

Pennsylvania's Rapid Stream Delisting Approach



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2017 Prioritization analysis

Where are the most important places to work?



Priority Layers ^{cumulative by parcel}
(Include with weights)

③ Drainage Acres Percentile
Agric. + Imperv. Surf. ↑W, ↑SIZE

④ Acres of planting opportunity - Percentile

Agriculturally ^{NO AMB} Impaired Stream ^{site specific}
↓ not just 1+0

② Exceptional Value / High Quality Water ^{site specific?}
- PERCENTILE?

① Ag + EV/HQ -
DRAINAGE ACRES overlay

Topography Datasets

GIS datasets for parcel prioritization

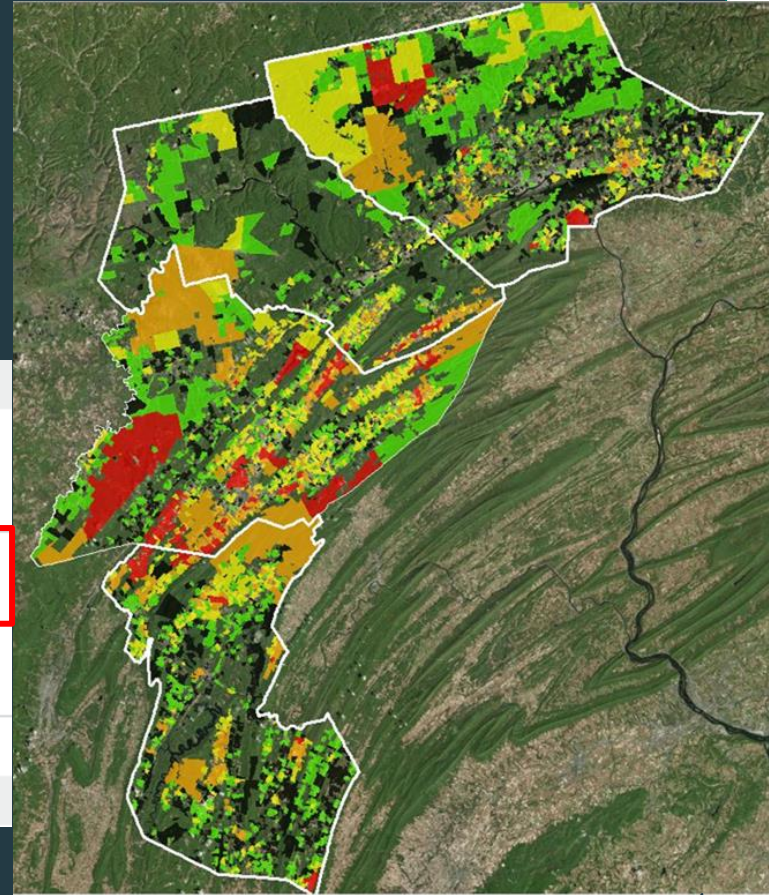
1. Riparian forest buffer gaps & restoration opportunity analysis
1. High-resolution land use/land cover (CBPO)
1. High-resolution hydrography
1. Drainage area analysis
1. Parcel prioritization



6,000 properties ranked, but a scattered approach wasn't working

Q10: What strategies would you like to explore over the next three years? (check all that apply)

ANSWER CHOICES	RESPONSES	
Segmenting out work load by property type (for example, each partner takes a lead on one property type, like hunting clubs, preserved farms, state lands, pick-your-own farms, properties within MS4 boundaries, etc.)	18.75%	3
Finding impaired stream segments with only a few high priority parcels upslope and focusing intensive full-farm restoration on those parcels.	81.25%	13
More focus on high scoring, low-lift projects (for example, buffer-only projects with no ag-BMPs).	56.25%	9
Other (please specify)	6.25%	1
Total Respondents: 16		



Stream delisting

Intuitive

Streams are either “impaired” or “attaining” on Integrated Water Quality Report

Tangible

Improving in-stream conditions for aquatic insects

Community-driven

Coordinate local practitioners, build on momentum

Index of Biological Integrity (IBI)



Mayfly

Scientific taxon: *Ephemera*



Riffle beetle

Scientific taxon: *Optioservus*



Stonefly

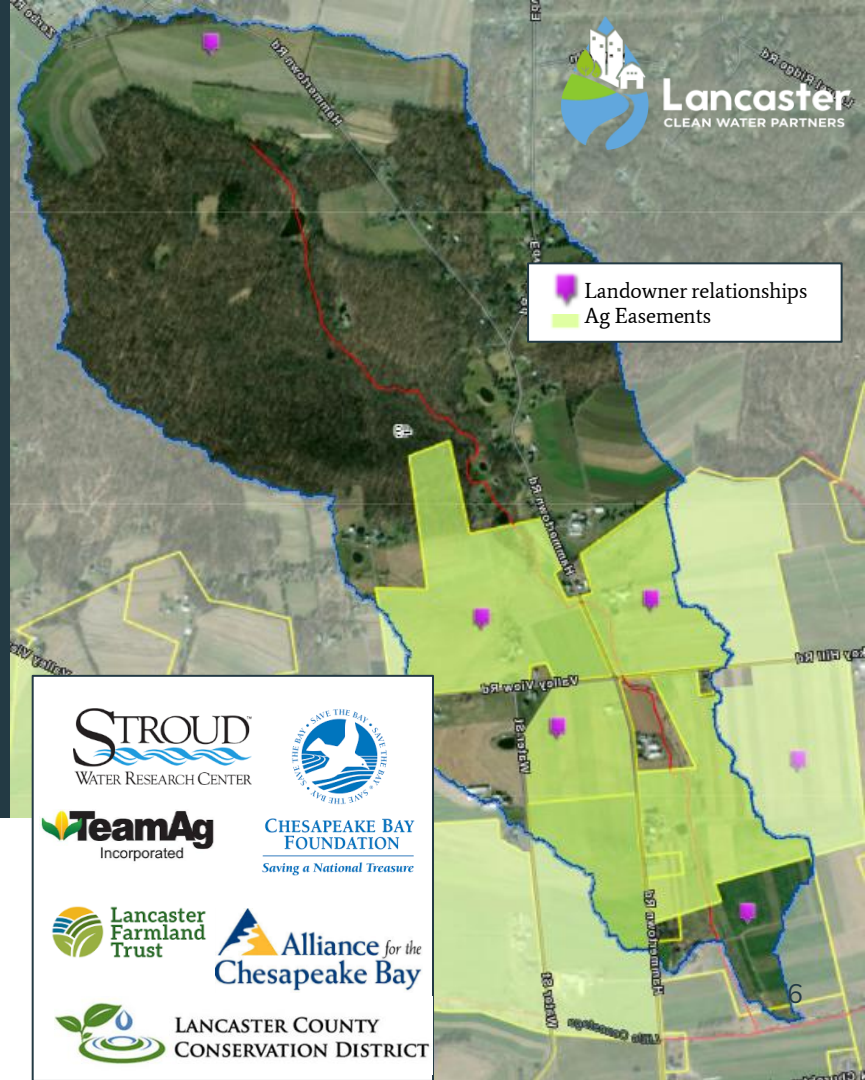
Scientific taxon: *Plecoptera*



The most promising streams

For delisting in 10-12 years

1. Fastest recovery: existing conditions
2. Efficient implementation: Parcel analysis
3. Advancing momentum: Sharing local knowledge



Landowner relationships
Ag Easements



Delisting catchment: Lancaster Co., PA

- Downstream IBI is 39.00, 895 ac.; 2.1 mi. of impairment
- Top 10 properties could lead to 64% of buffer restored; 85% of ag land under conservation practices
- Partner relationships established with 6 landowners

30 x 30 Stream Delisting Goal

Regional goals

Aggregating projects across 7 counties

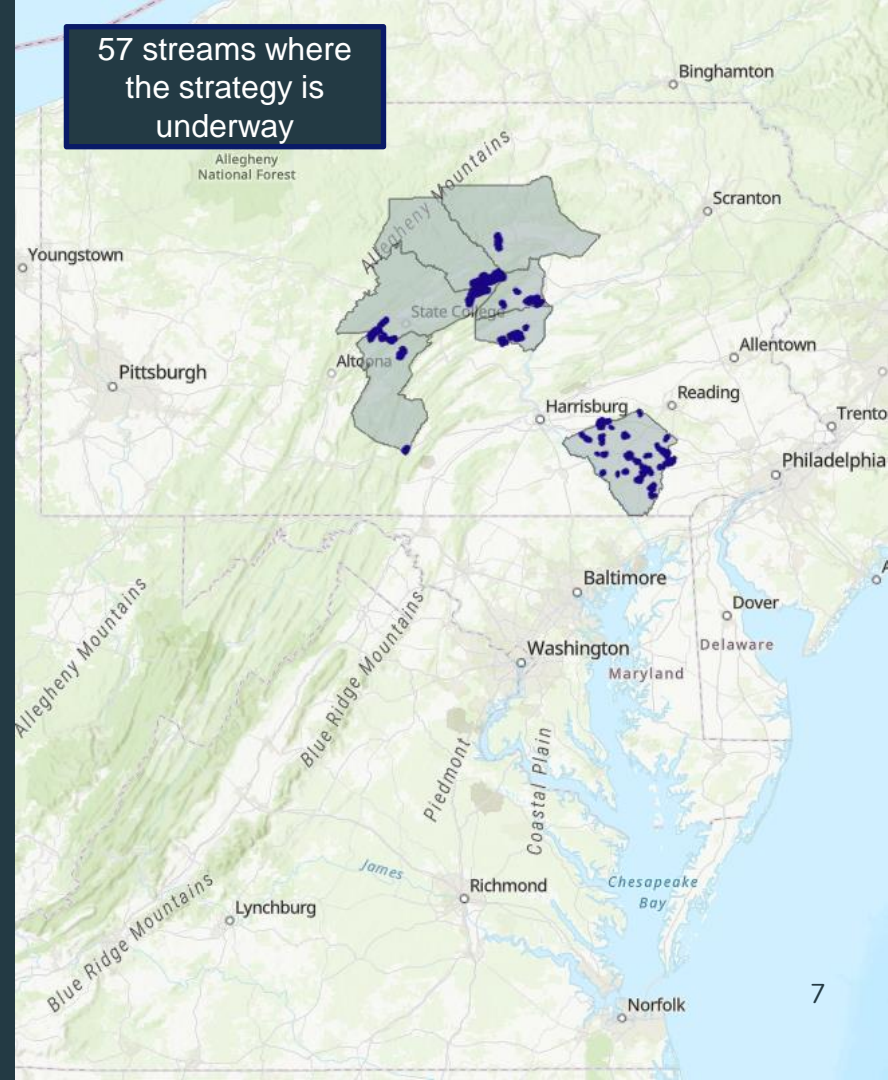
Goal: “delist” 30 streams by the year 2030

Progress tracking

Coordination

60+ partners - local, regional nonprofits, state agencies, county conservation districts, academic institutions.

Partner assignments



A model to follow: Northcentral Stream Restoration Partnership



Northcentral
Pennsylvania
Conservancy



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE



NORTHUMBERLAND
COUNTY
Conservation District



- Coordinated effort among partners beginning in 2009
- Streamline resource deployment
- First watershed project completed 2013
- Landowner helps with peer-to-peer outreach

2 SEGMENTS DELISTED IN 2024!

Developing a project portfolio

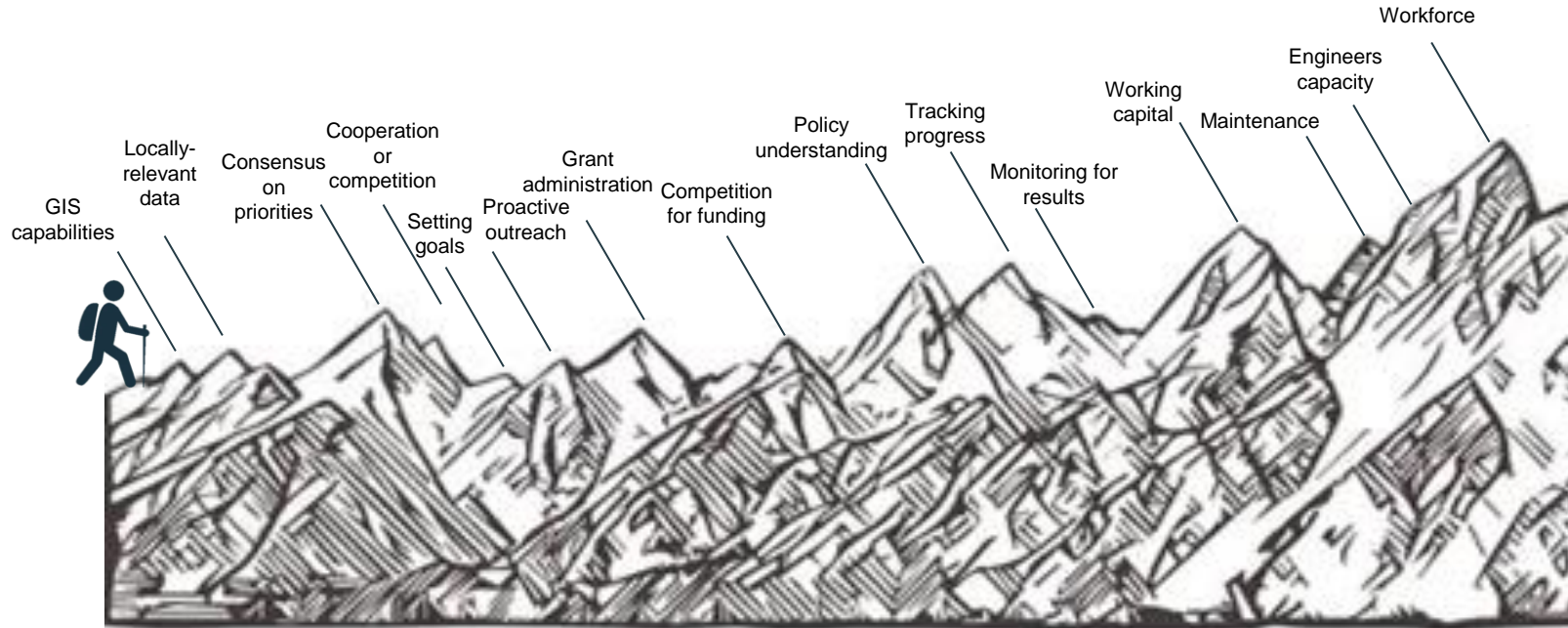
Catchment Name: Aughwick Creek
Commitment to Outreach: Huntingdon County Conservation District, Western Pennsylvania Conservancy, PA Department of Conservation and Natural Resources
Parcel summary: 4 parcels contribute 80% AIT.

Implementation Partners (TA)	Outreach contact	LO name	Previously completed restoration project	NFWF Shovel-ready projects	Likely amenable to Restoration	Outreach priority	AIT acres filtered
WPC	WPC			Pending GG grant for forest buffer, streambank fencing, livestock crossings, barnyard			94.31
	HCCD	R. &			Forest buffer, streambank fencing	X	85.44
	HCCD	&			Forest buffer, streambank fencing	X	74.38
	TBD					X	98.91
					AIT on 4 rapid delisting parcels		353.04
					Total catchment AIT		439.99

Key:
Completed restoration projects
NFWF shovel-ready projects
Landowner likely amenable to restoration
Highest impact landowners for outreach

Tackling challenges head on

*challenges are not to scale

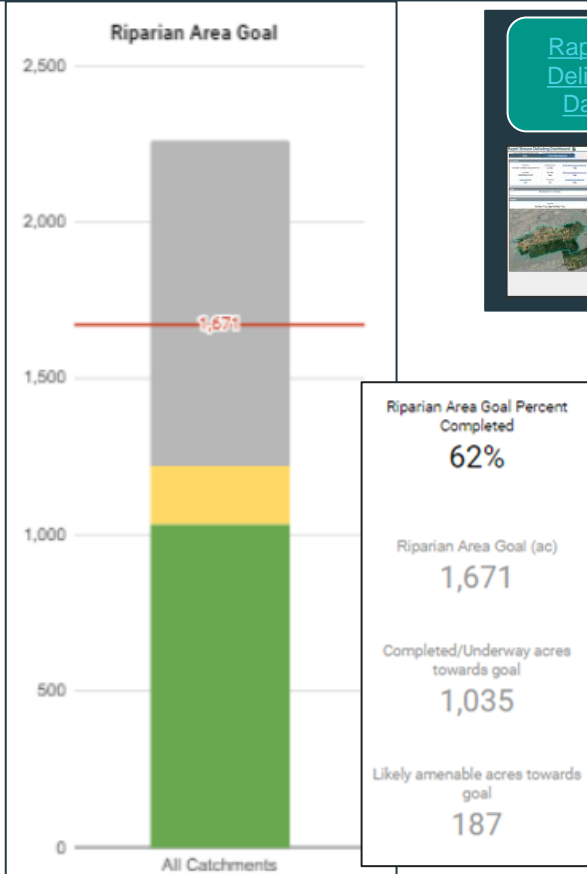


Setting feasible targets and tracking progress

Project partners:

Alliance for the Chesapeake Bay
 American Farmland Trust
 Bloomsburg University
 Bucknell University
 Centre County Ag Land Preservation Board
 Centre County Conservation District
 Centre County Planning Office
 Chesapeake Bay Foundation
 Chesapeake Conservancy
 ClearWater Conservancy
 Clinton County Conservation District
 Halfmoon Township Planning Commission
 Herbert, Rowland, and Grubic, Inc.
 Huntingdon County Conservation District
 Lancaster Clean Water Partners
 Lancaster County Agland Preservation
 Lancaster County Conservation District
 Lancaster Farmland Trust
 LandStudies, Inc.
 Lock Haven University
 Loyalsock Creek Watershed Association
 Lycoming County Conservation District
 Merrill Linn Land & Waterways Conservancy
 Middle Susquehanna Riverkeeper
 Mifflin County Conservation District

Mowery Environmental
 National Trout Unlimited
 Native Creations Landscape Services
 Northcentral PA Conservancy
 Northumberland County Conservation District
 Octoraro Watershed Association
 Partners for Fish and Wildlife Service
 The Pennsylvania State University
 Penns Valley Conservation Association
 Penns Valley School District
 Pennsylvania Department of Conservation and Natural Resources
 Pennsylvania Department of Environmental Protection
 Pennsylvania Fish and Boat Commission
 Pennsylvania Game Commission
 Pheasants Forever
 Rosetree Consulting
 Seven Willows LLC
 Snyder County Conservation District
 Stroud Water Research Center
 Susquehanna University
 TeamAg., Inc.
 Trout Unlimited Penns Creek Chapter
 Union County Conservation District
 University of Montana
 US Fish and Wildlife Service
 USDA Natural Resource Conservation Service
 Water Science Institute
 Weaver Environmental Consulting
 Western Pennsylvania Conservancy
 WHM Group
 Woods and Waters Consulting



Next up!

- Maintenance, permanent protections
- 15 streams within 10 points of delisting
- Streamlining administration, more flexible funding
- Replicating analysis of streams for rapid restoration potential
- New high-res land use/land cover data & hyper-resolution hydrography data produced through EPA Chesapeake Bay Program
- Maryland's Whole Watershed Act
- Conservation workforce



Thank you!

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Foundation for Pennsylvania Watersheds

The Hamer Foundation

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Natural Resources Conservation Service Conservation Collaboration and

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<https://www.chesapeakeconservancy.org/precisionconservationinpa/conservation/>

<https://lancastercleanwaterpartners.com/rapid-stream-delisting/>

