

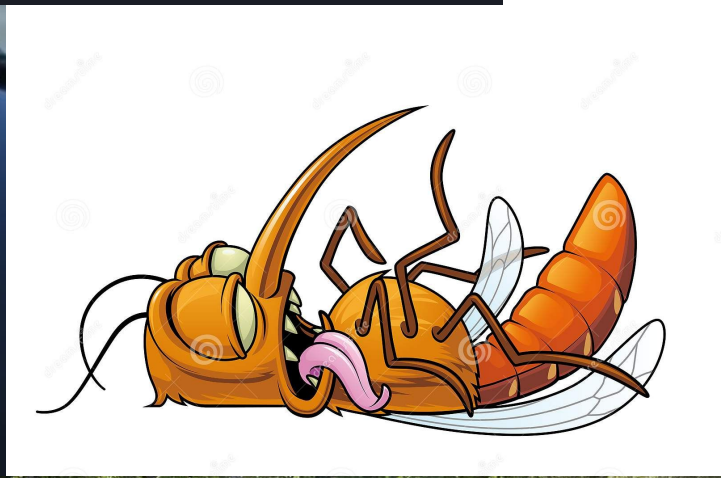
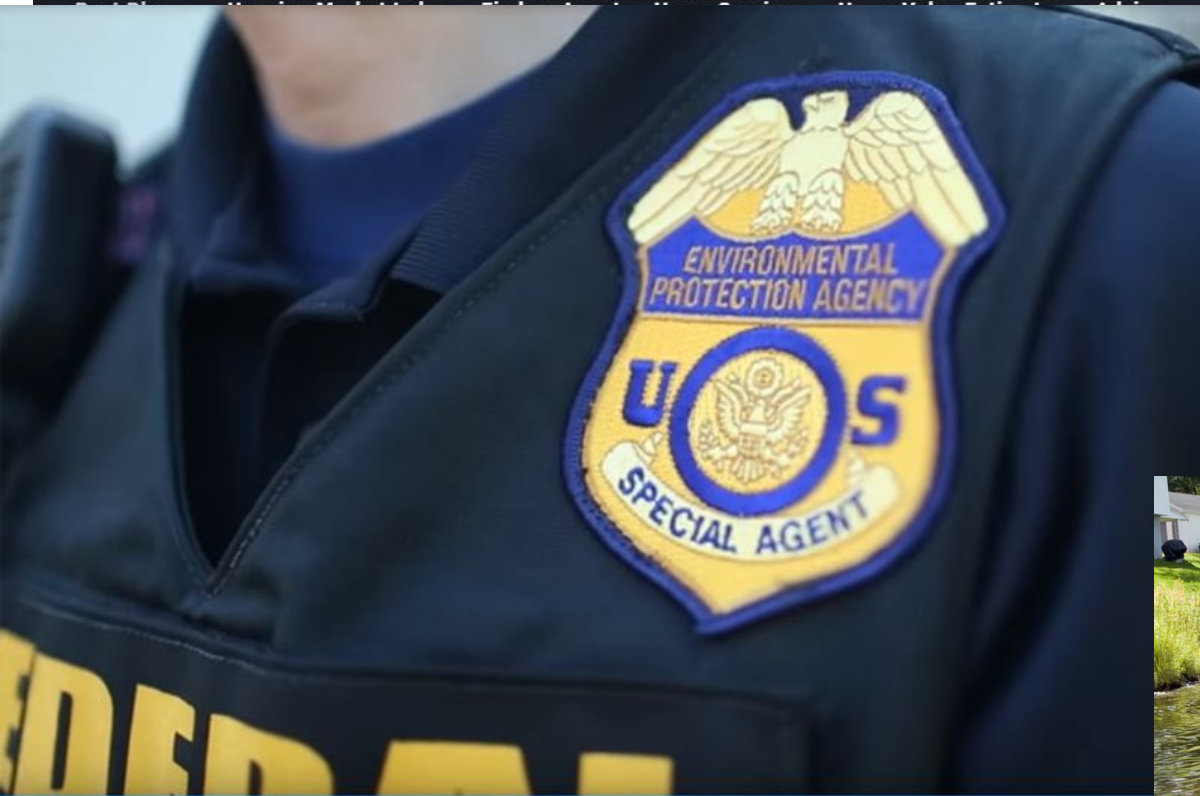
Pennsylvania's State Constitution states...



“...the people have the right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment.”

– *Article I, Section 27*





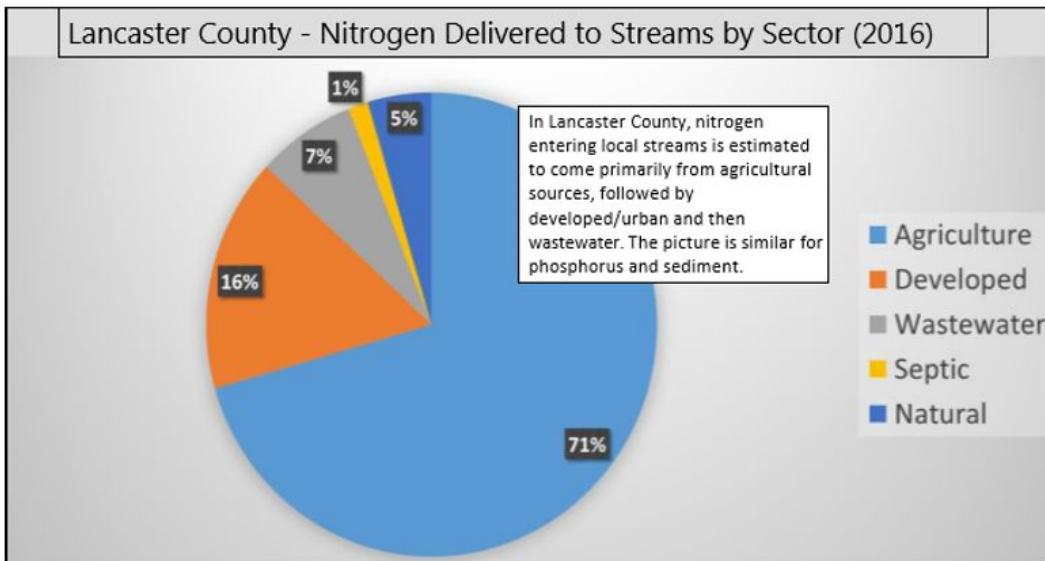
☒ Best Places to Retire



spaces that residents appreciate. Expansive... [Read more](#)

CAP Opportunity

We know the best opportunities for clean water work and economic support for Lancaster's local priorities and people are in agriculture.



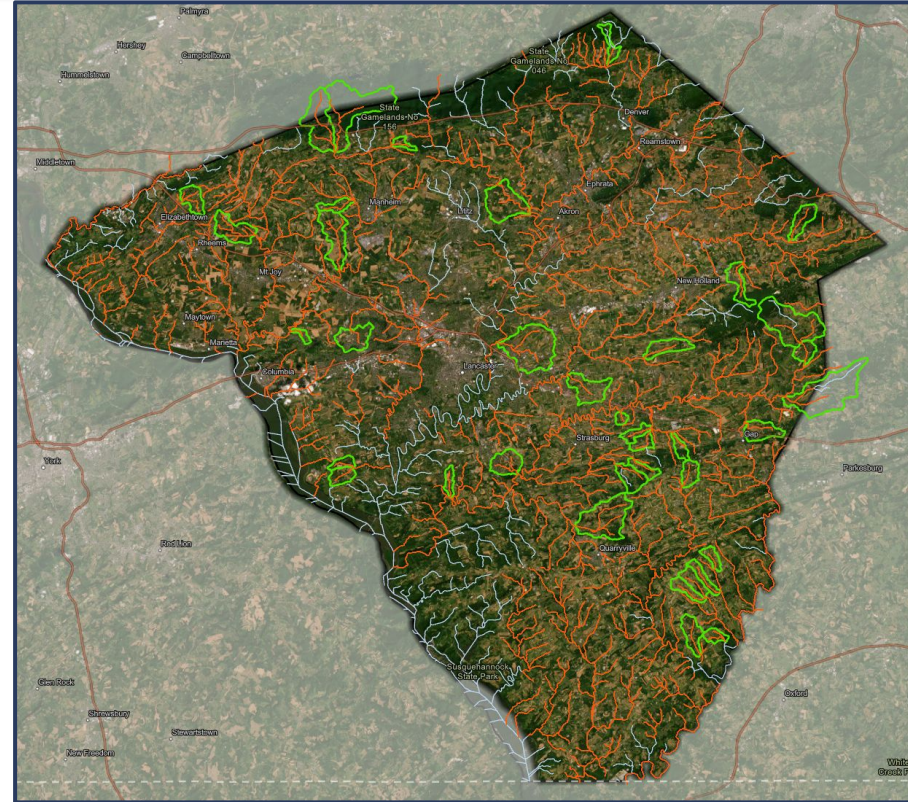
Source: Community Clean Water Toolbox, DEP 2018

But there are 5,000 farms in Lancaster and 1,400 miles of streams - that's too big to do all at once.



Rapid Stream Delisting

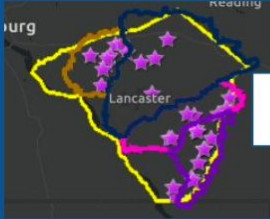
- Fastest Recovery
- Efficient Implementation
- Building momentum



Rapid Stream Delisting

Step 1: Select stream de-listing catchments

Interviews



Watershed leads

ID 40 potential catchments

Watershed workshops



Restoration professionals

Narrow to 20 most feasible

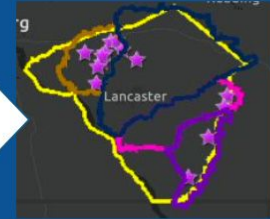
Meeting



Scientists

Narrow to 12 for de-listing

Final selection of catchments



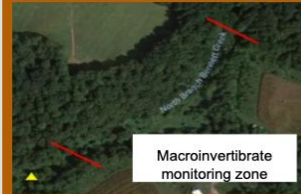
Lancaster Clean Water Partners

Step 3: Implementation



- Implement shovel-ready projects
- Carry out small, personal outreach with landowners of high priority parcels
- Secure funding & implement full-farm restoration in the catchment
- Complete periodic stream IBI monitoring

Step 2: Develop stream de-listing plan



BMPs Needed	Total Restoration Cost
Riparian	\$27,950.00
Barnyard, Riparian	\$20,000.00
Riparian with fencing	\$10,000.00
Riparian	\$33,840.00

- ID partners for catchment
- ID parcels as 1) shovel-ready; 2) landowner amenable; 3) outreach priority
- ID funding & TA needs
- Develop outreach & deliverables plan
- Develop monitoring plan



Rapid Stream Delisting - Utilize GIS

Delineate upslope catchment areas of small ag-impaired stream segments where restoring a relatively small number of farms will make major water quality improvements.

And print out BIG maps to take to landowner events so they see they're part of a bigger community effort



Rapid Stream Delisting - Fastest Recovery

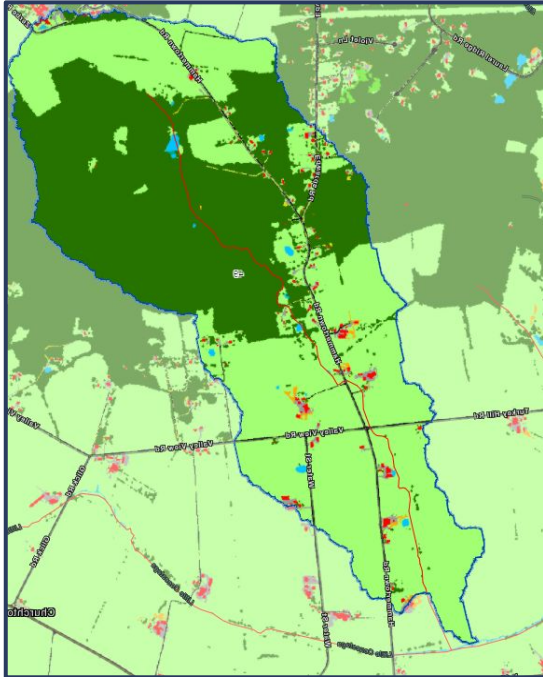
Higher IBI scores and percentage of forest

Index of biological integrity (IBI)

- A measure of stream health using diversity and quantity of stream insects
- More macroinvertebrates with a low tolerance for pollution = higher IBI score



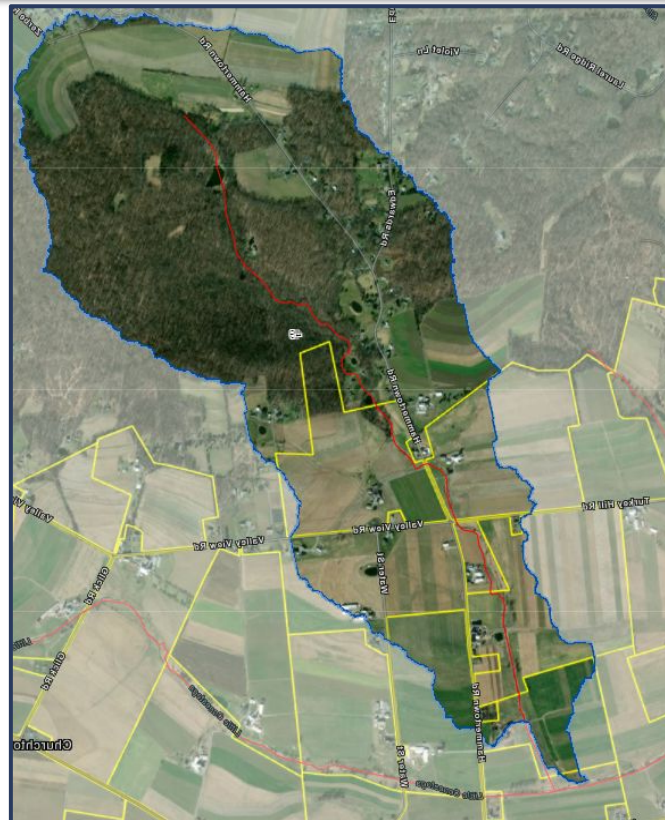
Stonefly. Credit David Huin, 2012



Rapid Stream Delisting - Efficient Implementation

Parcel analysis

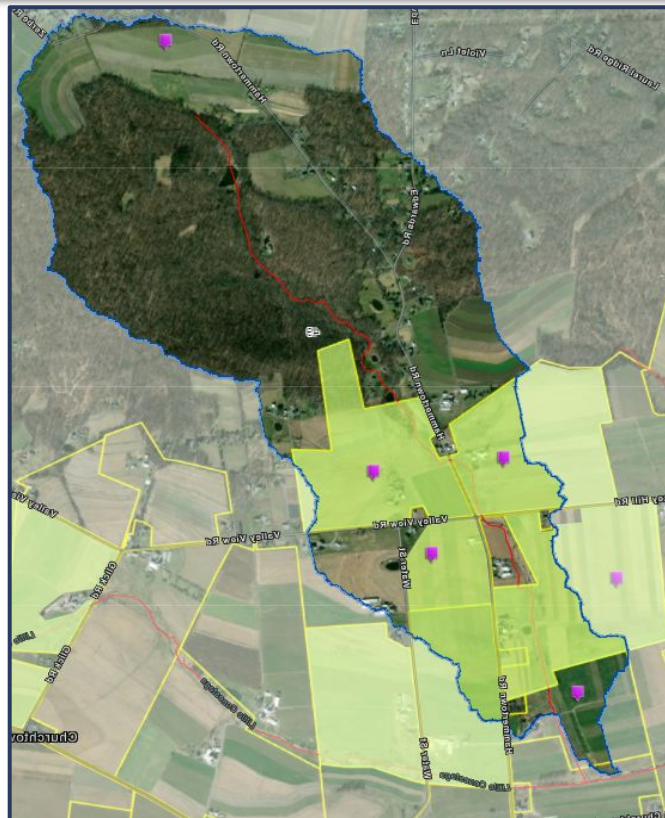
- Working on a fewer number of parcels with the greatest amount of restoration opportunity
- “Work smarter, not harder”



Rapid Stream Delisting - Building Momentum

Using local expertise and experience

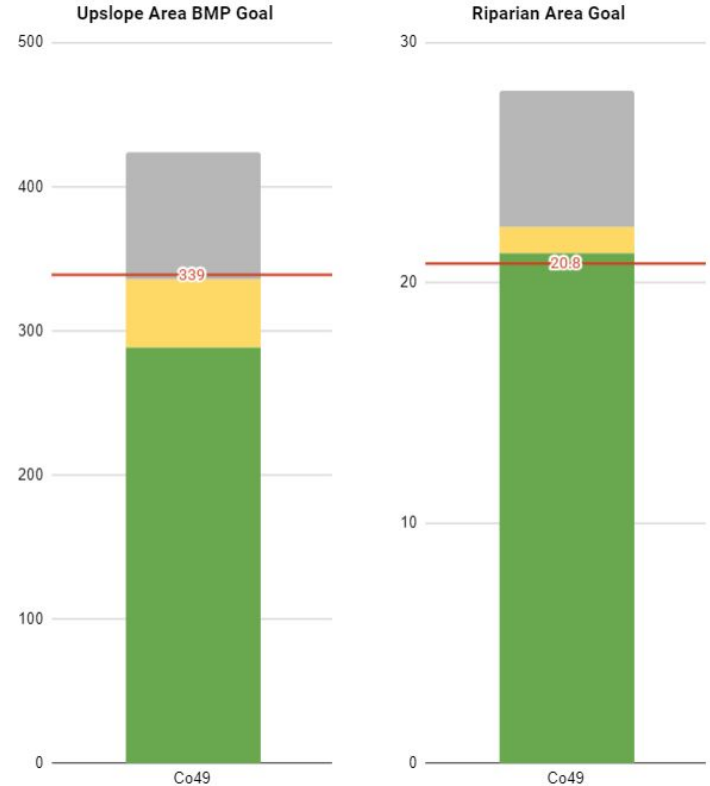
- Local knowledge of on-the-ground professionals
- Using existing landowner networks and relationships
- Show results by monitoring water quality in each catchment area



Data Collections and Sources

Rapid Stream Delisting Dashboard

- Publicly available
- Provides an up-to-date snapshot of the rapid stream delisting progress
- Offers general information on the catchment areas



Measurements — Measures — Outcomes —→

