Vale Wood Farms - Deliverable #1

Project Description: BMP, to roof the existing 250' long Animal Heavy Use Area (AHUA) feed lane and alley

Project Goals: This roof will keep rainwater from falling onto the manure-laden alleys and keep the roof water clean. Also, this roof will remove some of the water currently going to the "paint-pan" basin. This will reduce the pressure on this existing collection system.

Project Results: The 250' roof was built that resulted in a reduction of Nitrogen, Phosphorus, and Sediment flowing into the nearby stream.

Pollution Reduction Nitrogen: 3,445 lbs/year, Phosphorus: 221.7 lbs/year, Sediment: 35.3 tons/year









Pre - Construction

Post - Construction

Project Grants/Contributions: Growing Greener Grant: \$27,931.00

Landowner: \$53,724.56

Contractor: Robert L. Byrne Construction LLC

Partners: Vale Wood Farms, Cambria County Conservation District, DEP

Contact Information: Cambria County Conservation District

John Dryzal @ 814-472-2120 or dryzal@co.cambria.pa.us

Glendale Lake Shoreline Stabilization Projects

<u>Project Description</u>: The Project will eliminate feet of severely eroded shoreline, reduce sedimentation, decrease the hydrilla problem in the lake, improve aesthetics, provide fish habitat, maintain and improve fisherman access, and other water quality improvements

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding shorelines into Glendale Lake.

Project Results: A total of 66 structures were installed which included: Stone Framed Rock Deflectors, Sawtooth Deflectors, and breaker rock dumps.

Pollution Load Reductions (All Sites): Sediment -13,064 lb. Nitrogen - 12 lbs., Phosphorus - 5 lbs.

Pre-Construction - Turtle Cove



Pre - Construction - Deer Inlet



Post-Construction - Turtle Cove



Post - Construction - Deer Inlet



Pre-Construction – Hughes Trail



Pre-Construction - Troxel Point



Post-Construction - Hughes Trail

Post-Construction - Troxel Point



Project Grants/Contributions: Growing Greener Grant: \$293,360.00

DCNR - State Park - \$50,000.00

Total - \$343,360.00

Contractor: Earth Shapers LLC

Material Suppliers: Hawbaker, SiteOne Landscape Supply, Frank Roberts & Sons, Hanes Geo Components, American Floor Mats, GCI Glenn O Hawbaker Inc.

Partners: Pa Fish & Boat Commission, PA State Park DCNR, DEP, Cambria County Conservation District

Contact Information: Cambria County Conservation District

PROJECT SUMMARY Brubaker Run Projects – Site #1

<u>Project Description</u>: The Project installed 3 fish enhancement structures to control stream bank erosion on Brubaker Run for approximately 240 linear feet of stream.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into Brubaker Run.

<u>Project Results</u>: The streambanks were sloped and stabilized with 3 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (All Sites): Sediment - 6,269 lbs. Nitrogen - 2.2 lbs., Phosphorus - 2.2 lbs.



Pre - Construction



Post - Construction

Project Grants/Contributions: \$12,675.90

Contractor: Earth Shapers, LLC

<u>Partners</u>: PA Fish & Boat Commission, Hastings Borough, Department of Environmental Protection, Cambria County Conservation District.

Contact Information: Cambria County Conservation District

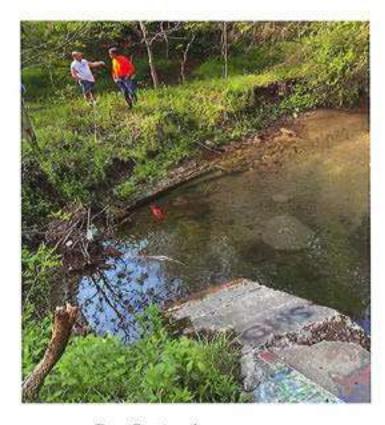
Brubaker Run Streambank Stabilization Project – Site #2

<u>Project Description</u>: The Project installed 4 fish enhancement structures to control stream bank erosion on the Brubaker Run for approximately 80 linear feet of stream.

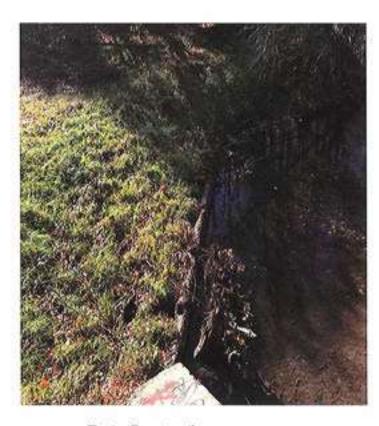
<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into Brubaker Run.

<u>Project Results</u>: The streambanks were sloped and stabilized with 4 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (All Sites): Sediment - 6,269 lbs. Nitrogen - 2.2 lbs., Phosphorus - 2.2 lbs.



Pre - Construction



Post - Construction

Project Grants/Contributions: \$10,926.40

Contractor: Earth Shapers, LLC

<u>Partners</u>: PA Fish & Boat Commission, Department of Environmental Protection, Hastings Area Industrial Association, Hastings Borough, and the Cambria County Conservation District.

Contact Information: Cambria County Conservation District

PROJECT SUMMARY Brubaker Run Streambank Stabilization – Site #3

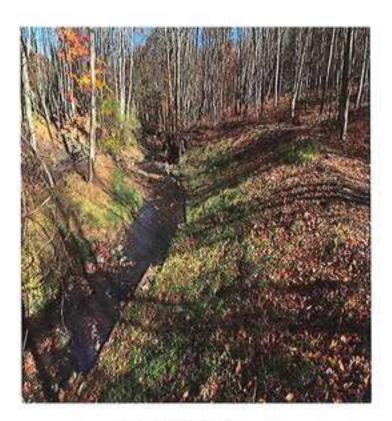
Project Description: The Project installed 12 fish enhancement structures to control stream bank erosion on Brubaker Run for approximately 190 linear feet of stream.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into Brubaker Run.

<u>Project Results</u>: The streambanks were sloped and stabilized with 12 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (All Sites): Sediment - 6,269 lbs. Nitrogen - 2.2 lbs., Phosphorus - 2.2 lbs.





Pre - Construction

Post - Construction

Project Grants/Contributions: Growing Greener Grant: \$21,282.30

Contractor: Earth Shapers, LLC

<u>Partners</u>: PA Fish & Boat Commission, Hastings Sewer Authority, Department of Environmental Protection, Cambria County Conservation District.

Contact Information: Cambria County Conservation District

West Branch Susquehanna River Streambank Stabilization Projects Deliverable #4 - Site #1

<u>Project Description</u>: The Project installed 14 fish enhancement structures to control stream bank erosion on the West Branch Susquehanna River for approximately 700 linear feet of stream.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into the West Branch Susquehanna River.

<u>Project Results</u>: The streambanks were sloped and stabilized with 14 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (3 Sites): Sediment - 25,928 lbs., Total Nitrogen - 16 lbs., Total Phosphorus - 8 lbs.





Pre - Construction

Post - Construction

Project Grants/Contributions: Growing Greener Grant: \$37,961.04

Contractor: Kev's Excavating LLC

<u>Partners</u>: Daniel Weaver (Landowner), PA Fish & Boat Commission, Department of Environmental Protection, and the Cambria County Conservation District.

Contact Information: Cambria County Conservation District

West Branch Streambank Stabilization Projects - Site #2

<u>Project Description</u>: The Project installed 36 fish enhancement structures to control stream bank erosion on the West Branch Susquehanna River for approximately 1500 linear feet of stream.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into the West Branch Susquehanna River.

<u>Project Results</u>: The streambanks were sloped and stabilized with 36 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (3 Sites): Sediment - 25,928 lbs., Total Nitrogen - 16 lbs., Total Phosphorus - 8 lbs.



Pre - Construction



Post - Construction

Project Grants/Contributions: Growing Greener Grant: \$36,599.26

Contractor: Kev's Excavating LLC

<u>Partners</u>: Northern Cambria Borough (Landowner), the Browns (Landowner), PA Fish & Boat Commission, PA Department of Environmental Protection, and the Cambria County Conservation District.

Contact Information: Cambria County Conservation District
Mark Stockley @ 814-472-2120 or mstockley@co.cambria.pa.us

West Branch Susquehanna River Streambank Stabilization Projects - Site #3

<u>Project Description</u>: The Project installed 46 fish enhancement structures to control stream bank erosion on the West Branch Susquehanna River for approximately 1800 linear feet of stream.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into the West Branch Susquehanna River.

<u>Project Results</u>: The streambanks were sloped and stabilized with 46 fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions (3 Sites): Sediment - 25,928 lbs., Total Nitrogen - 16 lbs., Total Phosphorus - 8 lbs.



Pre - Construction

Post - Construction

Project Grants/Contributions: \$36,778.16

Contractor: Kev's Excavating, LLC

<u>Partners</u>: Trout Unlimited, Spangler Fire Department & Northern Cambria Borough, the Marino's, the Bobik's, the Rajnish's (Landowners), PA Department of Environmental Protection, and the Cambria County Conservation District.

Contact Information: Cambria County Conservation District

PROJECT SUMMARY Bradley Run Streambank Stabilization Project

<u>Project Description</u>: The Project installed 94 fish habitat enhancement structures at different locations to control stream bank erosion on 3,700 ft of Bradley Run.

<u>Project Goals</u>: The goals were to improve fish habitat and other aquatic resources while reducing sediment pollution from eroding streambanks into Bradley Run.

<u>Project Results</u>: The streambanks were sloped and stabilized with fish habitat structures which stabilized eroding streambanks and reduced sediment loading into the stream.

Pollution Load Reductions: Sediment - 10,939 lbs., Total Nitrogen - 8.8 lbs., Total Phosphorus - 4.4 lbs.



Pre - Construction



Post - Construction

Project Grants/Contributions: Growing Greener Grant: \$ 63,850.92

Contractor: Smith's Lawn & Landscaping LLC

<u>Partners</u>: PA Fish & Boat Commission, Department of Environmental Protection, Summit Country Club, and the Cambria County Conservation District.

Contact Information: Cambria County Conservation District