Town of Berlin Serves as a Model of Environmental Stewardship for other Maryland Towns

In June, the Town of Berlin and Maryland Coastal Bays conducted a tour for participants of the Maryland Municipal League Summer Conference to visit sustainable drainage projects created to address flooding and improve water health.

Staff from 16 Maryland towns boarded a bus in Ocean City to tour three stormwater management projects, the Graham Avenue submerged gravel wetland, the Flower Street culvert and offline wetlands, and the future Hudson Branch stream restoration.

“Everything that happens here, flows down and impacts the coastal bays,” Jessica McIntosh, of Maryland Coastal Bays Program (MCBP), told the group. “Newport Bay is the focus of our Whole Watershed Project. These are all different parts along one waterway and flowing out to Trappe Creek and into the coastal bays.” She explained that each of these projects has an impact on the whole watershed system.

MCBP is the recipient of a five year grant from the State of Maryland through the Whole Watershed Act to restore Newport Bay, the Town of Berlin’s watershed.

Participants visited the submerged gravel wetland on Graham Avenue. In 2019/2020, the Town of Berlin converted this land, a former electrical substation, into a high performance stormwater system consisting of gravel-filled basins planted with native vegetation. Its design allows for stormwater to flow through the gravel beds and quickly filter out pollutants. The subsurface flow prevents standing water, which helps to minimize mosquito concerns for neighbors and enhances public safety.

“This project has alleviated a lot of the flooding in the neighborhood and downstream,” said Jamey Latchum, director of water resources for the Town of Berlin.

Steven Lemasters of EA Engineering provided the details on how the wetlands are functioning and answered questions on the various types of wetlands that can be created to address different needs. He also noted that Berlin has partnered with other organizations and taken advantage of grant opportunities to fund the projects. Latchum shared that by using town land and easements rather than having to purchase land, the town has been able to stretch its dollars to do more.

Lemasters and Latchum emphasized the importance of community outreach for these projects, including town meetings, door hangers and even knocking on doors to talk to neighbors. “Even though I am the director, I still go and knock on doors,” Latchum said. It probably helps that Latchum is a local guy and many of these residents know his father.

Participants were interested in how the wetlands were maintained. Latchum shared that EA Engineering will be doing an inspection of the wetlands. Once invasive vegetation has been identified, MCBP and Lower Shore Land Trust will help organize volunteers to help pull invasive plants. One participant shared that their town had to hire someone to deal with the invasives because it was a bigger issue than volunteers could handle.

Next, they visited the Flower Street culvert, a concrete box tunnel constructed to allow storm water to run under the road. The Town of Berlin enlarged this culvert to increase its capacity, reducing the risk of flooding to the roadway and nearby structures. They also created an offline wetland, a treatment basin located adjacent to Hudson Branch. During a typical rainstorm, as the water rises within the main channel, a diversion structure allows water to enter the offline wetland by first entering a forebay that allows sediments to be captured prior to releasing water into the main body of the wetland for treatment. The large main body of the wetland allows water to slowly disperse, inundant, and travel throughout the system providing further pollutant removal prior to slowly being released back into the downstream channel. Increasing the size of the culvert and utilizing an offline wetland greatly increased the capacity to withstand flooding while also improving water quality.

The final stop was the Hudson Branch stream restoration project, which is still in its design stages.

High and fast flows of stormwater runoff have caused the banks of this stream to erode, cutting off the stream from its natural floodplain. The goal of this project is to slow down storm water, filter pollutants and improve the water quality before it enters Newport Bay. This project is downstream from the other two projects.

“The projects we have done upstream have already reduced peak flows of water.” McIntosh advised participants to think through a whole system and fix the upstream issues before addressing those downstream.

On the Hudson Branch, stream banks will be stabilized with natural materials and native vegetation to help reduce erosion and limit the amount of sediment entering the waterways. Recreating a natural floodplain along this stream will allow water to slow down and flow with the

curves or newly created pools in the stream and mitigate flooding. Riparian buffers, trees and shrubs will be planted along the stream to help anchor the banks, shade the water to regulate temperatures and provide vital habitat for native wildlife.

The Hudson Branch stream restoration is expected to start later this year and is being funded by a five year grant through the Whole Watershed Act. Newport Bay is one of five pilot watersheds awarded funding by the State of Maryland.

The Newport Bay Partnership is receiving $2.25 million a year for five years to implement restoration projects," McIntosh said. "This is a really intense effort for five years to uplift the whole system."

Additional projects such as salt marsh restoration at the bottom of the watershed and working with the agricultural communities to address the water coming from the ditch systems are also planned.

Seat Pleasant Mayor Kelly Porter wrapped up the tour with encouraging words for the various town participants. "What we are really trying to do is have town leaders and municipal people have an opportunity to see what is going on within the restoration of the bay and its tributary."

The Newport Bay Partnership includes Maryland Coastal Bays, Assateague Coastal Trust, Lower Shore Land Trust, the Town of Berlin and Worcester County.