

# Eichhorn Middle School Habitat Restoration Project

**Project Description:** The Limestone Run Watershed is impaired by non-point sources of pollution including excess nutrients and sediment. The Union County Conservation District was awarded a Growing Greener grant to restore and enhance terrestrial and aquatic habitat while increasing outdoor educational opportunities by utilizing a multi-partnership approach.

**Project Goals:** The implemented best management practices were designed to remediate nonpoint source sediment and stormwater pollution leading to improved water quality and enhance ecological habitat within the Limestone Watershed in Union County.

**Project Results:** The restoration and enhancement project resulted in 0.55 acres restored agricultural wetlands, removal of invasive species, and the creation of a pollinator plot. The previous stormwater swale was only providing 0.1 acres of filtration and retention, the new wetland basins have increased retention to 0.55 acres with an average depth of 8 inches. This project overall has reduced stormwater, sediments, and nutrient loads on Limestone run, a tributary to the Susquehanna River leading to the Chesapeake Bay.

**Project Cost:** \$17,920 Growing Greener Grant (\$15,222.50 used) and Matching contributions by US Fish and Wildlife Service (\$4,810), the Lewisburg Area School District (\$1,847.50), and Union County Conservation District (\$1,820).

**Partners:** US Fish and Wildlife Service, the Lewisburg Area School District, and Union County Conservation District.

**Contact information:** Savannah Rhoads, Watershed & Program Specialist @ Union County Conservation District, 570-524-3863 or [srhoads@unionco.org](mailto:srhoads@unionco.org)



Through the partnership with USFWS, we were able to work with the Lewisburg Area School District to create the restoration design above to incorporate both environmental and educational benefits. Environmentally, the design lowers the amount of storm water runoff dumping directly into the drain, reduces the sediment load on Limestone Run, and a large plot of pollinator habitat is provided. Educational benefits consist of having students learn how to plant trees/shrubs with stakes and tubes, how to create and install pollinator habitats, having an outdoor classroom without traveling, and 15 Ecology/Environmental standards (5 directly related to wetlands).

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In this series of photos: #1 shows the site prior to any projects – stormwater runoff during rain event with no retention/filtration. #2 shows the same site where the existing swale led directly into the stormwater drain. #3 shows the same site with an improved swale and the wetland basins being constructed



In this series of photos: #1 shows the site after construction was completed prior to the planting #2 shows the same area where the 8<sup>th</sup> grade students volunteered and learned how to plant shrubs around the wetland basins #3 is another area that the students planted shrubs so that each basin was fully vegetated



The wetland area has had great environmental impacts and has provided opportunity to cover a total of 15 education standards including, but not limited to, biotic and abiotic components of an ecosystem, energy flow within an ecosystem, viability of ecosystems based on biological diversity, factors that affect the quality of ground and surface waters and how human actions affect the health of the environment.