maneuver their equipment.

The contractor has cleared the site of existing vegetation and is constructing the pipes and structures that will manage the flow within the facility. The next step is to finish excavating the site and building the submerged gravel wetland pool. When the facility is complete, the wetland pool will contain a mix of wetland meadow plants and the facility will improve the quality of the water that is discharged downstream.

Stone Manor

