The Next Level: How can we leverage nutrient and sediment practices to achieve other priorities?

Chesapeake Bay Commission meeting: May 6, 2022

Chesapeake Conservancy
EXPLORE. CONSERVE. INNOVATE.

Joel Dunn, President and CEO
Susan Minnemeyer, Vice President for Technology
Carly Dean, Program Manager

Precision Conservation

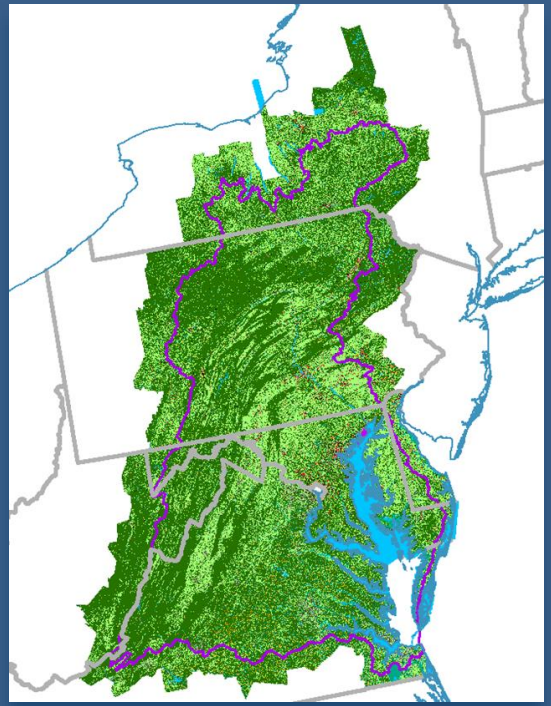
Chesapeake Bay Program Geospatial Support

Objective 1: Land Cover, Land Use and Change Mapping
Data release May 2022

Objective 2: Streamflow Mapping

Objective 3: Restoration Planning & Reporting (Opportunity Mapping, Nutrient and Sediment Reduction Modeling)

Objective 4: Cross-GIT mapping support (User-needs research on CBP Data Tools)



Chesapeake Bay Program
Science. Restoration. Partnership.

USGS
science for a changing world

The Academy of Natural Sciences of Drexel University

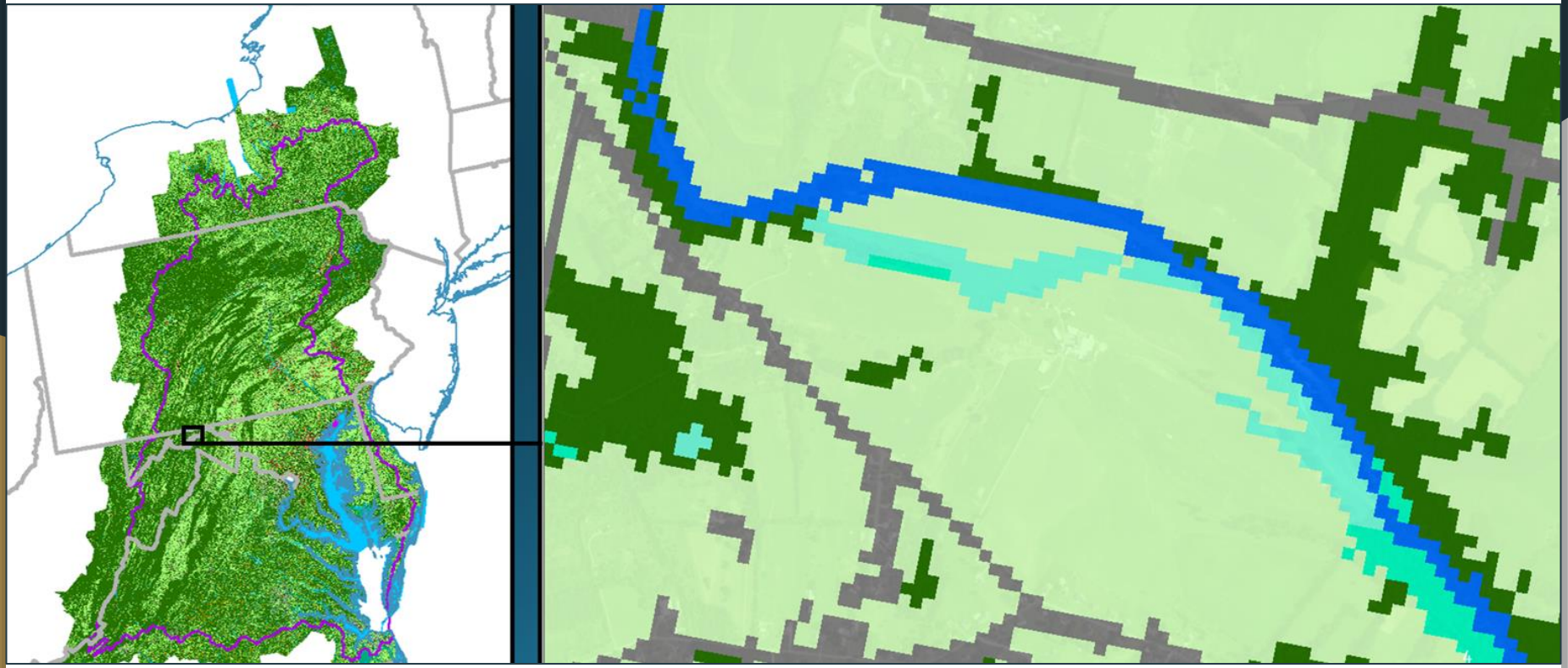
UMBC

Chesapeake Conservancy
EXPLORE. CONSERVE. INNOVATE.

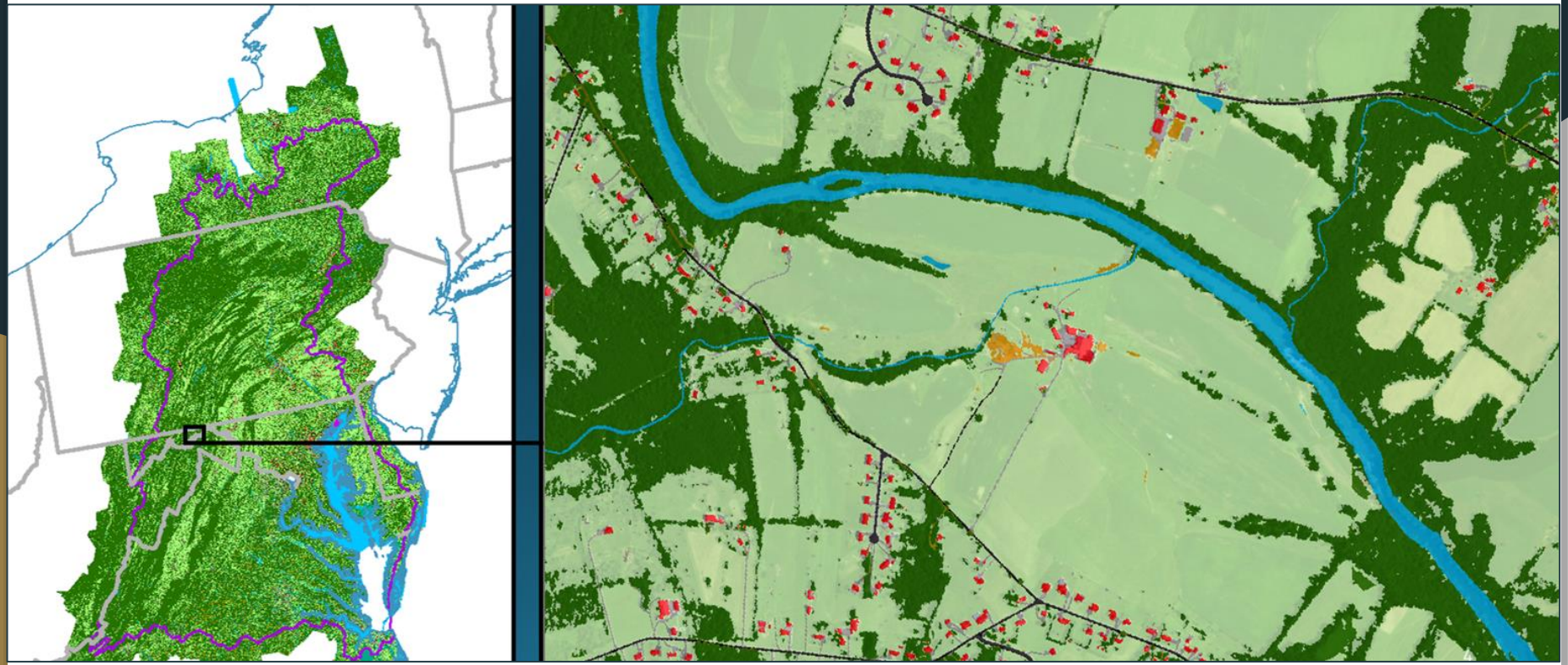
University of Vermont Spatial Analysis Lab

The COMMONS

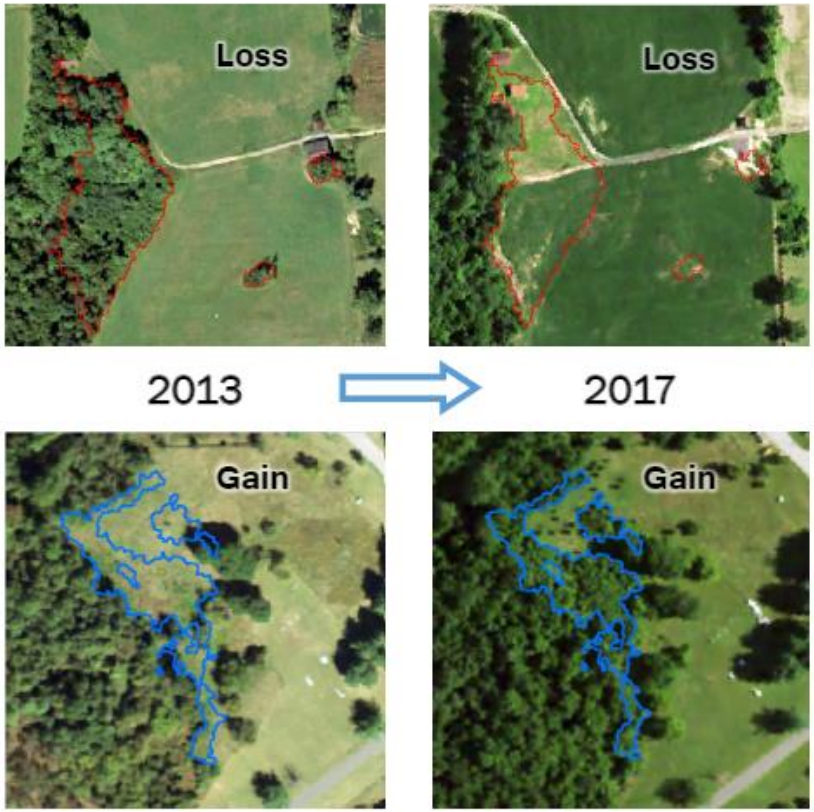
Previously Available Land Cover Data

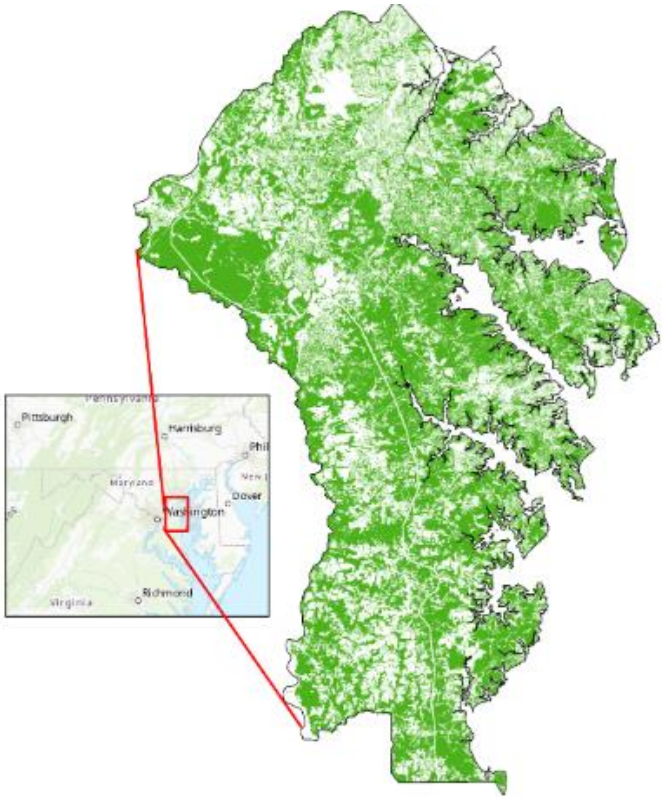


High-resolution Land Cover Data



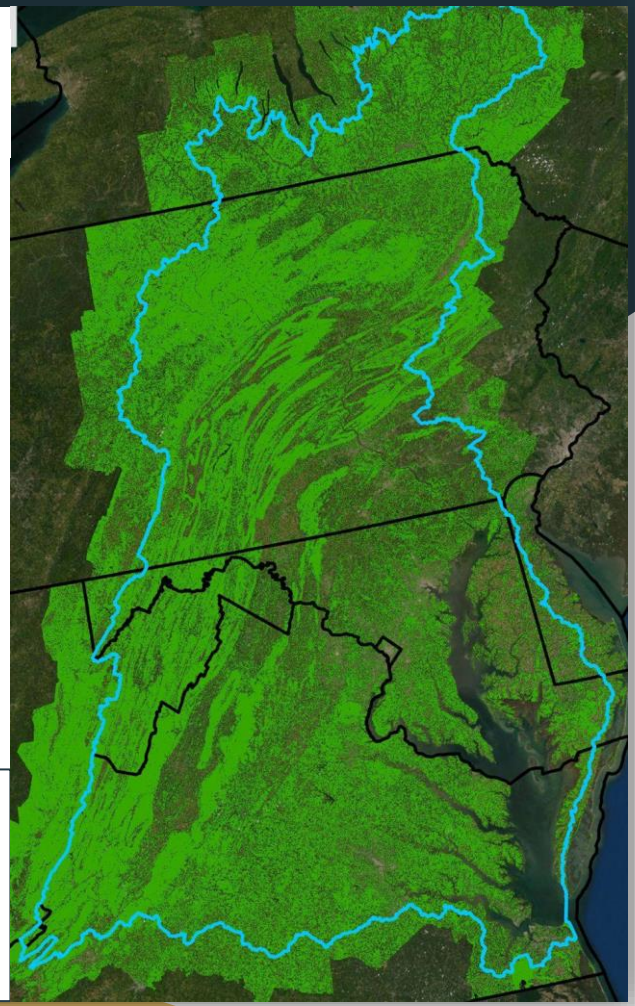
Change Detection products: Tree Canopy Change
Anne Arundel County, MD





Anne Arundel County 2017 Tree Canopy

Change Detection products: Tree Canopy Change Chesapeake Bay Watershed

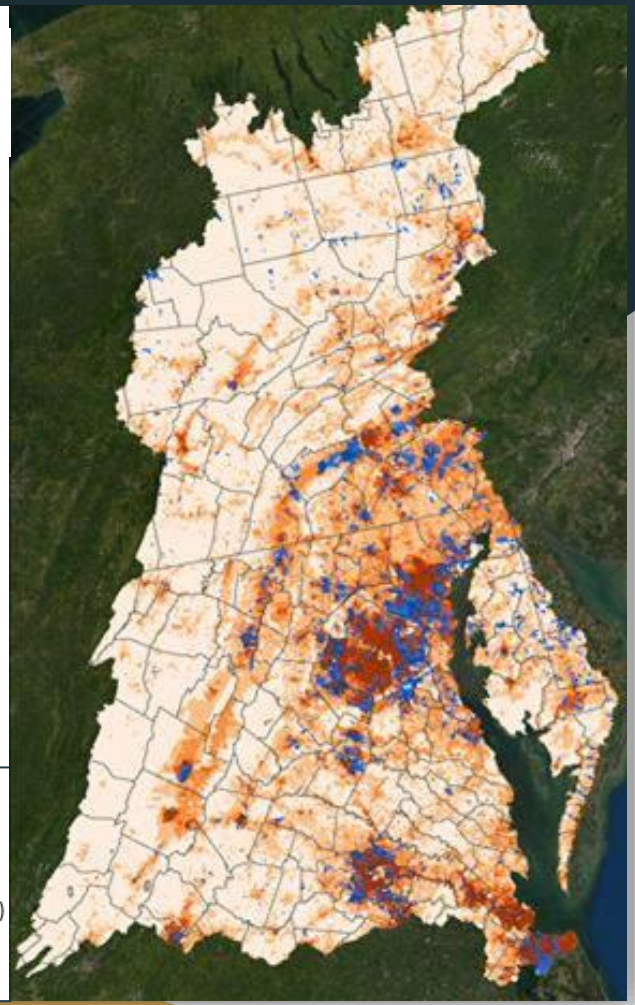


Change Detection products: Land Cover Change Chesapeake Bay Watershed

Impervious Surface Analysis

Example land uses:

- Roads
- Buildings
- Pavement



Impervious Surface Analysis

* data shown are preliminary results and may differ from the final released data

Previously Available Hydrography Data

High-resolution Hydrography Data

Leveraging High-resolution Data to Restore Impaired Streams

Pennsylvania “Rapid Stream Delisting Strategy” brings together:

- Water-Quality
- Fish, Wildlife, and Habitat
- Land Conservation
- Benefits to people

PA Dept. of Environmental Protection: Integrated Water Quality Report & 303(d) List;

- Non-attaining for aquatic life use
- Impaired from agricultural sources

Rapid Stream Delisting Strategy:

- Isolating relatively small impaired stream segments to achieve attainment status & delist
- Quantifying goals, needs, and feasibility
- Coordination and collaboration

Leveraging High-resolution Data to Restore Impaired Streams

Mapping how pollution enters our waterways

Fastest recovery: watershed analysis

Efficient implementation “smarter, not harder”

Advancing momentum: local knowledge

Leveraging High-resolution Data to Restore Impaired Streams

Mapping how pollution enters our waterways
- 0.6 mi. of stream impaired

Fastest recovery: watershed analysis
- 232 total acres; 3 acres buffer gap (2013)

Efficient implementation “smarter, not harder”
- 5 priority farms; target 148 ag acres with BMPs

Advancing momentum: local knowledge

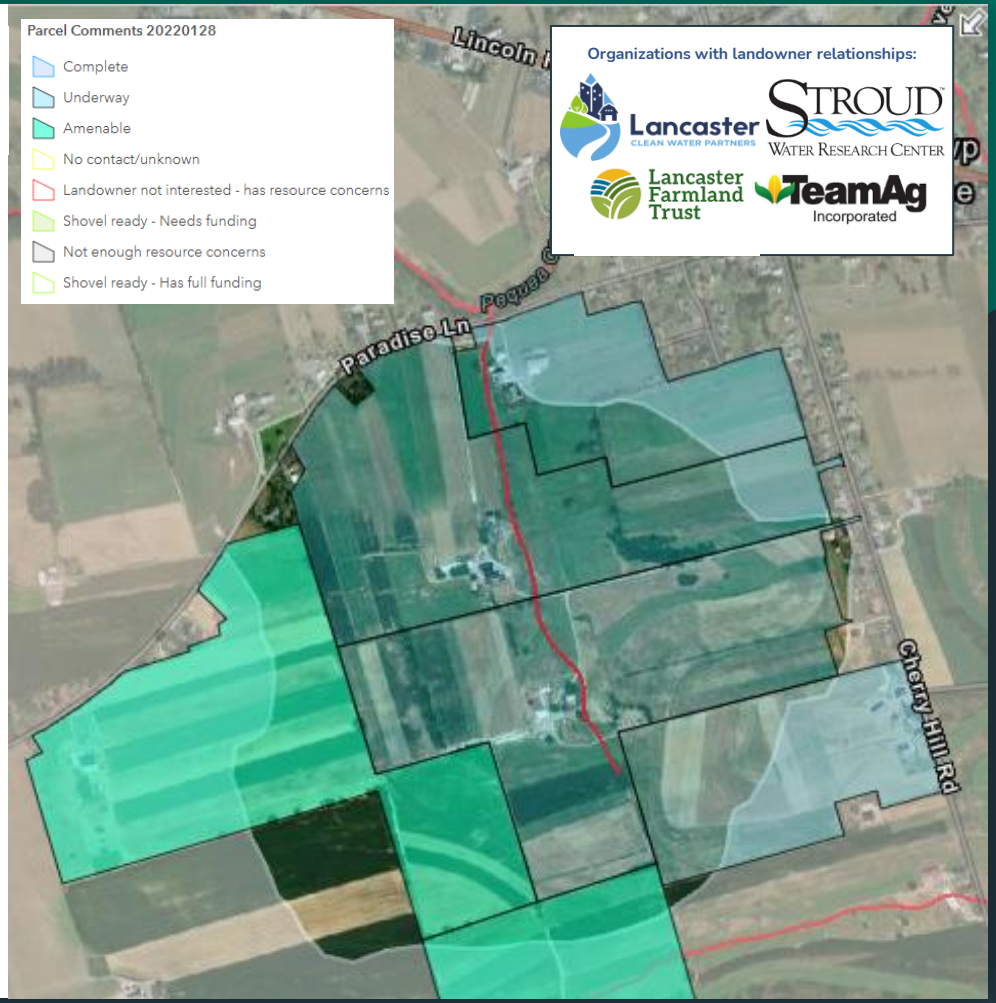
Leveraging High-resolution Data to Restore Impaired Streams

Mapping how pollution enters our waterways
- 0.6 mi. of stream impaired

Fastest recovery: watershed analysis
- 232 total acres; 3 acres buffer gap (2013)

Efficient implementation “smarter, not harder”
- 5 priority farms

Advancing momentum: local knowledge
- Existing relationships with farmers on 4 out of 5 priority farms



Leveraging High-resolution Data to Restore Impaired Streams

Pennsylvania's 30 by 30 rapid stream delisting strategy

The strategy is underway for 39 streams in 7 Pennsylvania counties.

Building a project portfolio toward implementing BMPs on 500 priority farms.

Bundle projects to streamline fundraising and leverage partner strengths.

- 200 farms restored
- Approximately $12M raised
- New funding through PA DEP Growing Greener: Watershed Renaissance program

Gov. Wolf, Chesapeake Conservancy & Partners Announce Initiative to Restore 30 Agriculturally Impaired Streams by 2030

April 22, 2021

ENVIRONMENT, PRESS RELEASE

Two administration employees honored for being 'Champions of the Chesapea

Governor Tom Wolf marked Earth Day today by joining the Chesapeake Conservancy to anno collaborative environmental initiative for the Commonwealth of Pennsylvania to restore the agriculturally-impaired streams by 2030.

https://www.governor.pa.gov/newsroom/gov-wolf-chesapeake-conservancy-partners-announce-initiative-to-restore-30-agriculturally-impaired-streams-by-2030/

Next Steps for High-resolution Data Development and Applications

CBP Interaction:

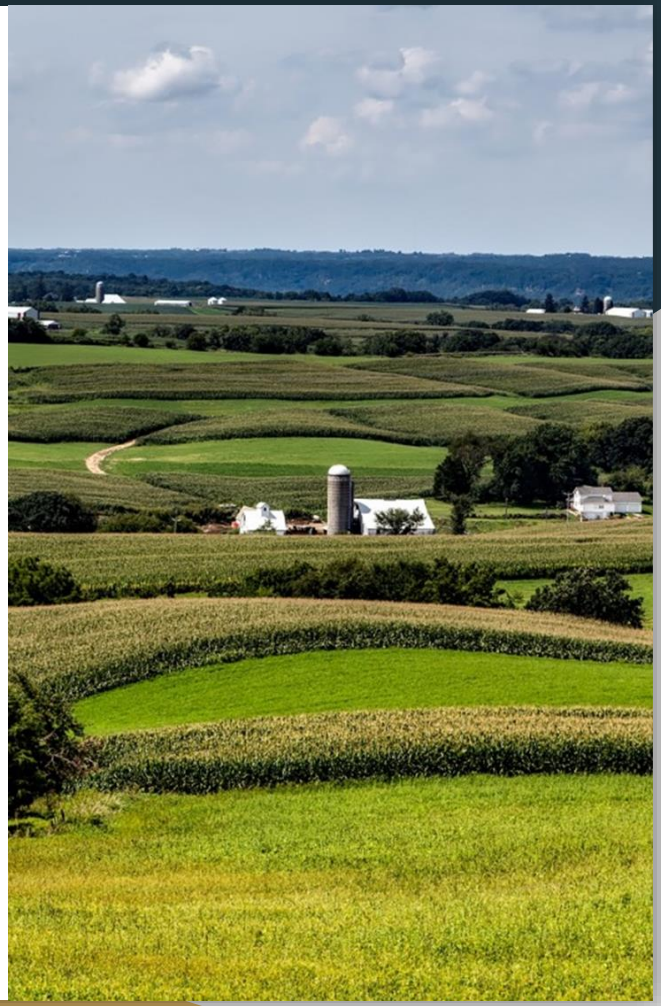
- GITs: stakeholder interaction
- BM and PSCO: Members who are involved in funding policies

Short-term actions

- Promote use of existing tools
- Ecosystem services for selected BMPs

Longer-term action

- Enhance tools with new land use data
- Connections between tools
- Provide stakeholder support
- Would require more resources



Chesapeake Conservancy

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