

Yellow Breeches Trout Habitat and Stream Bank Restoration at Allenberry

Growing Greener Plus Document Number: C990002475

Sponsor: Cumberland County Conservation District

PROJECT DESCRIPTION This project enhanced trout habitat and stabilized 4,040 linear of stream by installing 43 structures and 93 boulder clusters to create a diverse and exciting section of stream that is a very popular fishing destination. Project construction commenced in January 2022 and finished in September 2022 with a break in construction in March-August to comply with special restrictions for construction and seasonal fishing popularity.

PROJECT GOALS Enhance habitat to provide cover, pools, and riffles for trout and macroinvertebrates and stabilize stream banks and stream beds to prevent farther stream bank erosion and stream bank degradation.

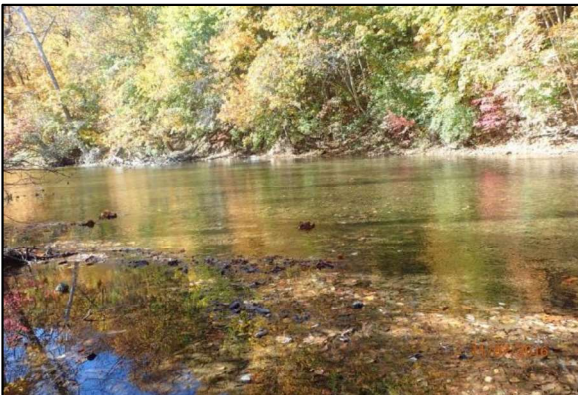
PROJECT RESULTS Trout habitat structures included a total of 43 structures and 93 random boulders:

Rock Vanes: 12	Log Vane: 1	Rock Toe: 6 (240 ft)	Log cross vane (trib.): 1
Rock Vane with J-Hook: 2	Mudsills: 10 (951 ft)	Random Boulders: 93	Rock Cross vane repair: 1
Rock Cross Vane: 2	Brush Mattress: 8 (293 ft)		

Mudsill cribbing provides a stable stream bank toe while it mimics undercut banks where trout can hide from aerial predators. Rock vanes stabilize the toe of the stream bank while being angled to push water into the center of the stream. Adding a “j” hook to rock vanes help create a pool at the “j”. Rock toes help stabilize areas that are prone to erosion and are critical to preserving the low-flow historic dam bank approaches. Brush mattresses create slow water that allow fish to hide from predators. Random boulders were placed in clusters and create feeding lanes and resting areas for fish.

Nutrient Reductions					
Sediment	245,598.83 lbs/year	Nitrogen	74.27 lbs/year	Phosphorus	67.34 lbs/year
Reductions modeled through CAST					

PICTURES



Before: Flat section of stream with eroded banks and stream deposition.



After: Rock cross vanes and random boulder clusters narrow stream channel and provide diversity.

PROJECT COSTS \$ 255,913.30 Growing Greener Plus Grant contributions
\$ 132,806.91 Landowner and Partners' contributions

LESSONS LEARNED Multiple field days allowed for positive feedback and allowed for question and answer sessions.

PARTNERS Cumberland County Conservation District, Allenberry, U.S. Fish and Wildlife Service, Dave McMullen Guided Fly Fishing and Stream Consulting, Partners for Fish and Wildlife, Habitat Forever, Foundation for California University of Pennsylvania, Cumberland Valley Trout Unlimited, and Pennsylvania Department of Environmental Protection.

CONTACT INFORMATION Cumberland County Conservation District, Lori Glace at lbglace@cumberlandcountypa.gov or 717-240-7812.