

# Northcentral Stream Partnership



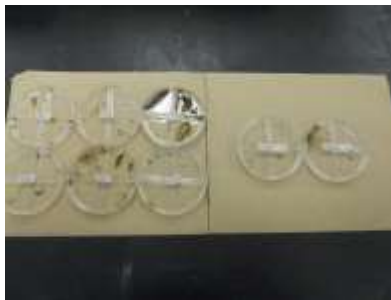
## Project Goals:

- Decrease erosion
- Stabilize stream banks
- Stabilize the riparian buffer
- Increase filtration of run-off
- Improve/create aquatic habitats
- Support fish and aquatic life
- Riparian buffer plantings



## What's the Problem?

- 303d List (EPA designation)
- Agricultural Sediment/Siltation
- Aquatic habitat impaired



## What the Problem Looks Like

- Poor bank vegetation
- Poor riffle habitat
- Embedded substrate



A partnership to reduce sediment and nutrient inputs by restoring stream corridor stability.

- Pennsylvania Department of Environmental Protection-Northcentral Regional Office (DEP)
- Pennsylvania Fish and Boat Commission-Stream Habitat Section (PFBC)
- County conservation districts (CCD)
- Northcentral Pennsylvania Conservancy (NPC)

We **restore** eroding streambanks and **reduce sediment** at the source, inches away from the stream. At the same time, we are **improving in-stream aquatic habitat**. By using in-stream structures for **bank stability** and habitat restoration in combination with Ag. BMPs along the stream corridor, we are working to address **immediate** concerns and mitigate the threat of **future** degradation.

BMPs used in our projects include; but are not limited to:

- (1) in-stream log and rock structures such as log vane deflectors, muddills, log and rock cross vanes, etc.
- (2) livestock exclusion fencing
- (3) stable livestock/equipment stream crossings
- (4) reinforced/stable livestock/equipment lanes/walkways
- (5) riparian buffer plantings
- (6) roof gutters



Common perceptions of stream projects we've heard:

- They're too complex
- You need engineers
- Someone involved needs to REALLY understand environmental permitting
- Most streams and floodplains are regulated as wetlands, so you're dealing with wetland permits
- They're too expensive
- It takes a long time, at least 1 to 3 years to get a project done
- There's a lot of monitoring and survey work that needs to be done ahead of time





### *"They're too complex"*

There are a lot of moving parts:

#### Conservation Districts:

- Find a site/willing landowner
- Serve as landowner liaison (before, during, after)
- Assist with permit application
- Construction logistics
- On-site during construction

#### NPC:

- Secure funding (and handle reporting to funders)
- Pay the bills
- Coordinate
- Communicate within the Partnership
- Communicate about what the Partnership is doing

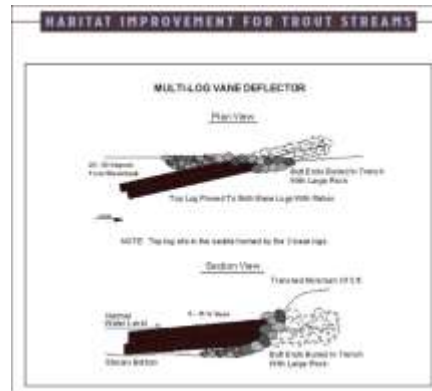
#### DEP & PFBC:

- Select the sites
- Design the projects
- Develop supply list/material list
- Implement the practices/oversee construction

### *"You need engineers"*



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS  
GENERAL PERMIT  
DWEW-GP-1  
FISH HABITAT ENHANCEMENT STRUCTURES



| Amount      | Vendor         | Description                         |
|-------------|----------------|-------------------------------------|
| \$1,112.00  | LB Water       | Geotextile, jute, sod staples       |
| \$1,126.50  | Martin's Steel | Rebar – 2' and 4'                   |
| \$6,022.57  | New Enterprise | Rock/stone – loads and trucking     |
| \$7,073.50  | RJ Hoffman     | Logs                                |
| \$13,100.00 | Stacey Snyder  | Excavator and Bobcat with operators |
| \$133.00    | Robert Rohrer  | Straw – Erosion Control             |
| \$34.00     | Seed           | Erosion Control                     |
| \$420.00    | Log moving     |                                     |
| \$6,015.05  | T-Fencing      | Streambank fencing                  |

SOS – PFBC  
Landowner contribution  
DEP

*"It takes a long time, at least 1 to 3 years to get a project done"*



*"There's a lot of monitoring and survey work that needs to be done ahead of time"*

**Document that it works.....**

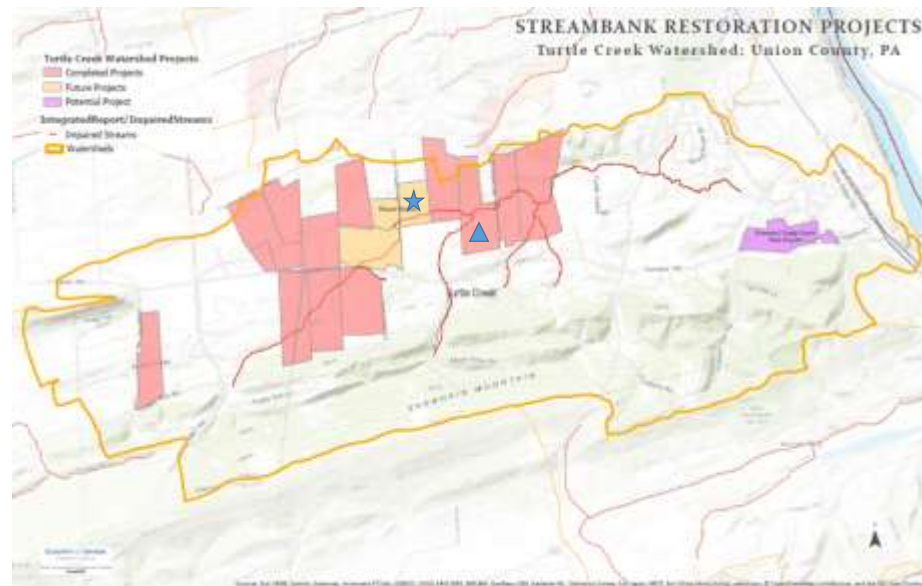
|                                  | Macros | Temp   | Water Chem. | Fish   |
|----------------------------------|--------|--------|-------------|--------|
| •John Ivan Martin (Turtle Creek) | DEP    | DEP    | DEP         | SU-FRI |
| •Steven Martin (Turtle Creek)    | DEP    | DEP    | DEP         | SU-FRI |
| •Steven Brown (Turtle Creek)     | DEP    | DEP    | DEP         | SU-FRI |
| •Norman N. Martin (Turtle Creek) | DEP    | DEP    | DEP         | SU-FRI |
| •Norman M. Martin (Turtle Creek) | DEP    | DEP    | DEP         | SU-FRI |
| •Jonas Zeiset (Turtle Creek)     | DEP    | DEP    | DEP         | SU-FRI |
| •Pfleegor (Limestone Run)        | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Smith (Limestone Run)           | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Little Shamokin Creek WatAssoc. | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Schnure (Limestone Run)         | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Danny Bobb (Middle Creek)       | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Baylor (Turtle Creek)           | SU-FRI | SU-FRI | SU-FRI      | SU-FRI |
| •Carl/Greg Brown (Turtle Creek)  |        | BU     | BU          |        |
| •Abram Zimmerman (Conley Run)    | BU     | BU     | BU          | BU     |





Investment of over \$2,001,583 - Growing Greener, SWG, SOS, etc.

|              | Number of Structures | Stream Length                     | Number of Projects/Sites |
|--------------|----------------------|-----------------------------------|--------------------------|
| 2009         | 247                  |                                   | 16                       |
| 2010         | 80                   |                                   | 10                       |
| 2012         | 52                   | 9,375                             | 7                        |
| 2013         | 143                  | 9,017                             | 14                       |
| 2014         | 260                  | 23,031                            | 24                       |
| 2015         | 330                  | 13,200                            | 15                       |
| 2016         | 503                  | 21,575                            | 21                       |
| 2017         | 291                  | 8,342                             | 13                       |
| 2018         | 129                  | 5,005                             | 11                       |
| <b>Total</b> | <b>2,035</b>         | <b>89,545 ft.<br/>17 miles+/-</b> | <b>150+</b>              |



- ★ Stop 1 – Griffith's
- ▲ Stop 2 – Carl/Greg Brown

Field design for Carl/Greg Brown



Carl/Greg Brown



Carl/Greg Brown



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Griffith's  
March 2019



Griffith's  
March 2019

