



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Bureau of Watershed Restoration
and Nonpoint Source Management

Partnership Approach to BMP Implementation

September 2024 STAC Quarterly Meeting

Nature Inn at Bald Eagle State Park

September 10, 2024

Josh Shapiro, Governor

Jessica Shirley, Acting Secretary



**Northcentral
Pennsylvania
Conservancy**



**Pennsylvania
Department of Environmental Protection**



Stream Corridor BMP's



In-Stream Structures



Cattle and Equipment Crossings

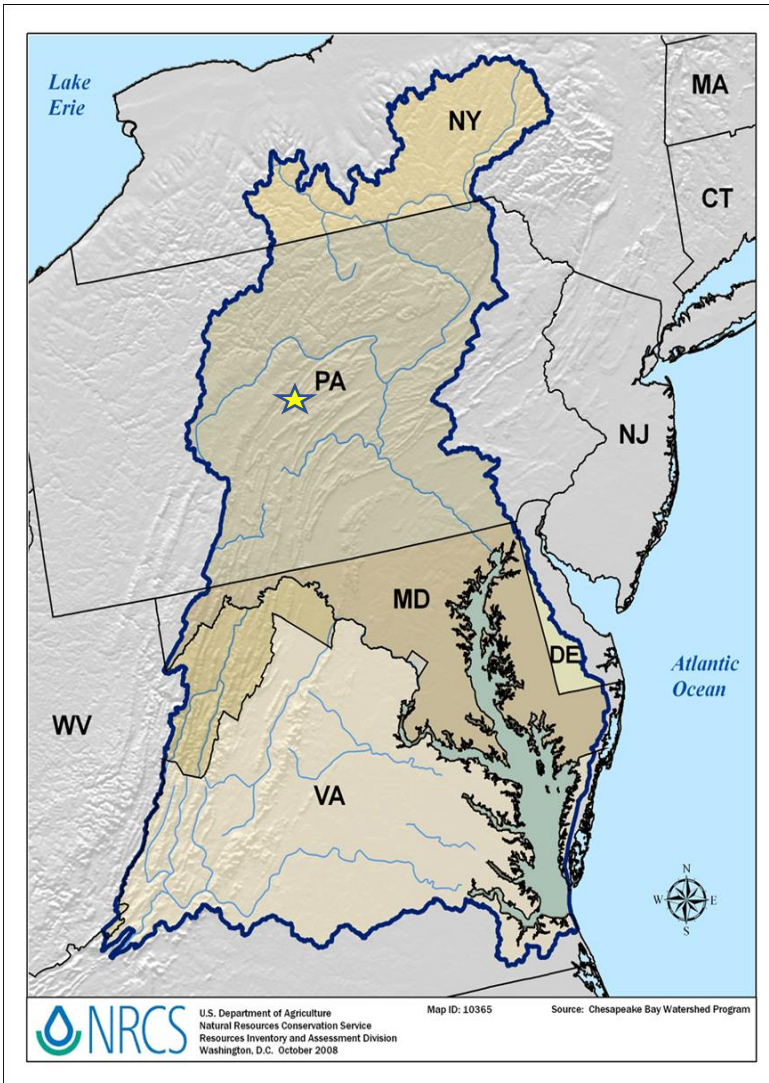


Livestock Exclusion Fencing



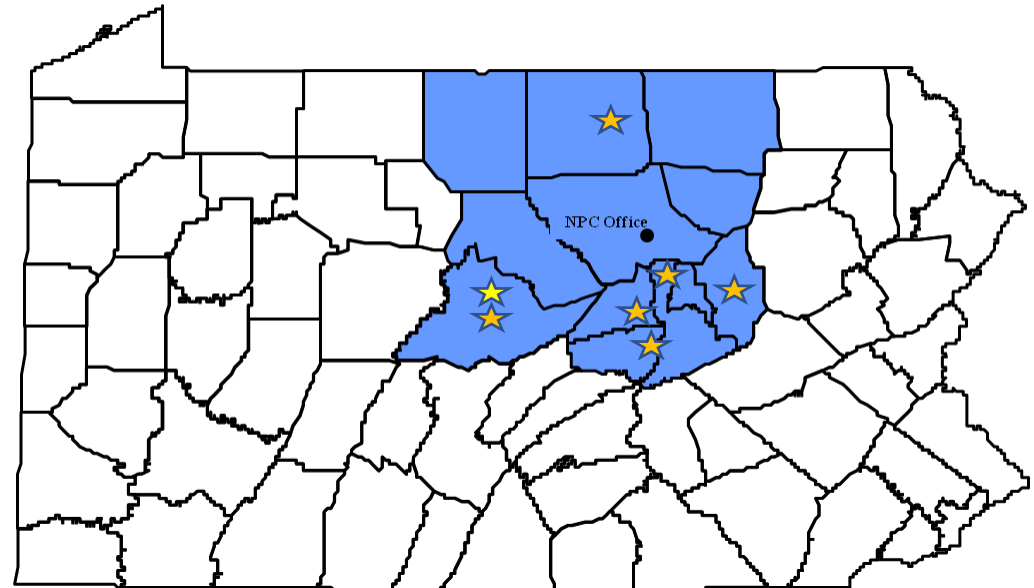
Riparian Plantings

Northcentral Stream Partnership



Partner Goals:

- *Decrease Accelerated Erosion*
- *Improve/Create Aquatic Habitats*
- *Build Lasting Landowner Relationships*
- *Find the “Win-Win” Solution*



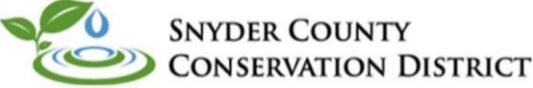
“Everyone does a little so no one has to do it all”



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▶ Bank Erosion and In-stream Structures

Turtle Creek Union County



Mudsill Cribbing



Turtle Creek, Union County

Wilson Creek, Tioga County



Completed August 2024



Warrior Run, Northumberland Co.



Completed August 2024

Halfmoon Creek, Centre County



Completed 2022-2023

Hemlock Creek, Columbia County



Completed June 2024

Susquehecka Creek, Snyder



Completed July 2023

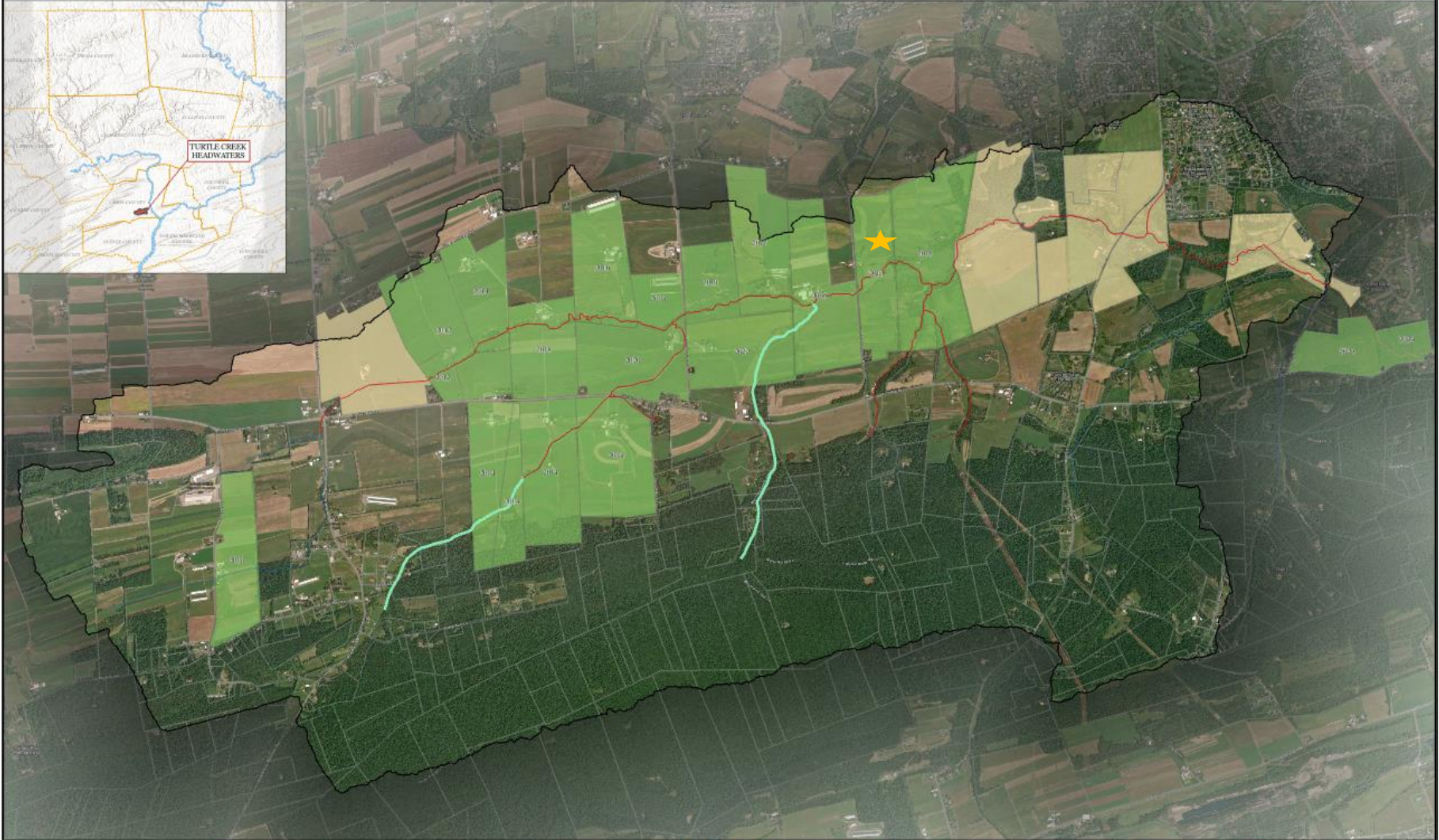
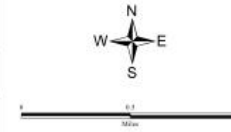


- Legend
- Non-attaining stream
 - Stream
 - DEP 2024 Integrated Report stream changes
 - Parcel boundary
 - Completed restoration project properties
 - Proposed restoration project properties

TURTLE CREEK WATERSHED

TURTLE CREEK - WEST BRANCH SUSQUEHANNA RIVER

UNION COUNTY,
PENNSYLVANIA



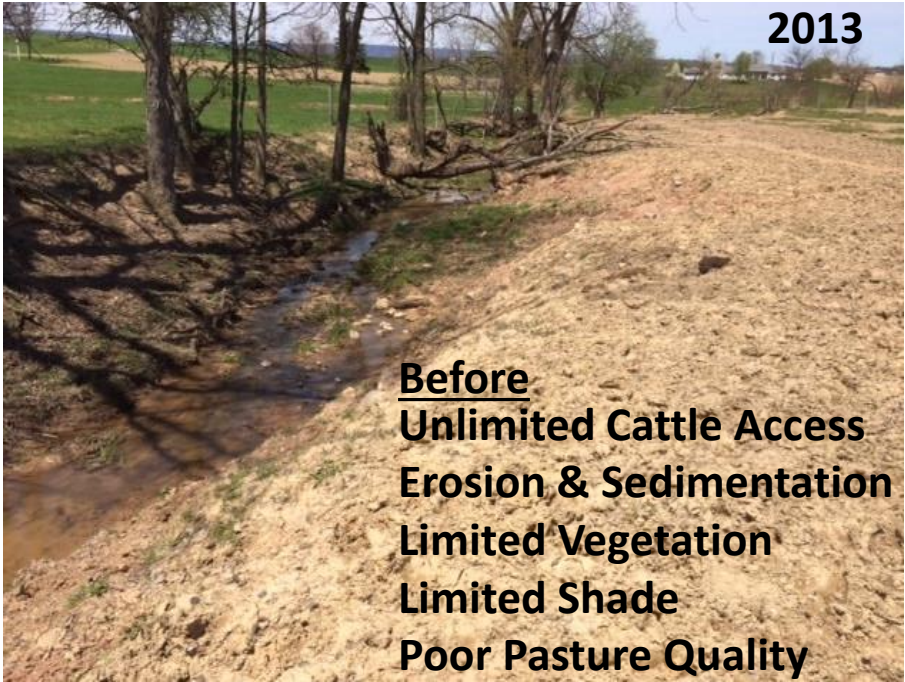
Delisted Segment



Turtle Creek Tributary

Completed July 2014

2013



Before
Unlimited Cattle Access
Erosion & Sedimentation
Limited Vegetation
Limited Shade
Poor Pasture Quality

Turtle Creek Un-mapped Tributary

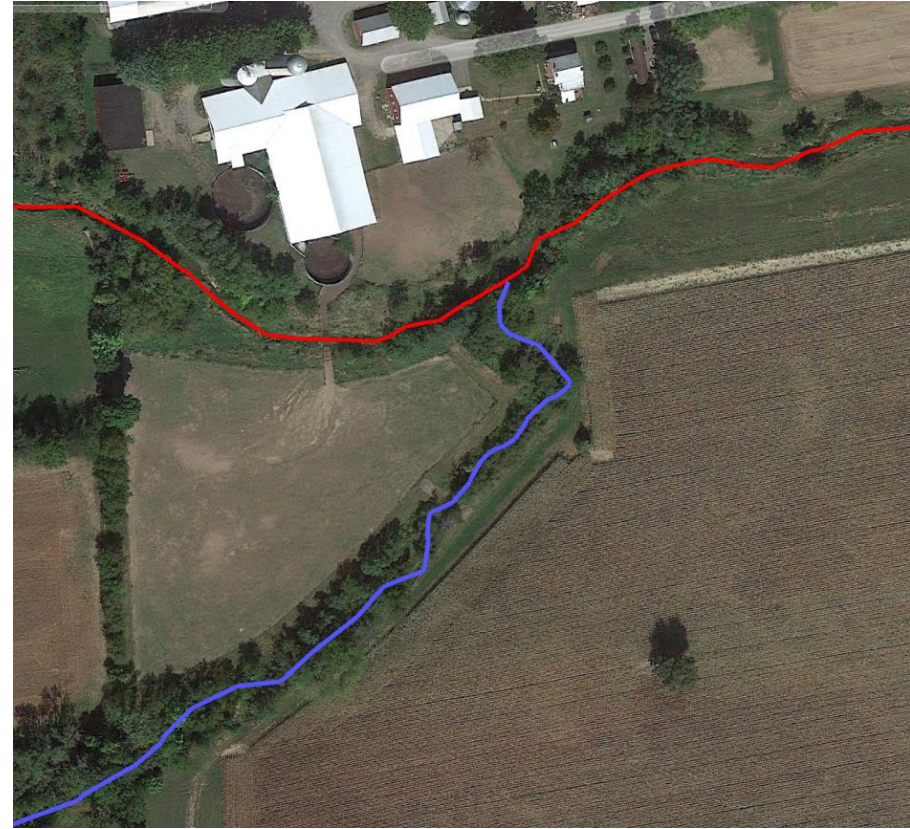


Benefits:
Shade
Clean Gravel Substrate
Limited Fine Sediment Inputs
Vegetated to Water's Edge
Pasture Improvements

2019



After
In-stream Structures
Livestock Exclusion Fencing
Crossings
Riparian Plantings
Pasture Improvement



Turtle Creek Delisted Segment

BMP's Implemented:

Livestock Exclusion

Fencing

Stabilized Crossings

Instream Habitat

Structures

Riparian Buffer Planting

Livestock Walkway

Landowner Changes:

Pasture to Buffer

Pasture to Hayland

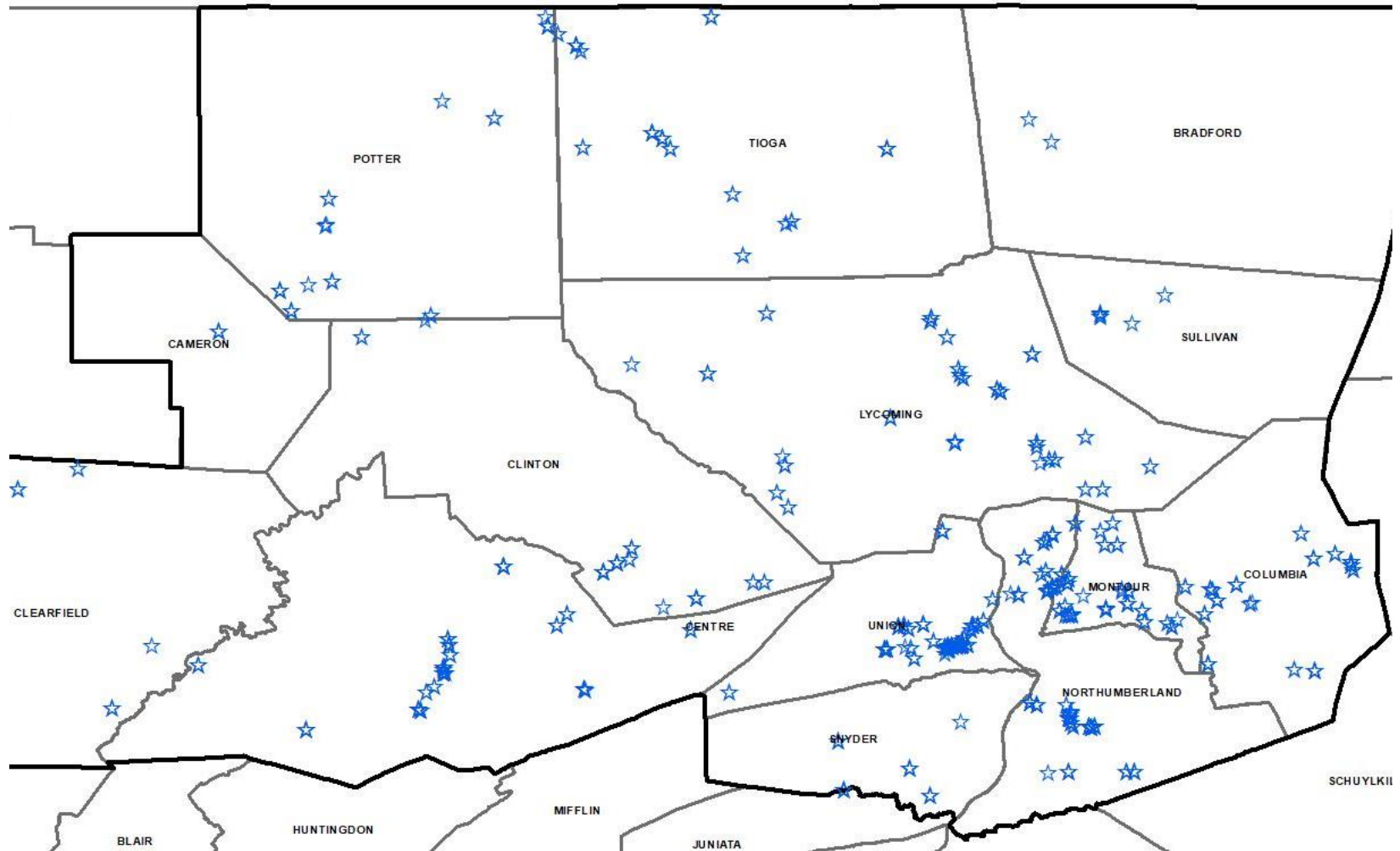
Pasture to Cropland

Number of Projects Completed in Sediment Impaired Watersheds

- North Fork Cowanesque: 7
- Wilson: 3
- Limestone Run: 6
- Hemlock Creek: 8
- Susquehecka Creek: 5
- Beaver Run: 8
- Chillisquaque Creek: 7
- Mahoning Creek: 4
- Buffalo: 4
- Turtle Creek: 21
- Limestone Run Montour/North'd: 19
- Little Shamokin: 20
- Schwaben Creek: 11



Partnership Project Locations 2009-2023





UNION COUNTY
CONSERVATION DISTRICT



Northcentral
Pennsylvania
Conservancy



Bucknell
UNIVERSITY



Susquehanna
UNIVERSITY



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