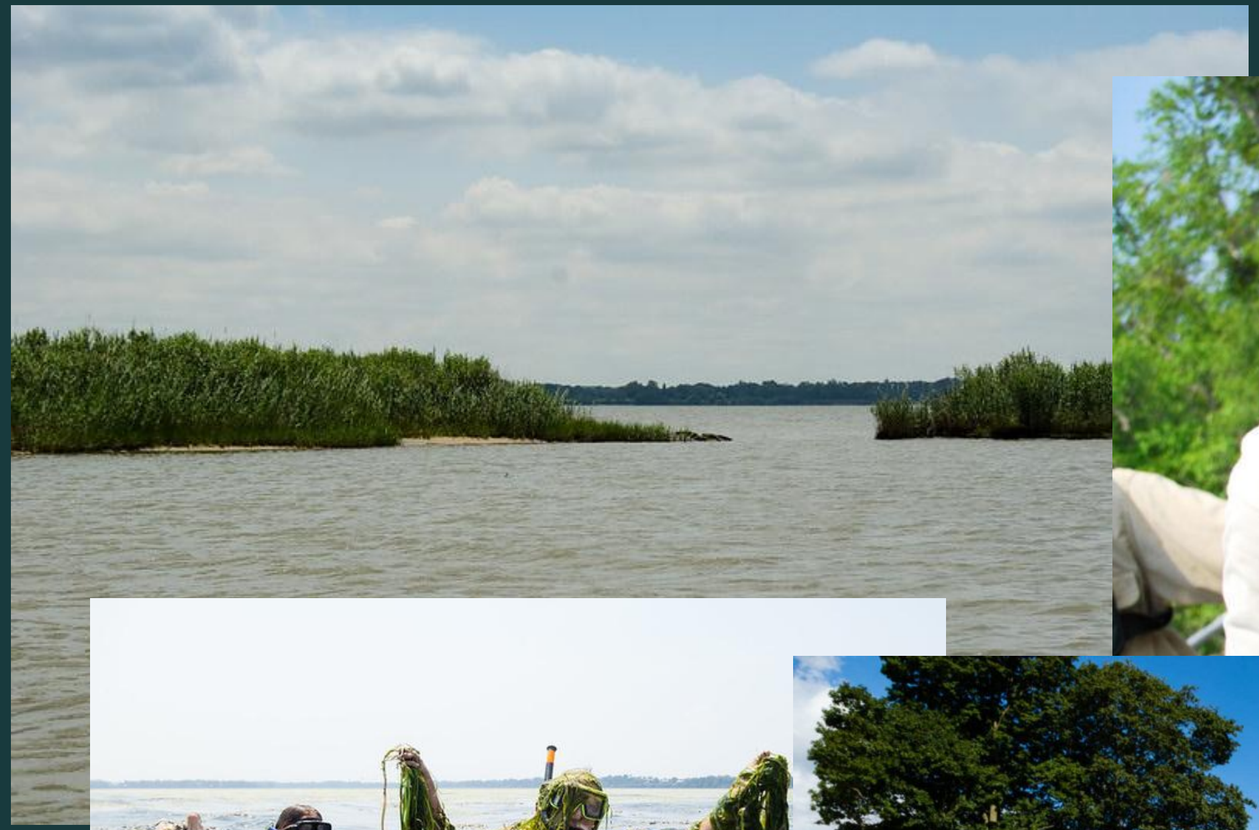
Living Resources and Local Government's Role with Watershed Improvement

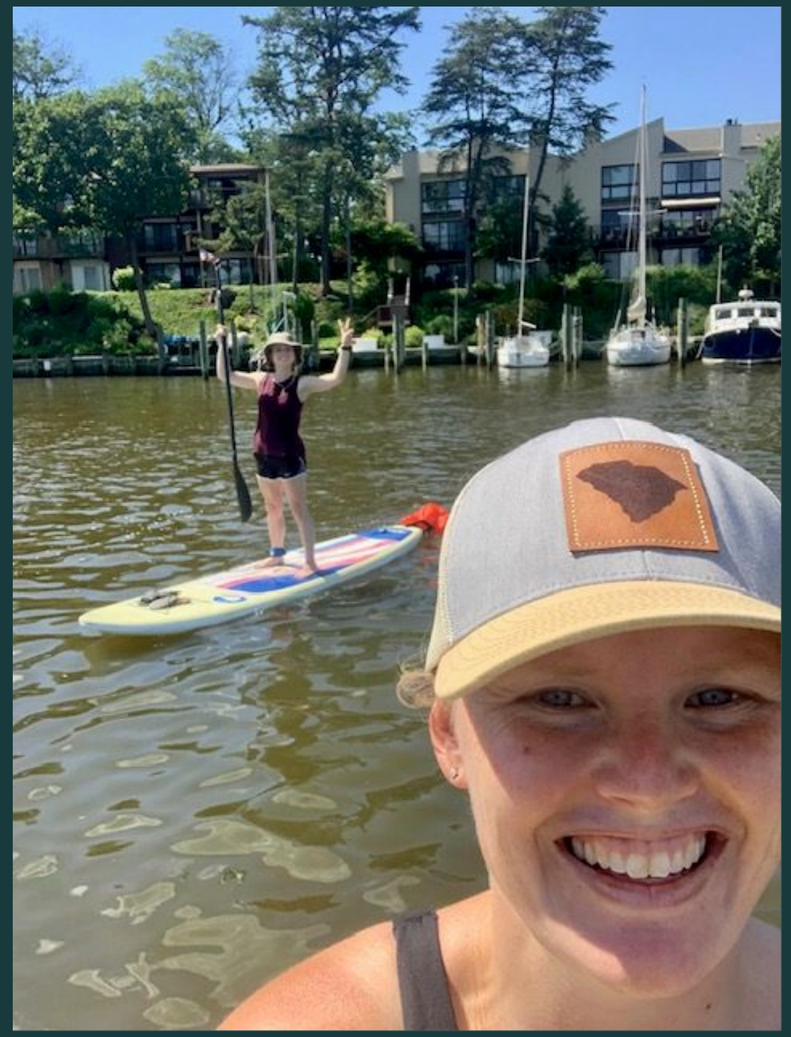
Breck Sullivan, STAR Coordinator

LGAC Meeting 6/1/23



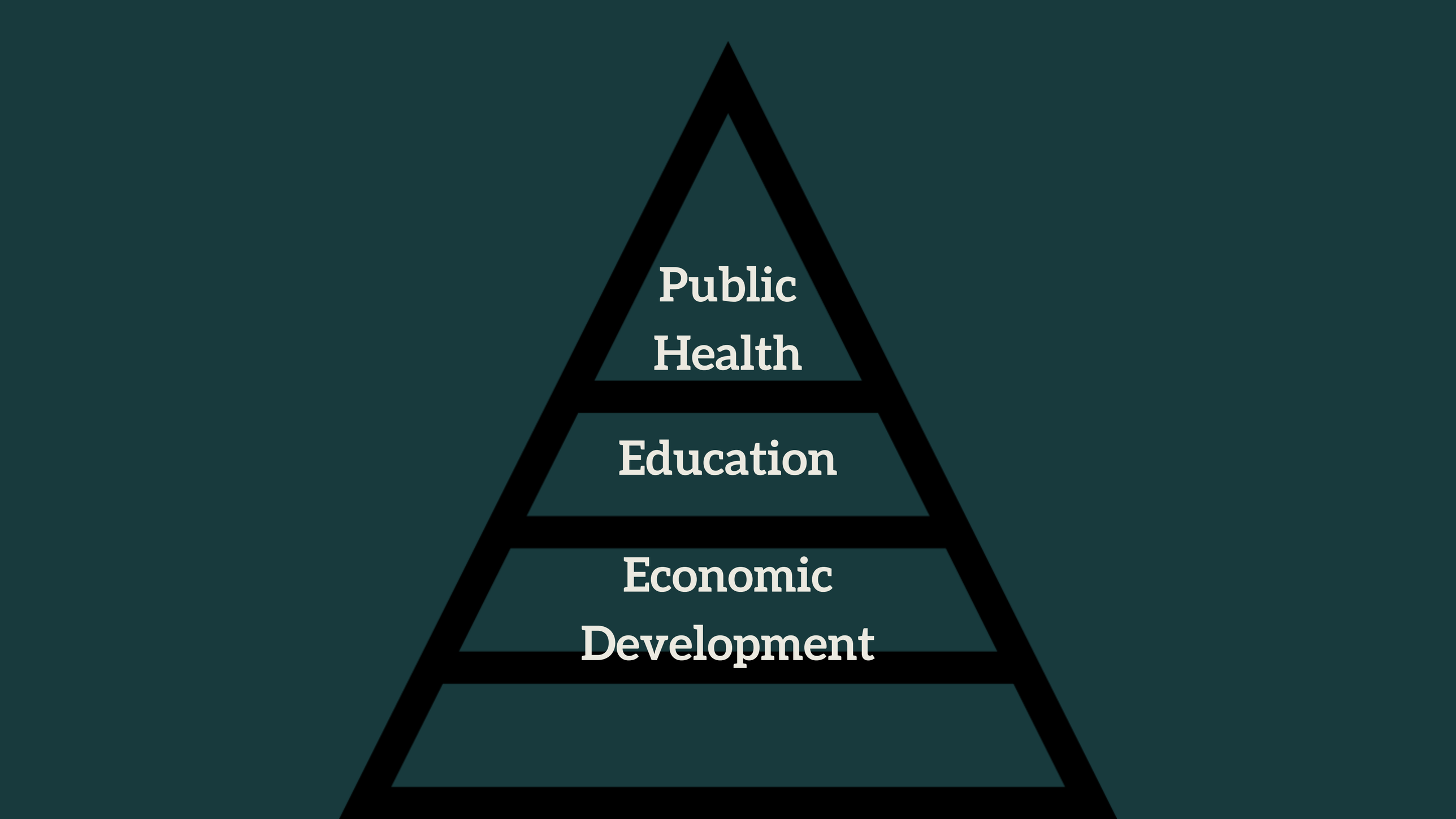
17 out of the 31 outcomes in the Watershed Agreement are in shallow water

Patuxdent Research Refuge



Back Creek, Annapolis, MD

Public
Health
Education
Economic
Development
Chesapeake Bay
Program


Public
Health
Education
Economic
Development

Public Health

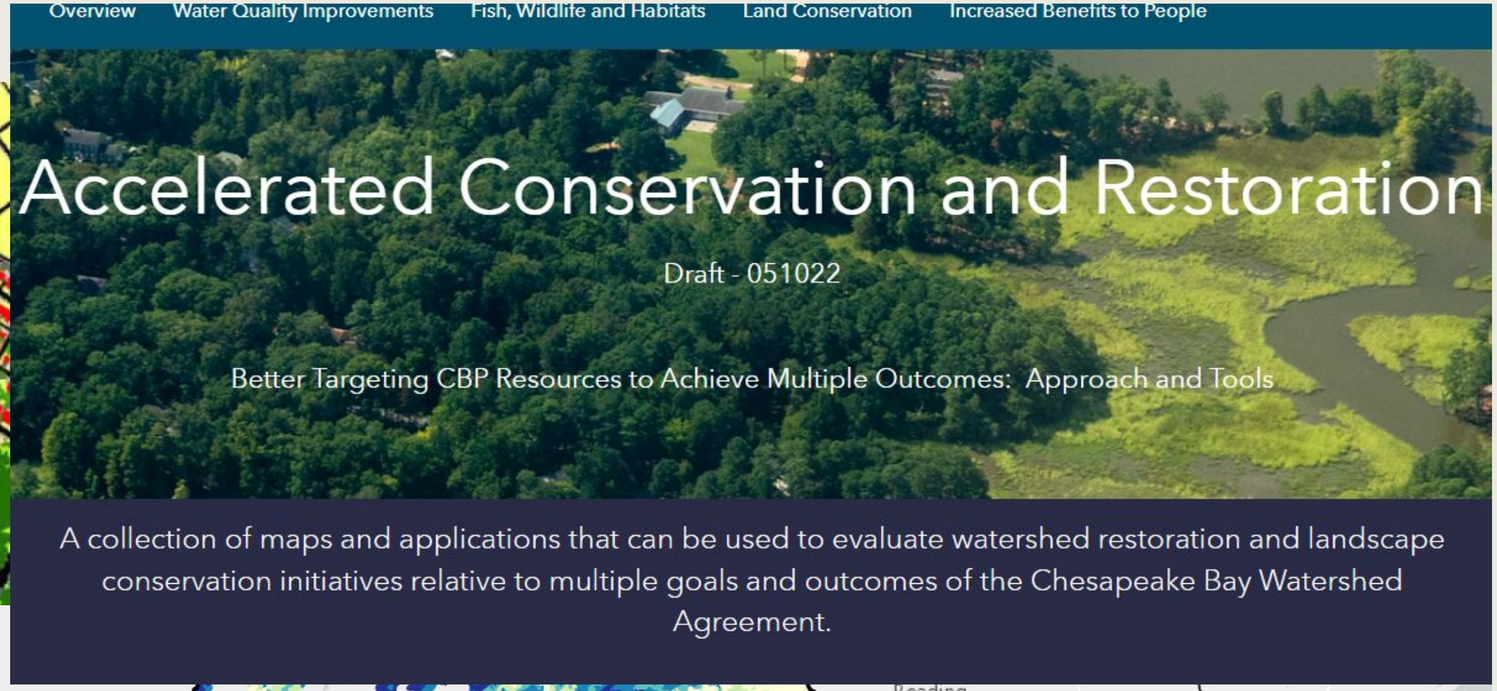
Education

Economic Development

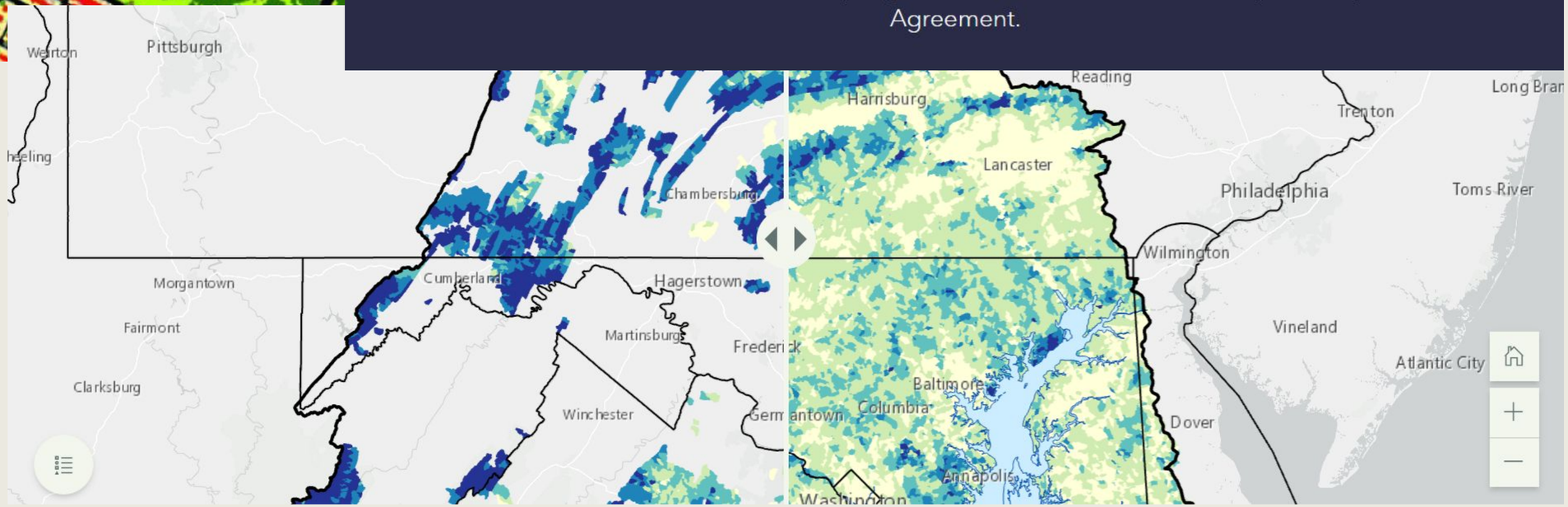
How to maximize local benefits
AND
Chesapeake Bay and watershed benefits with efforts you are already doing?

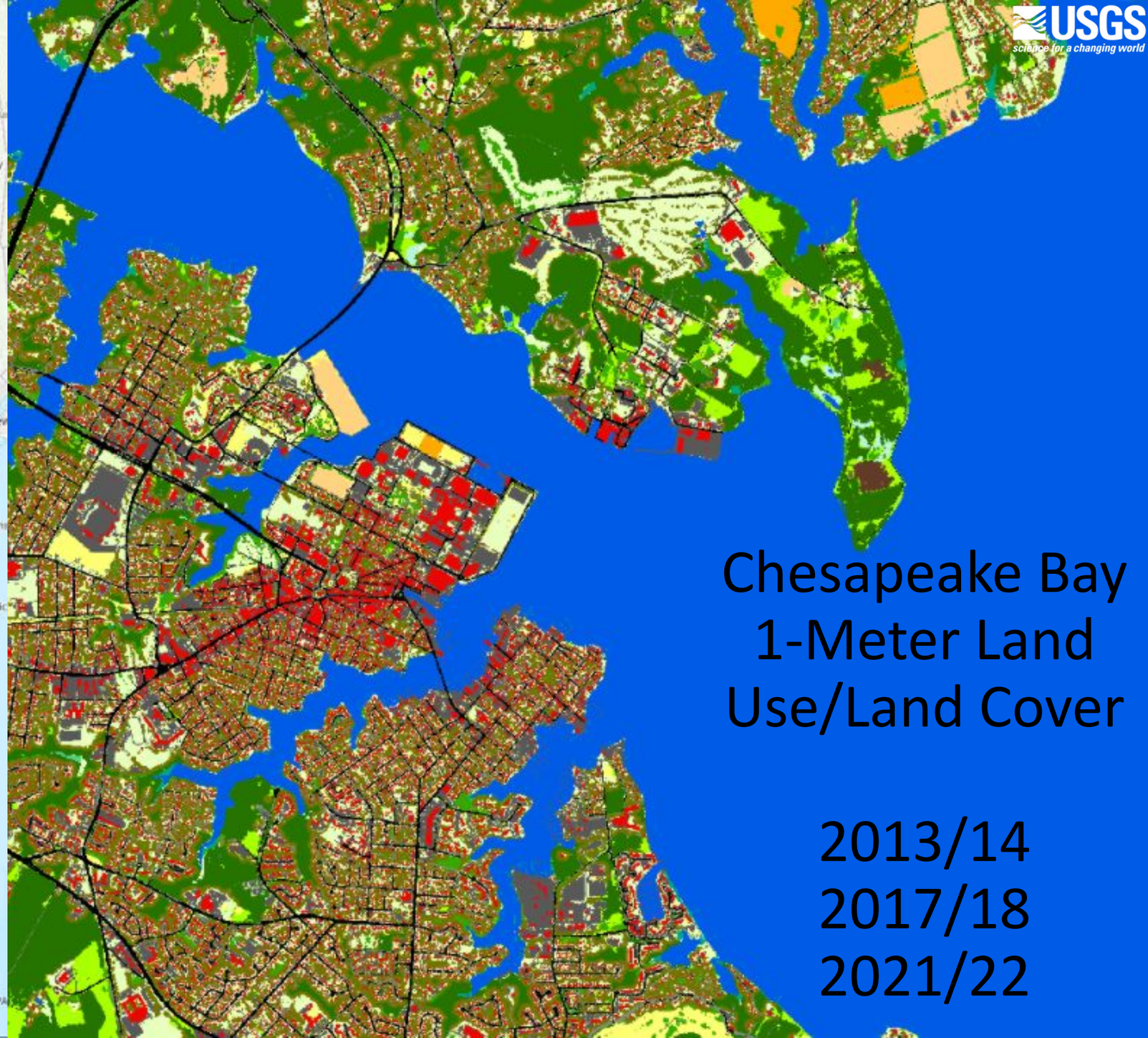
High Resolution Land Use/Land Cover Data

CBP Targeting Portal



Chesapeake Healthy Watershed Assessment





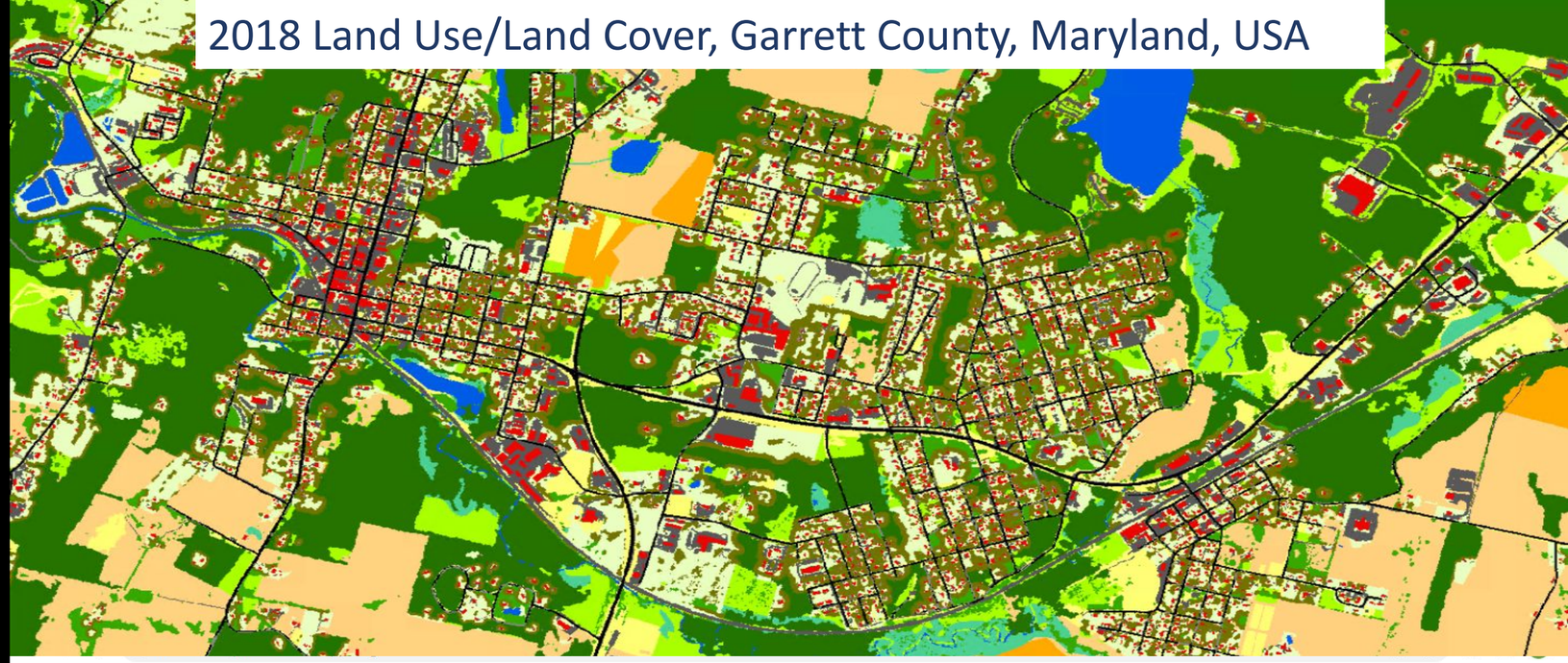
USGS
science for a changing world

Chesapeake Bay 1-Meter Land Use/Land Cover

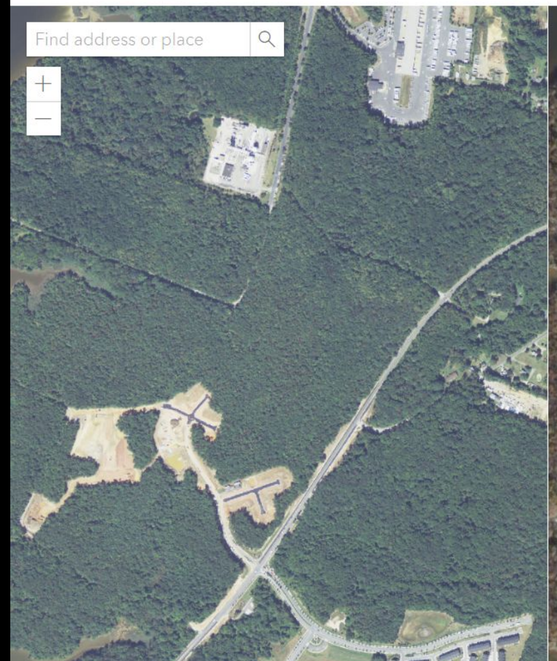
2013/14
2017/18
2021/22

1- meter resolution, 54-class Land Use/Land Cover and Change for all counties within and adjacent to the Chesapeake Bay Watershed 2013/14 – 2017/18

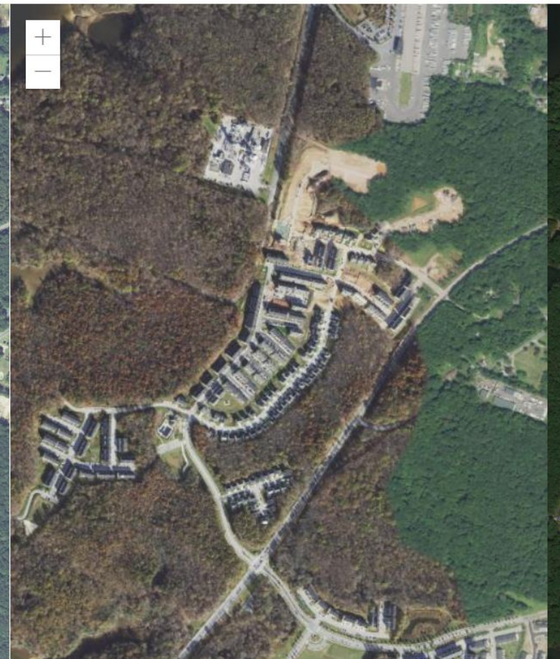
2018 Land Use/Land Cover, Garrett County, Maryland, USA



2013/2014 NAIP



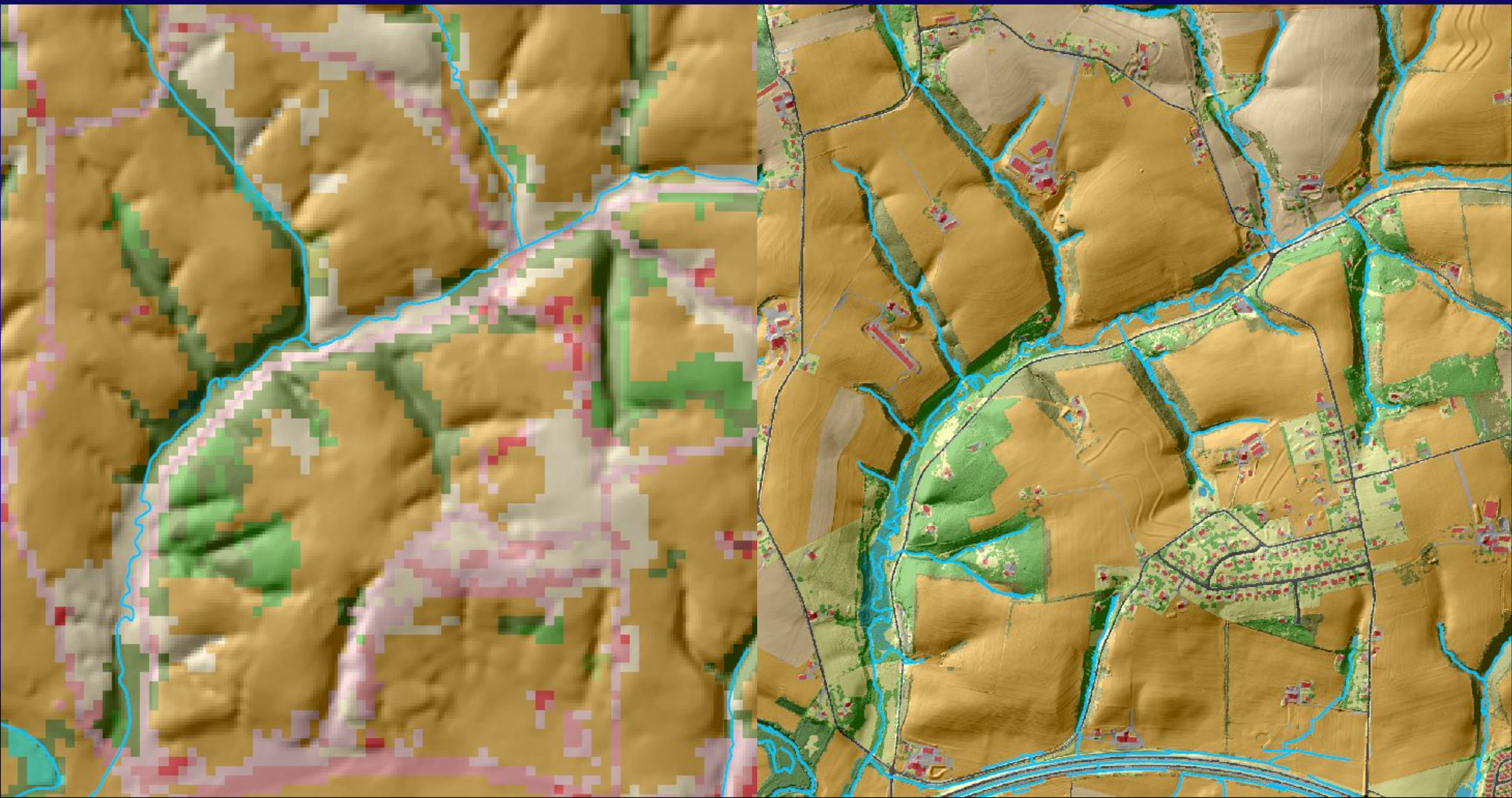
2017/2018 NAIP

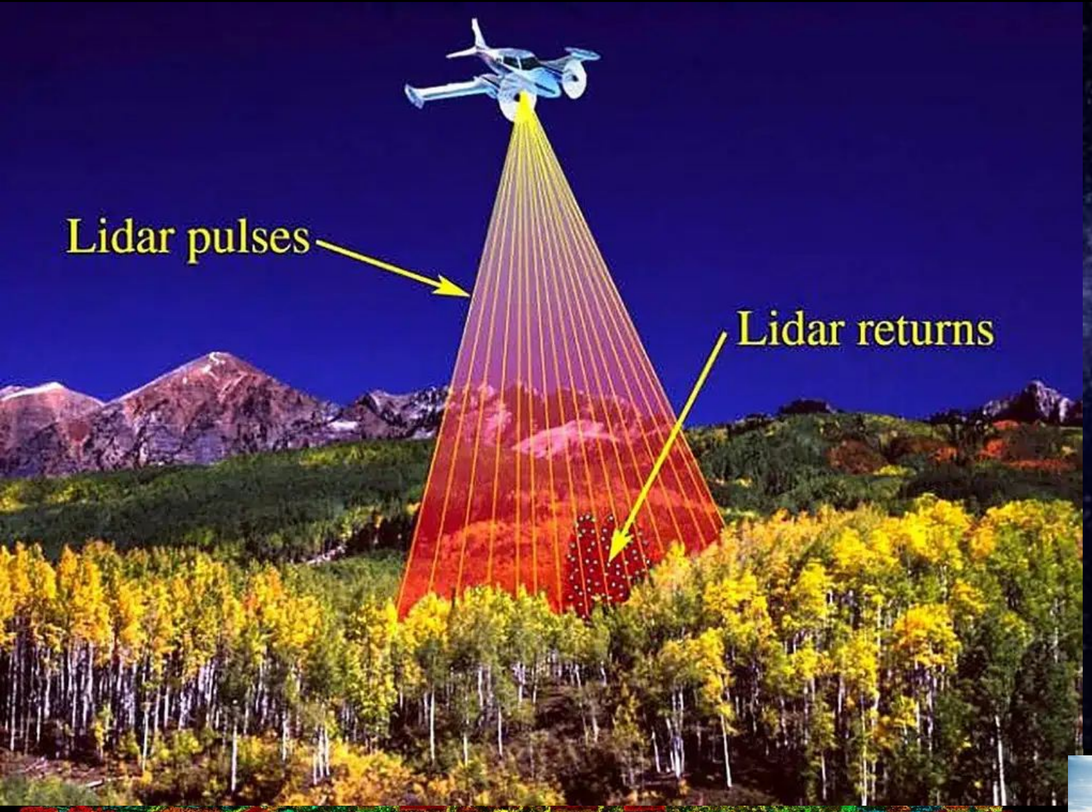


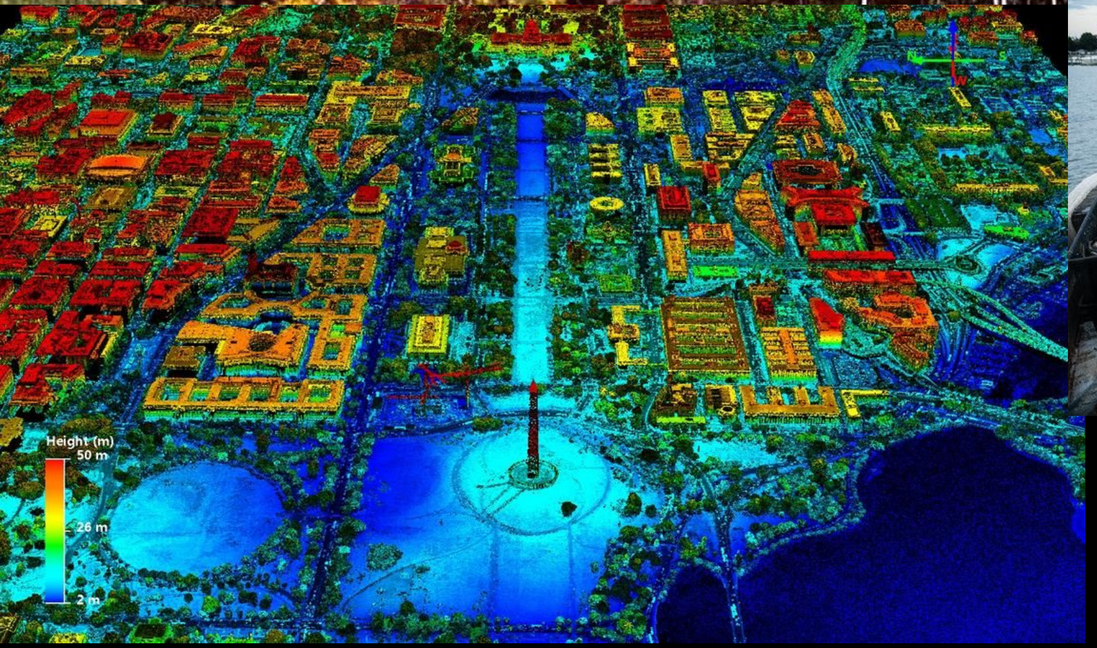
Land Use / Land Cover Change, 2013-2018

30-meter Resolution

1-meter Resolution

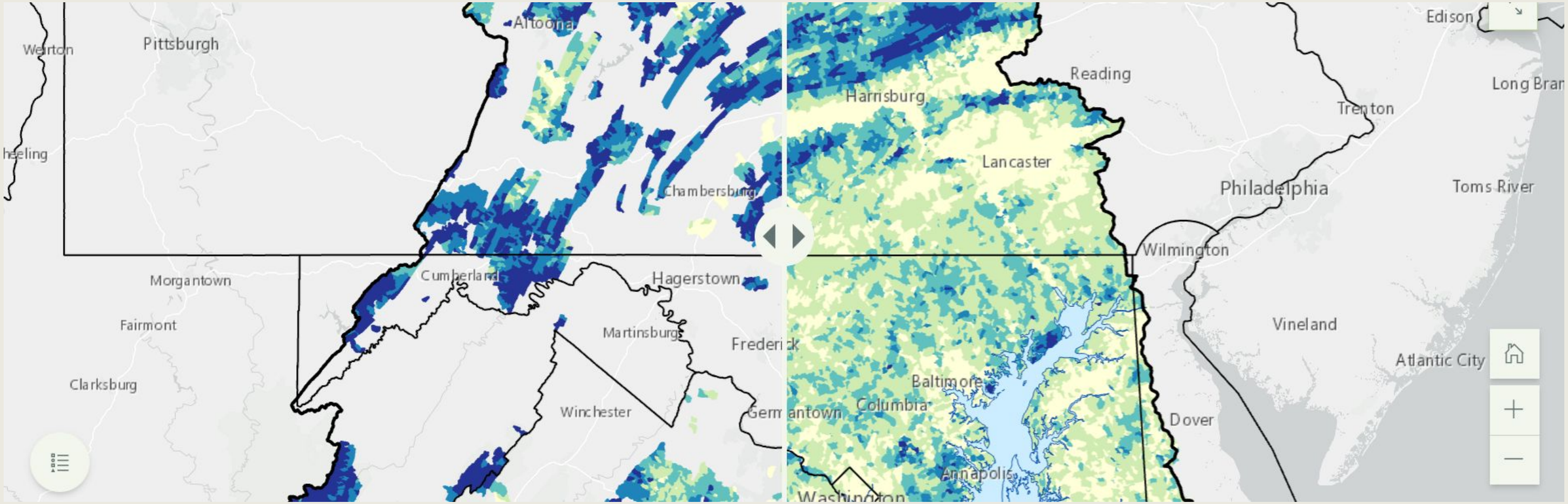



Lidar pulses
Lidar returns


Height (m)
50 m
26 m
2 m

Chesapeake Healthy Watershed Assessment

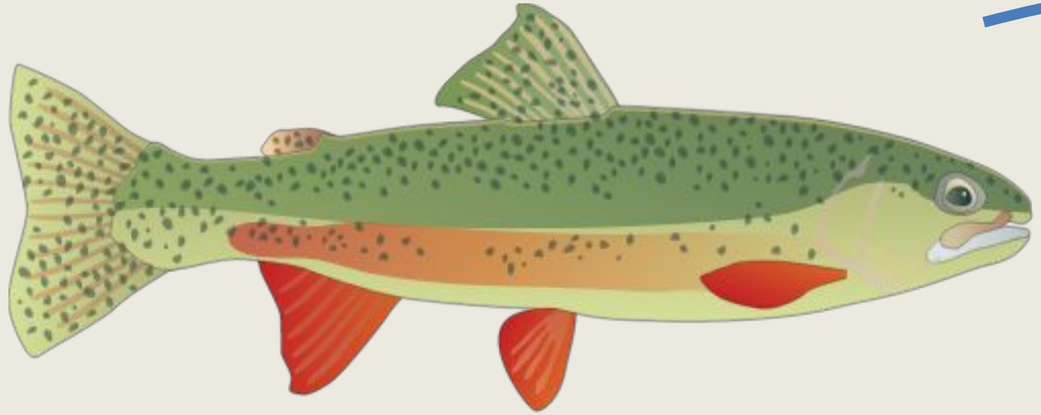
Providing information useful to support strategies protecting and maintaining watershed health

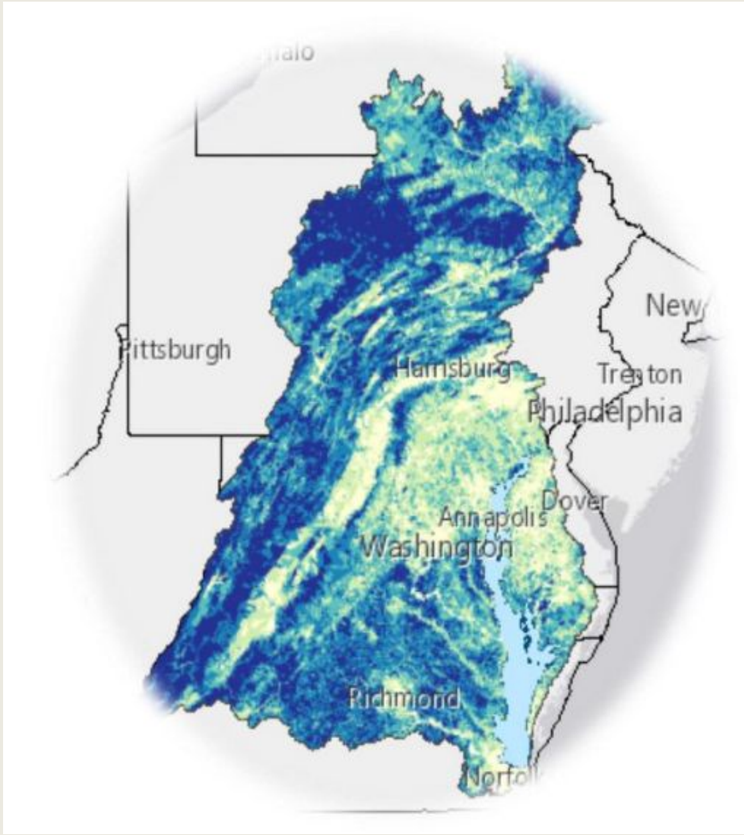


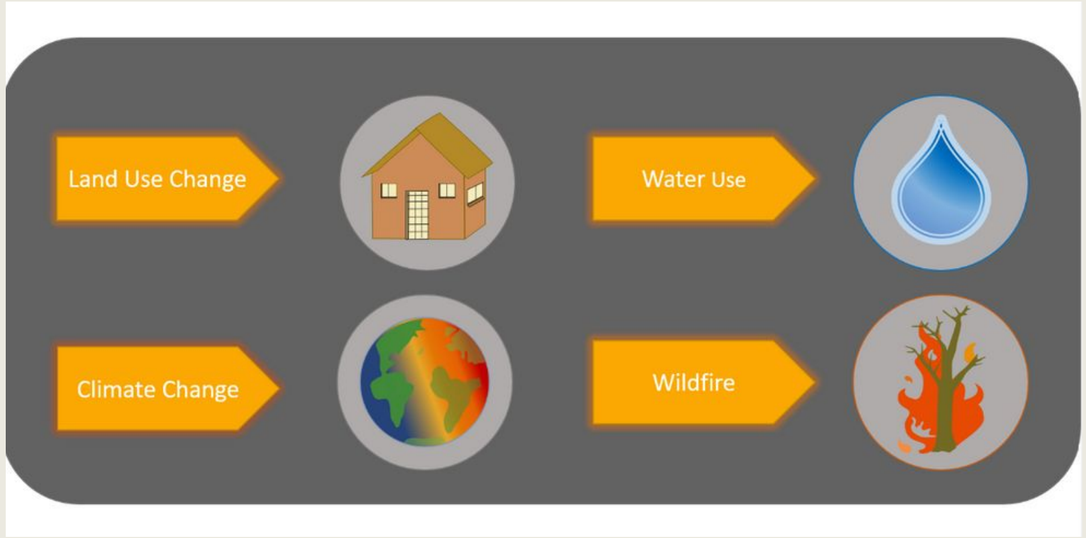
Watershed Health Index and Metrics: Habitat Sub-Index

Attributes include: aquatic, wetland, riparian, floodplain, lake, and shoreline habitat, Hydrologic connectivity.

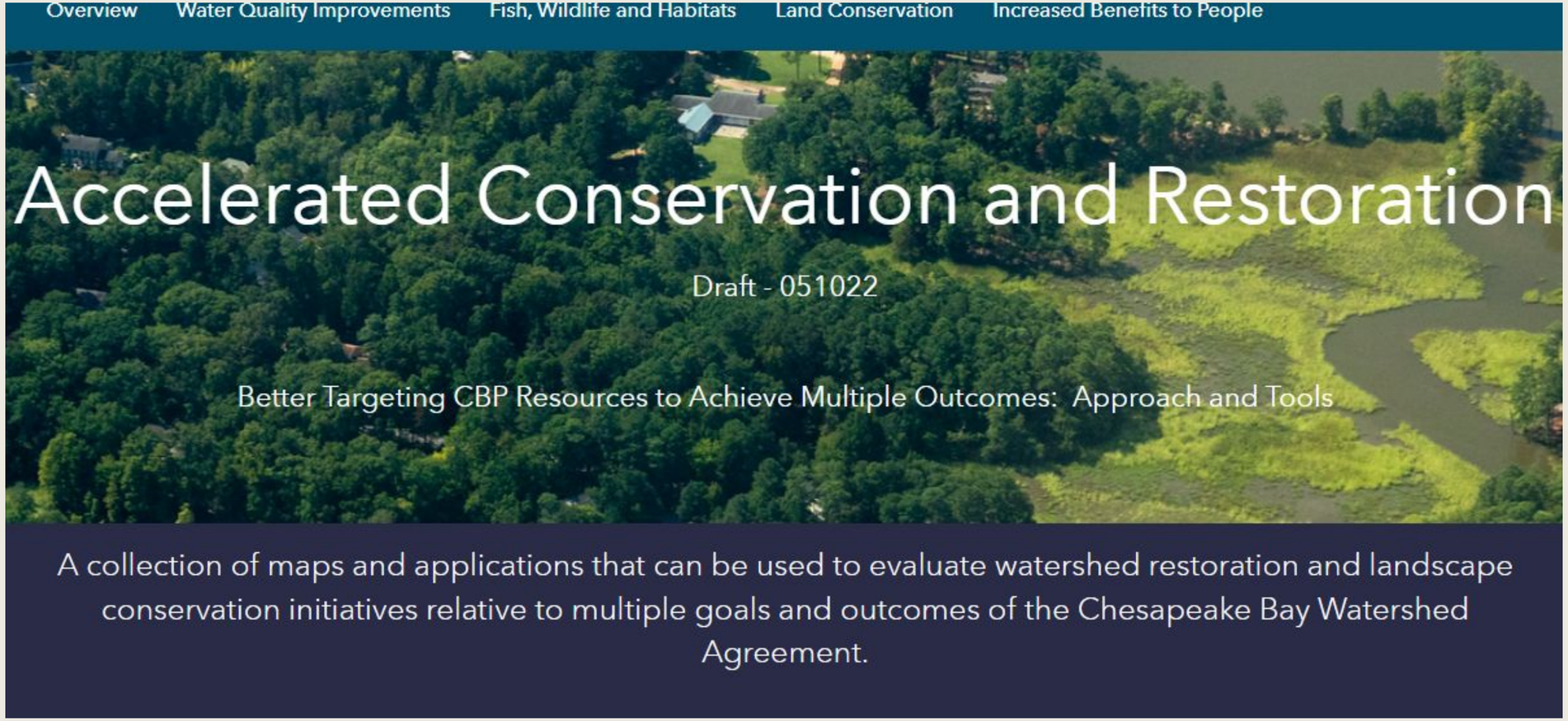
Watershed Vulnerability Metrics





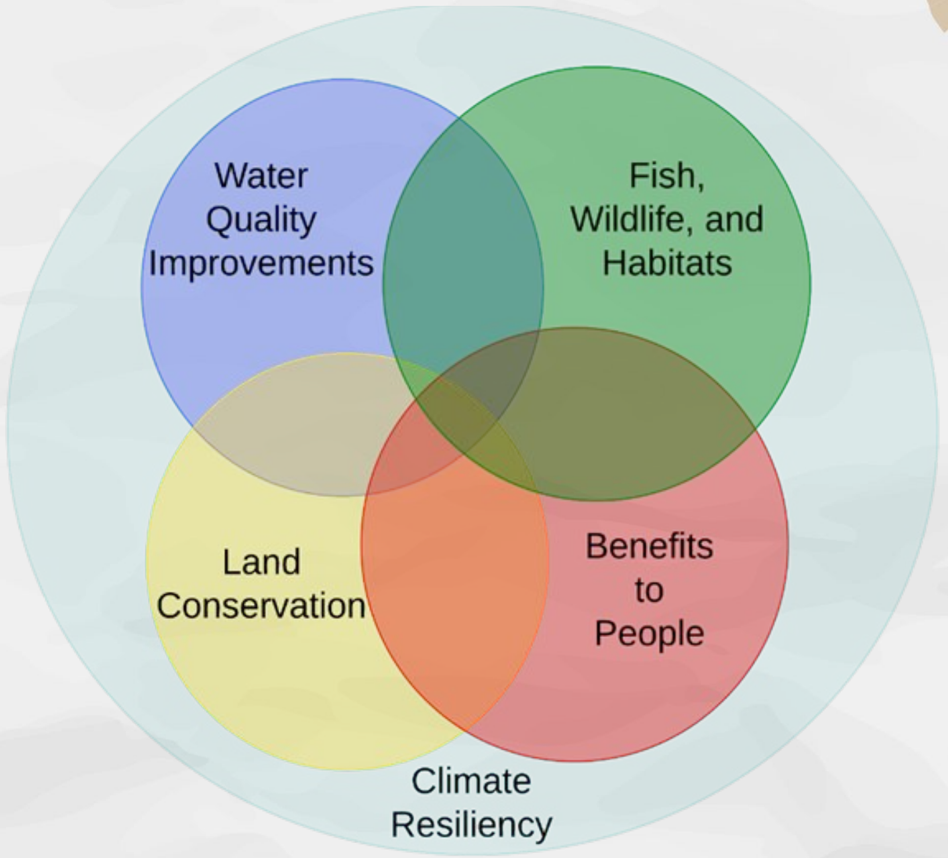


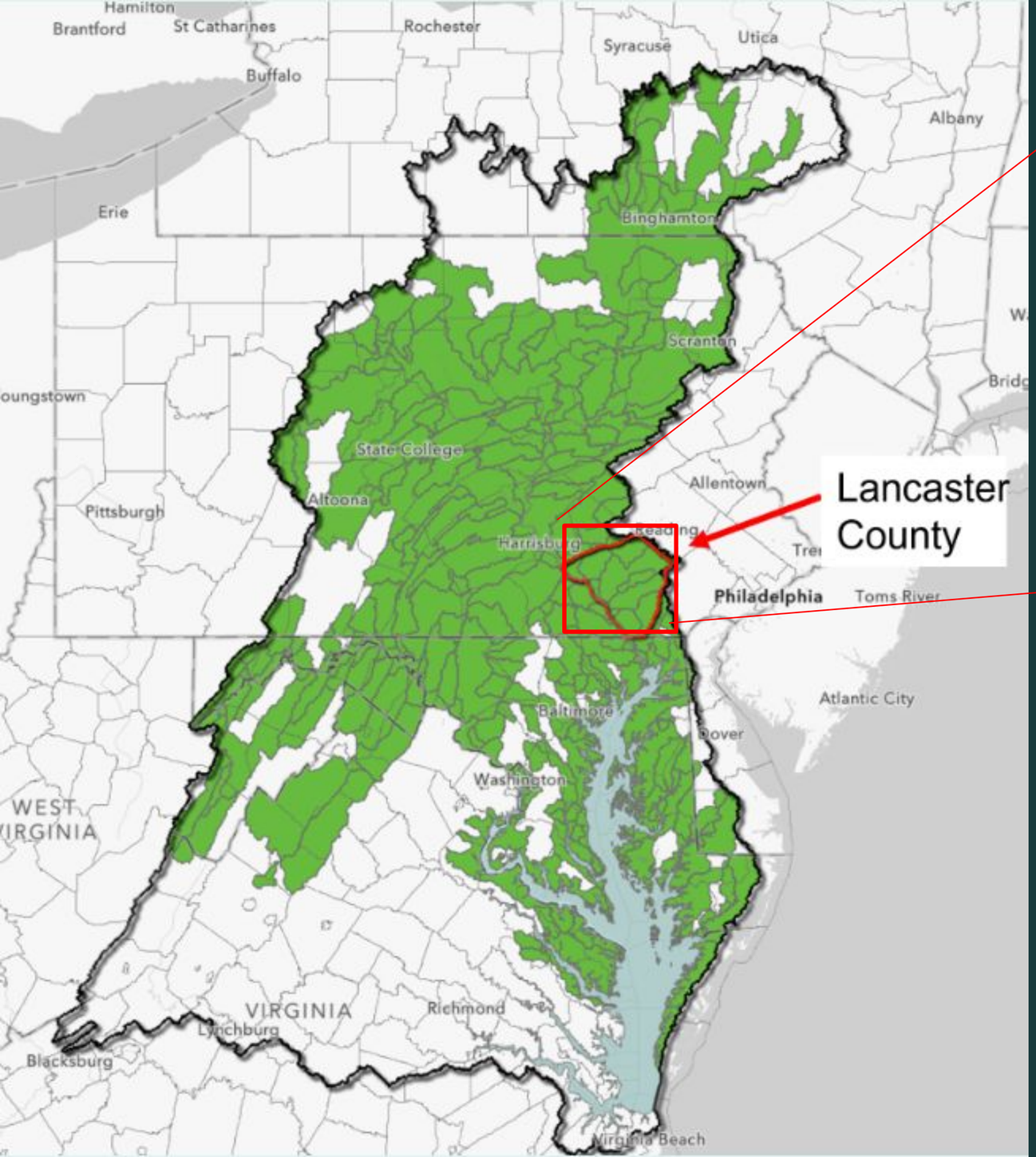
CBP Targeting Portal

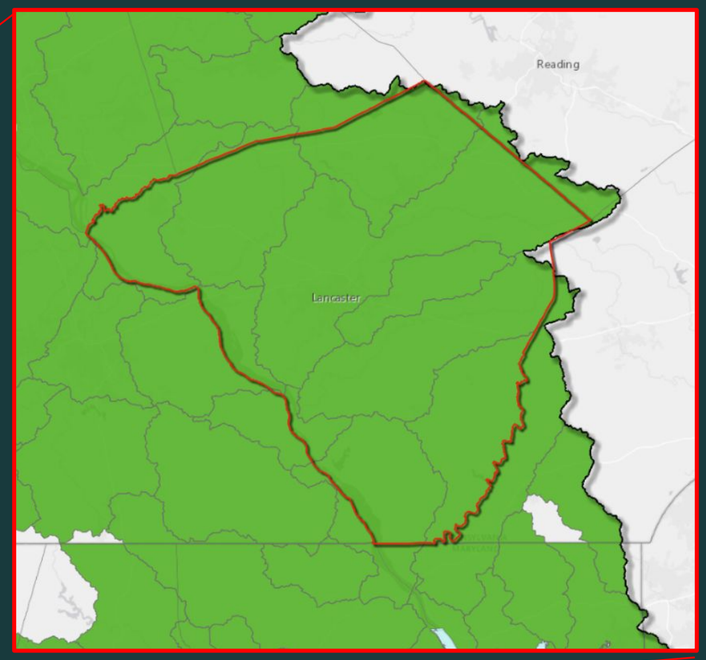


Management Question:

How can additional CBP outcomes for habitats and people be achieved in the Most Effective





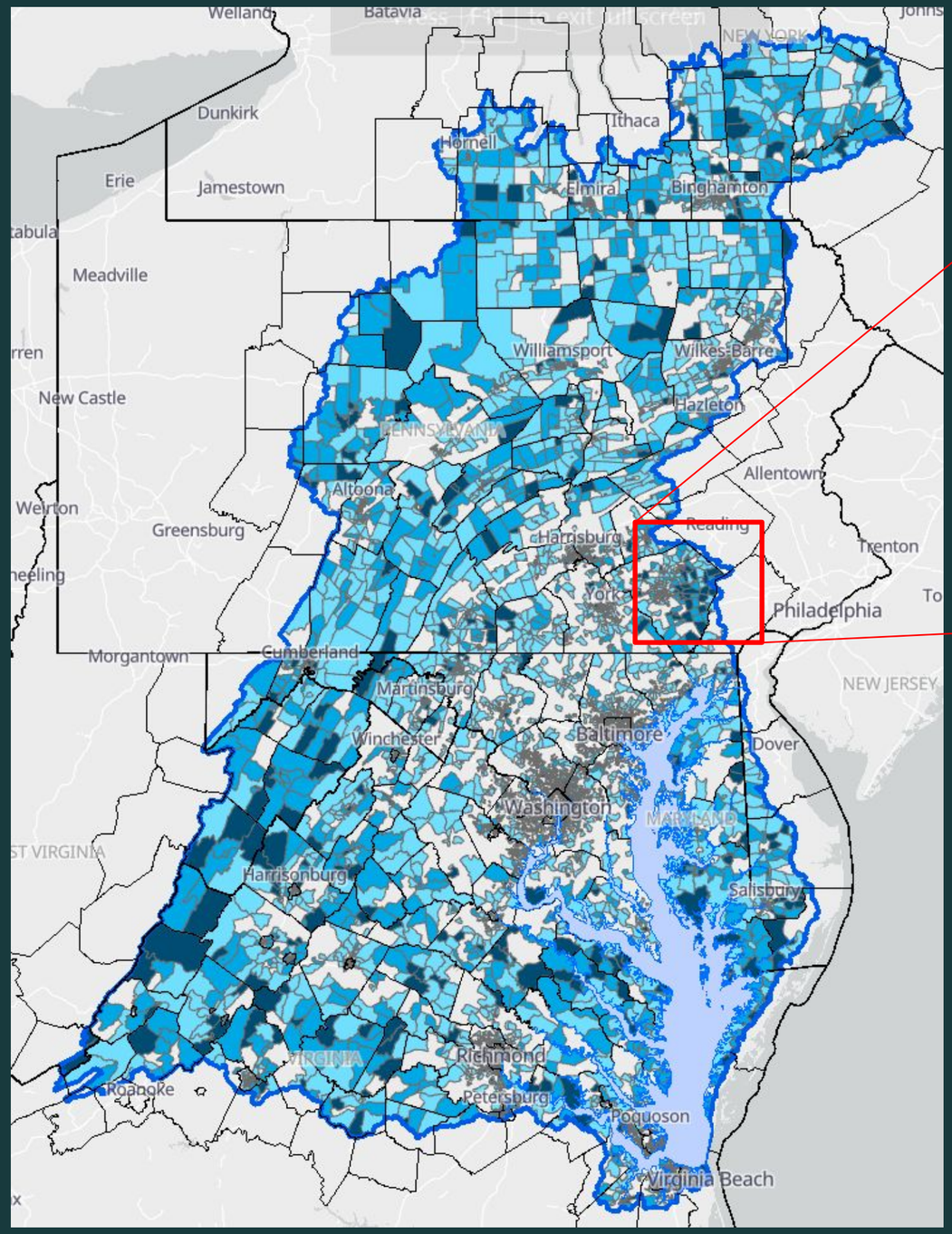


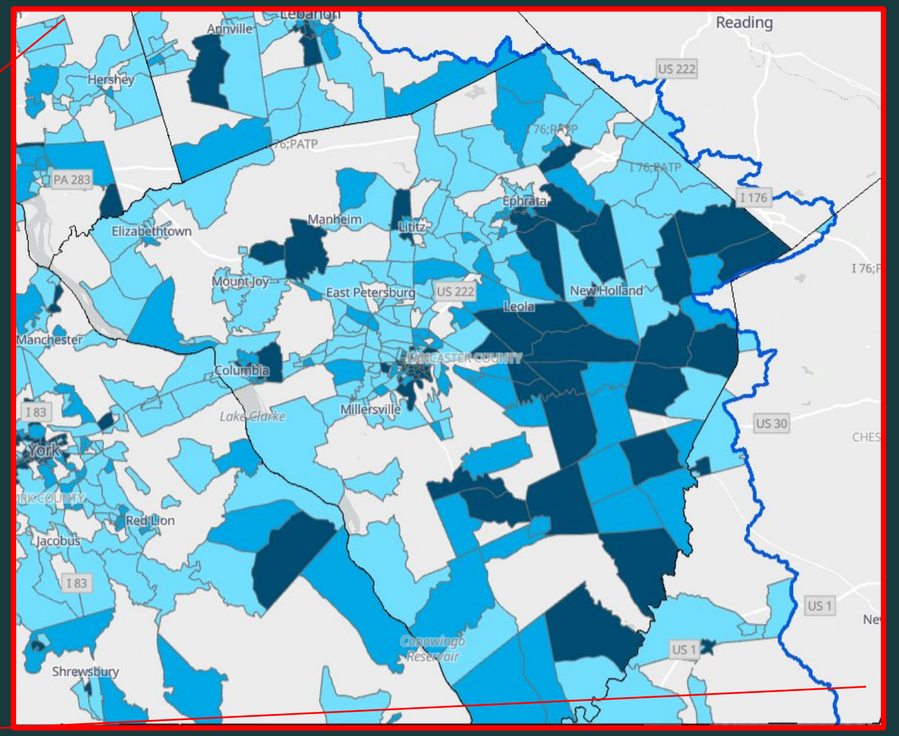
2 CBP Outcomes

- Bay TMDL & Standards Attainment

Tool: Most Effective Basin Map

Programs: EPA CBP Grants & State Programs



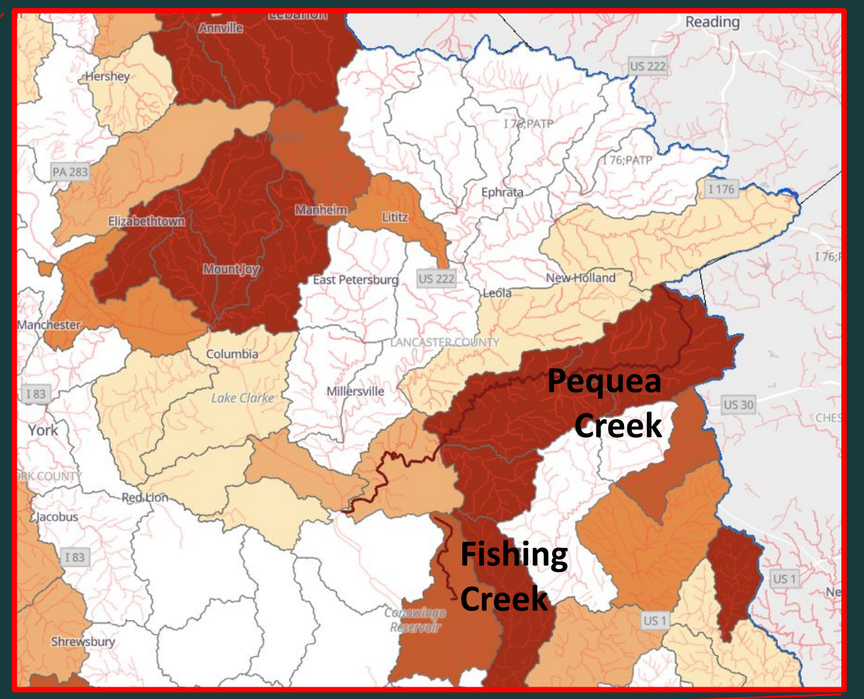


3 CBP Outcomes

- Bay TMDL & Standards Attainment
- *Diversity*

Tools: MEB + *Disadvantaged communities*

Programs: EPA, States, +*EPA Grant for Disadvantaged Communities*

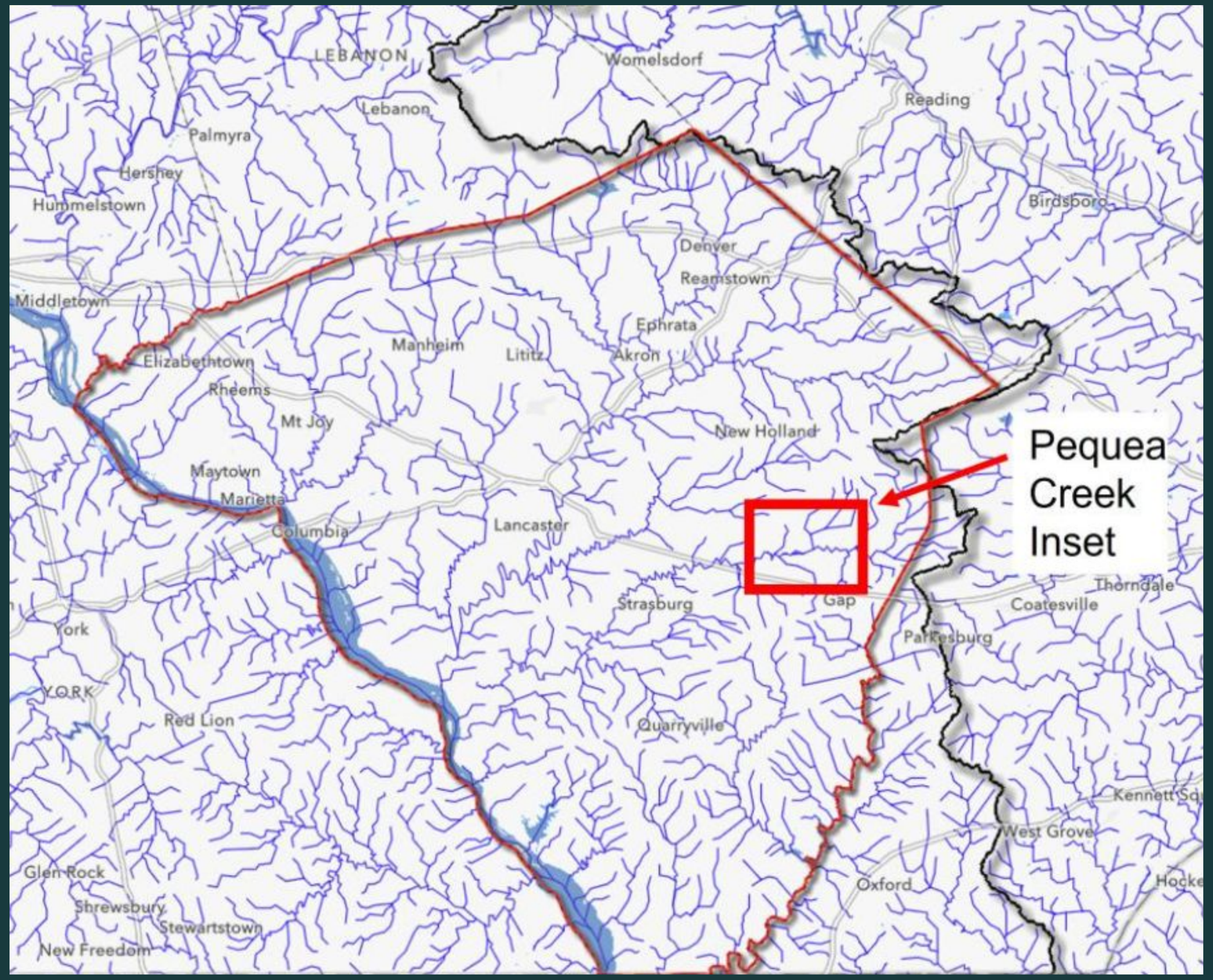


4 CBP Outcomes

- Bay TMDL & Standards Attainment
- Diversity
- *Stream condition/local waters*

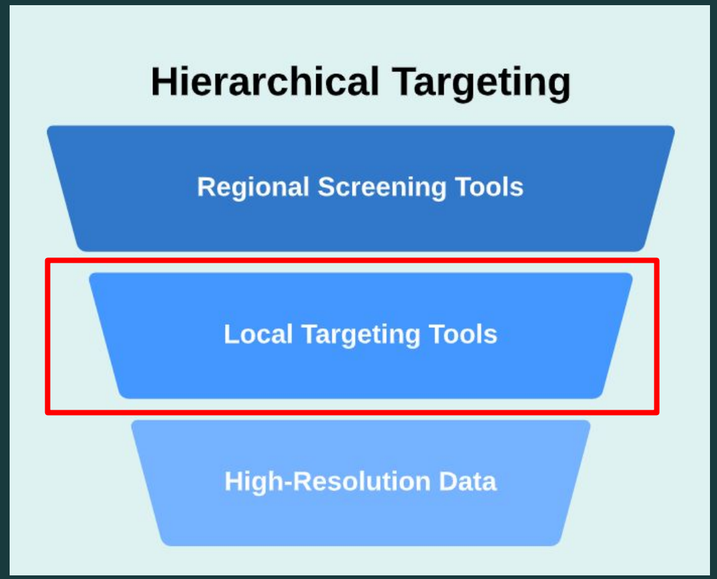
Tools: *+ Ag Priority Watersheds*

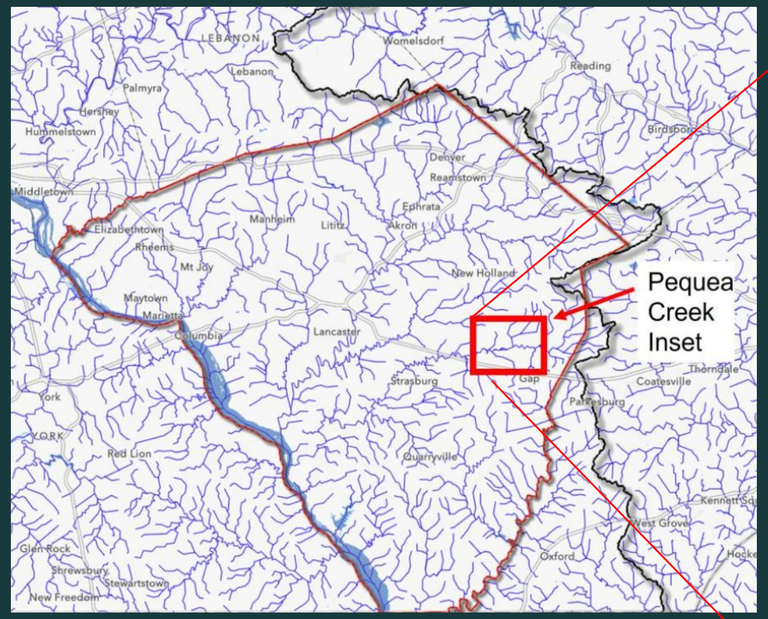
Programs: – EPA, States *+NRCS Programs*



Local Targeting Tools

- Streams within Lancaster County



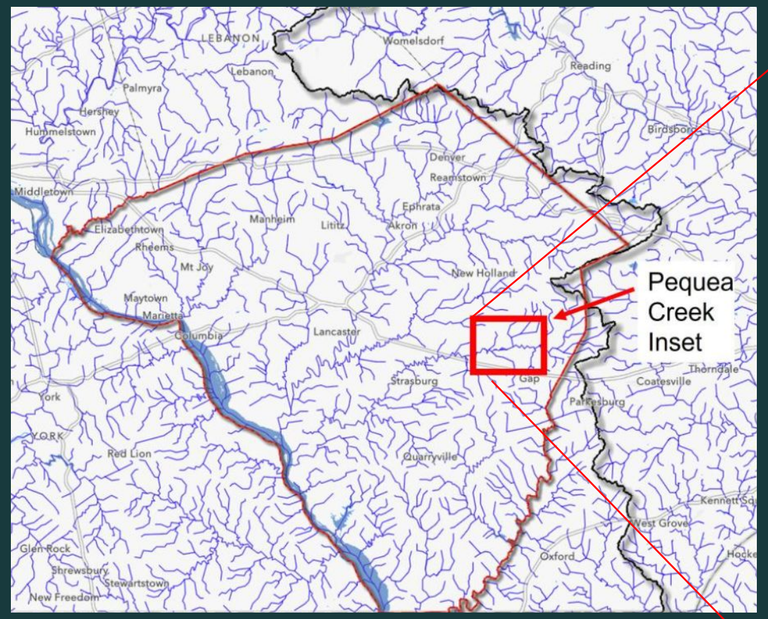


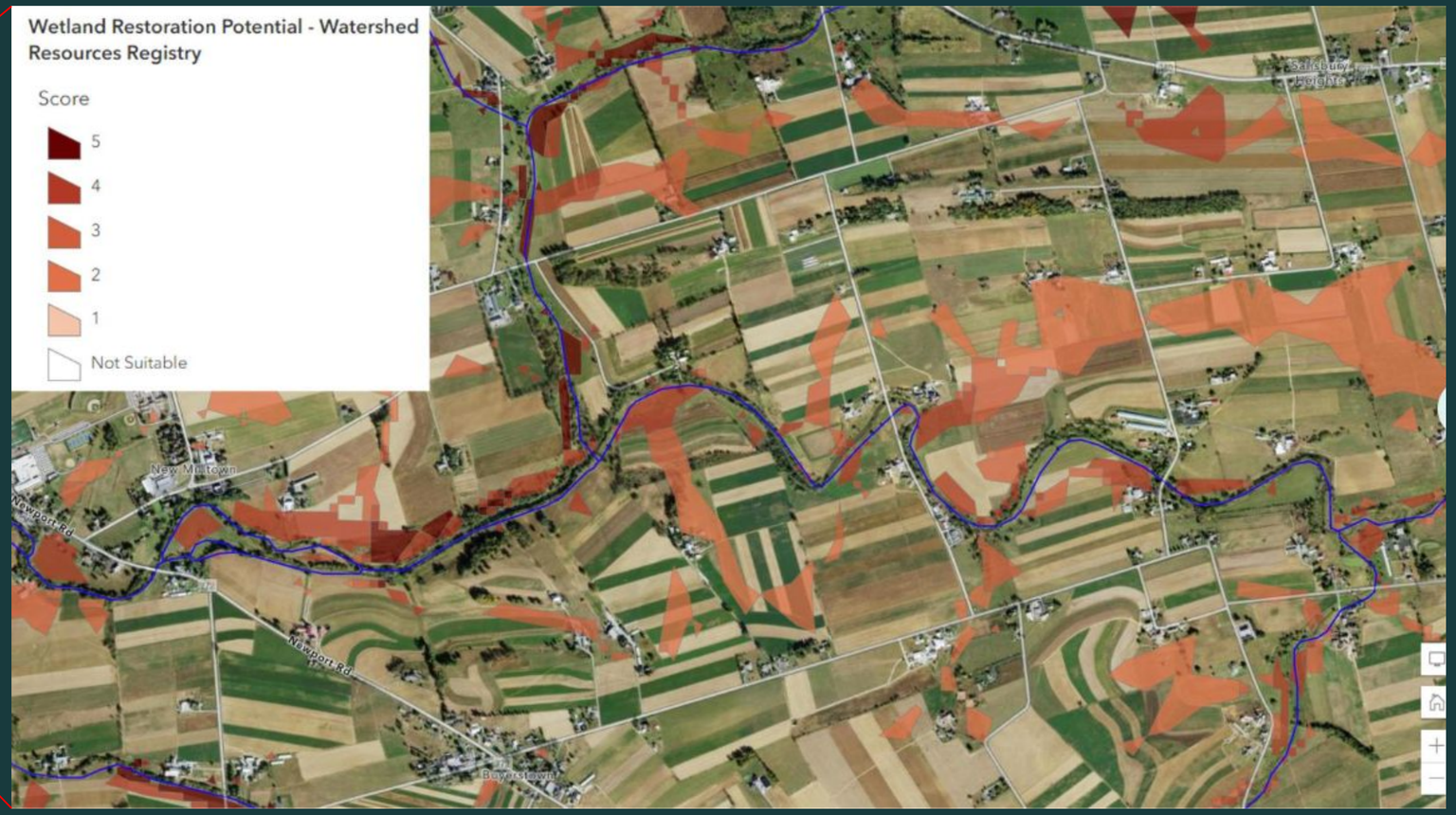
5 CBP Outcomes

- Bay TMDL & Standards Attainment
- Diversity
- Stream Health
- *Forest Buffers*

Tools: *+ Watershed Resources Registry*

Programs: – EPA, States, NRCS, *+local programs*





6 CBP Outcomes

- Bay TMDL & Standards Attainment
- Diversity
- Stream Health
- Forest Buffers
- *Wetlands*

<u>Tools:</u> *+ Watershed Resources Registry*

<u>Programs</u>: – EPA, States, NRCS, *+local programs*

We Need Your Feedback

Support local decisions on flood hazard mitigation, land use and climate resiliency planning

Translate, format, package and flow information through to trusted sources to better effectively engage locals directly.

Strategy on how to involve locals, using the existing Local Engagement Strategy for guidance, so they may be provided data, resources and information related to land use change in a more efficient and effective manner.

Questions?

Breck Sullivan, USGS@CBPO
bsullivan@chesapeakebay.net

References

- Chesapeake Healthy Watershed Assessment Method Overview and Sample Results. https://storymaps.arcgis.com/stories/6c45b975e27d413bad23988dc2dde5ef
- Accelerated Conservation and Restoration Version 1. https://gis.chesapeakebay.net/targeting/
- CBP Science Needs Database. https://star.chesapeakebay.net/
- Retrospective on Lessons Learned from the CBP SRSs 3rd Cycle. https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/2.-Read-Ahead-Retrospective-on-Lessons-Learned-from-the-CBP-SRS%E2%80%99s-3rd-Cycle_5.5.23_2023-05-09-175030_ddta.pdf
- High Resolution Data. https://www.chesapeakeconservancy.org/conservation-innovatio