

In April of 2022, volunteers including local students and Master Watershed Stewards planted 1,500 trees on the property of Northeastern High School, located in York County, PA, finishing a large-scale riparian buffer project across 23 acres of land. This project aimed to stabilize the banks of Hartman Run (the stream that runs through the property), filter pollutants, prevent erosion, and add species diversity near large span of lawn adjacent to the school. The most exciting aspect of this project, however, is that the idea originated in a classroom just minutes away from the site. POWR had the chance to chat with Mark Lentz, the Assistant Coordinator for the Master Watershed Steward (MWS) program in York County about his role in this riparian buffer project, as well as the other great work that the York County Stewards are doing.

The MWS program was created through Penn State University Extension and provides extensive training in watershed management and protection of watersheds, streams, and rivers to volunteers who, in return, help design, plan, and implement watershed restoration projects and engage community members in a variety of “clean water” topics and stewardship efforts. They fulfill a critical role of educating people about water resources and what they can do to improve water quality within their watersheds. This educational and outreach work in York County includes tabling events, leading hikes, and even facilitating a youth fly-fishing event.

The work that the Stewards do would not be possible without the Program’s many partners. Two key players with whom the York County Stewards collaborate include the Watershed Alliance of York County and the Lower Susquehanna Riverkeeper Association. “The three of us are like Manny, Moe, and Jack.” Mark joked, alluding to the infamous Philly-based Pep Boys, “We’re always working together.” Collaborations expand the reach of MWS Program, provide access to additional resources, and enable more people to participate in their events.

Physical work is a large component of the role too. “We’re like the ants; we show up and work,” Mark shared, about the volunteer power the organization wields. The York County MWS Program has around 100 active volunteers. These volunteers work on everything from installing rain gardens, riparian buffers, and meadows to collecting trash in streams at community clean-up events. What stands out about this organization is their focus on the maintenance of these projects in addition to just installation. “Stewardship is part of our name.” Mark said, “We don’t just plant them and walk away from them.” This maintenance is crucial to securing the longevity of these projects, especially those that include extensive tree planting along riparian (streamside) corridors where young trees face many challenges to long term survival.

A great example of this stewardship work is the aforementioned riparian buffer planting along Hartman Run. Mark’s personal role in this project was important, but what makes this project really special were the students at the local school. At the time the idea kicked off, Mark

was teaching at Northeastern Middle School and covering land use and development in his classes. In discussing environmental impacts and runoff water, Mark decided to use the school district property as an engaging case study for his students and facilitated a discussion about what they could do to improve the property and the local creek. “We took big Google Earth maps and overlaid pieces of paper, cut to the shapes where we could plant trees or meadows.” Mark said, describing the exercise. Pleased with the ideas that his students generated, he took the ideas to the MWS Program (and school officials!), which were (generally) enthusiastically received.

The MWS Coordinator Jodi Sulpizio reached out to the Alliance for the Chesapeake Bay and The Pennsylvania Department of Conservation and Natural Resources (DCNR) to invite them to participate in the project. After a bit of planning, Mark and the MWS presented the idea to the school district, which the school board voted on, unanimously approving the project. The hard work from all organizations involved ensured that the school district did not have to spend a single penny on this riparian buffer installation.

The first phase of planting took place in 2019 and was almost entirely done by students from 3rd through 12th grade, with guidance and facilitation from the MWS and Mark. Plantings included trees and shrubs such as Sycamore, Black Locust, Tulip Poplar, American Holly, and Buttonbush, all provided by DCNR. Like most things, the onset of the pandemic in 2020 delayed additional planting, but that did not curb enthusiasm for the project. For the second phase of planting, the school district and the MWS invited volunteers from York County to participate and received an overwhelming turnout. The event was scheduled to go well into the afternoon, but as Mark shared, “So many people showed up, that we were done by lunch time.” Additional planting was completed entirely by the students, as a part of a few “field trips”. This provided them with the opportunity to get outside of the classroom during the school day, connect with their surroundings, and make lasting improvements to the school and environment.

Maintenance of a 23-acre riparian buffer is no easy task, but the work is shared among the students, the MWS, and the Alliance for the Chesapeake Bay. This maintenance includes straightening trees and tree tubes, preventing deer damage, replacing plants when needed, and more. This maintenance, expected to continue over the next few years as the trees and shrubs age, provides continuous educational opportunities for students at Northeastern Middle and High School.

This project has already made a sizable difference in the health of Hartman Run. Part of another class project, Mark and his students conducted routine macroinvertebrate monitoring in the creek to assess the stream's quality. Since planting, the quality has improved dramatically. “Initially we were getting fair water quality,” Mark said, “The last couple years,

we've been getting up to excellent." They also saw the reappearance of the stone fly nymph in the stream, a testament to the improving health of the stream ecosystem.

The York County MWS Program has on-going projects and projects "in the pipeline." Mark is planning Watershed on Wheels, an environmental history bike tour with the goal of exploring the Codorus Creek watershed. He is also assisting with the planning of a future Macroinvertebrate workshop that will be held for all the Stewards with the goal of increasing education and awareness regarding these important species which depend on clean, healthy rivers and streams. Other projects and initiatives of the Program include the Street 2 Creek Storm Drain Art Project, which raises awareness about the need to keep litter out of storm drains, and the Tap Talks series, which are social and educational gatherings featuring a special presentation and topic each month at a local brewery, winery, or eatery.

It is an exciting time to be a Steward, and the York County group has proven their dedication to protecting and improving the valuable natural resource that is their water. Looking to get involved with this group or find more information? Check out the group's website (<https://extension.psu.edu/programs/watershed-stewards/counties/york>) and Facebook page (<https://www.facebook.com/PennStateExtYork/>) for information on public events such as the Tap Talks or the upcoming Watershed on Wheels bike tour, and updates on current projects. Additionally, those looking to become a Master Watershed Steward, whether in York County or elsewhere across the commonwealth, should visit the Penn State Extension website for the application. Applications to become a MWS through Penn State are accepted year-round, and the training session takes place each year from March through June.

Pictures from the site follow:





