Healthy Watersheds GIT meeting January 30, 2020

Chesapeake Bay Program
Science. Restoration. Partnership.

USGS

Management response:

How can managers respond to "signals of change" in watershed health?

Adapted from Maryland Water Monitoring Conference – Dec 6th, 2019

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Maintain Healthy Watersheds GIT,
Coordinator

ALLIANCE for the Chesapeake Bay

Healthy Watershed and Land Use Outcomes

Through the Chesapeake Bay Watershed Agreement*, the Chesapeake Bay Program has committed to…*

Healthy Watersheds Goal:

- Goal: *Sustain state-identified healthy waters and watersheds recognized for their high quality and/or high ecological value*

- Outcome: *100 percent of state-identified healthy waters and watersheds remain healthy*.

Land Conservation Goal:

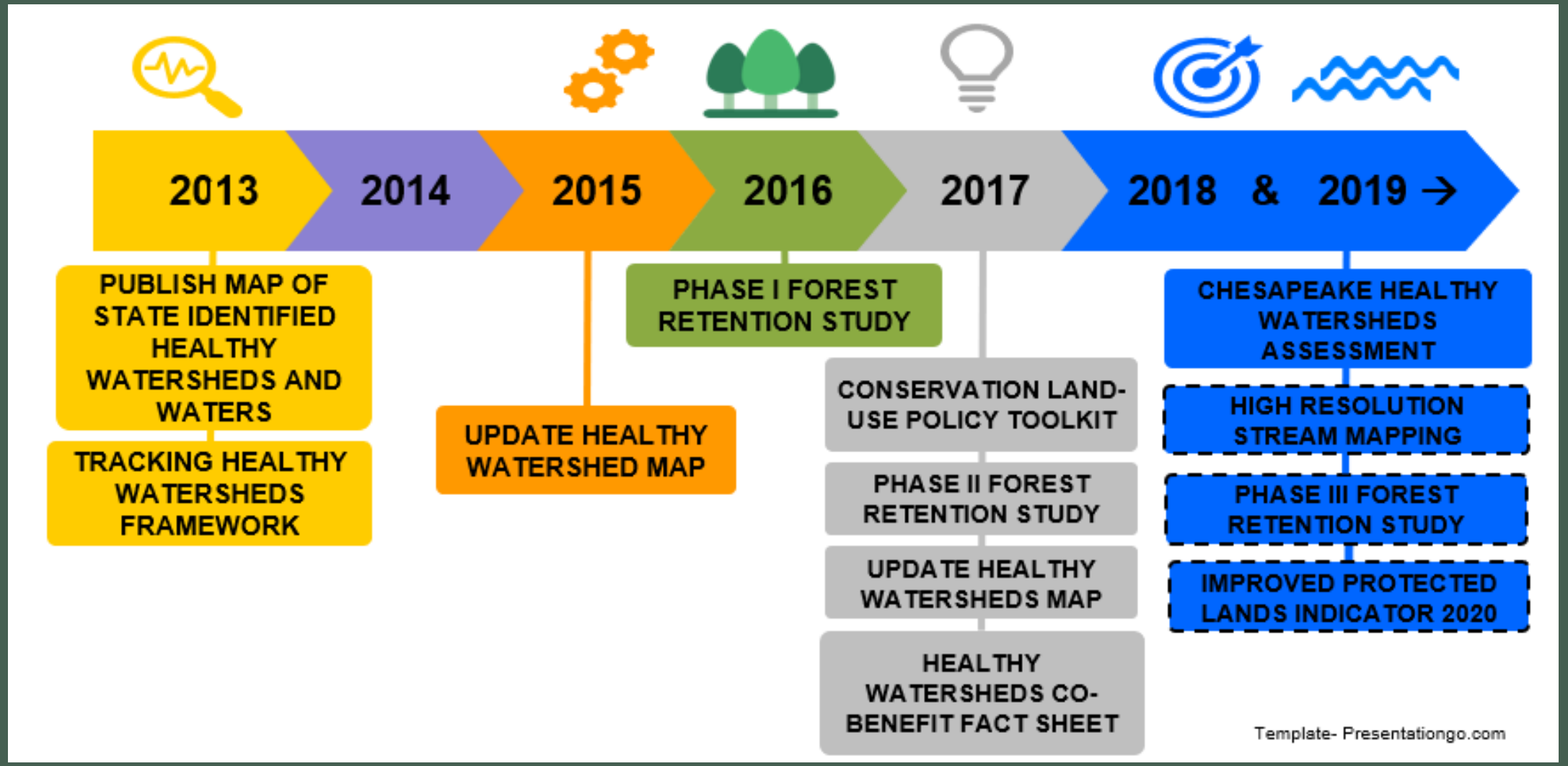
Land Use Options Evaluation Outcome:

- *policy options, incentives and planning tools* for local governments reduce the rate of conversion of agricultural lands, forests and wetlands
- Development of *strategies* to support local government efforts in *reducing land conversion*

Land Use Methods and Metrics Outcome:

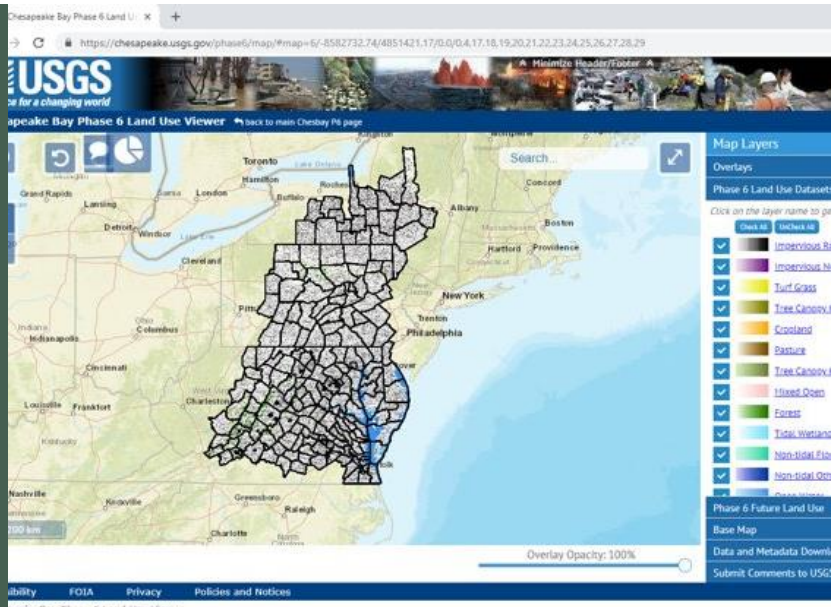
- *improve the knowledge of land conversion and impacts throughout the watershed.*
- *methodology and local level metrics for rate of farmland, forest and wetland conversion, ….impervious surface*
- *public awareness campaign to citizens, local governments, elected officials and stakeholders.*

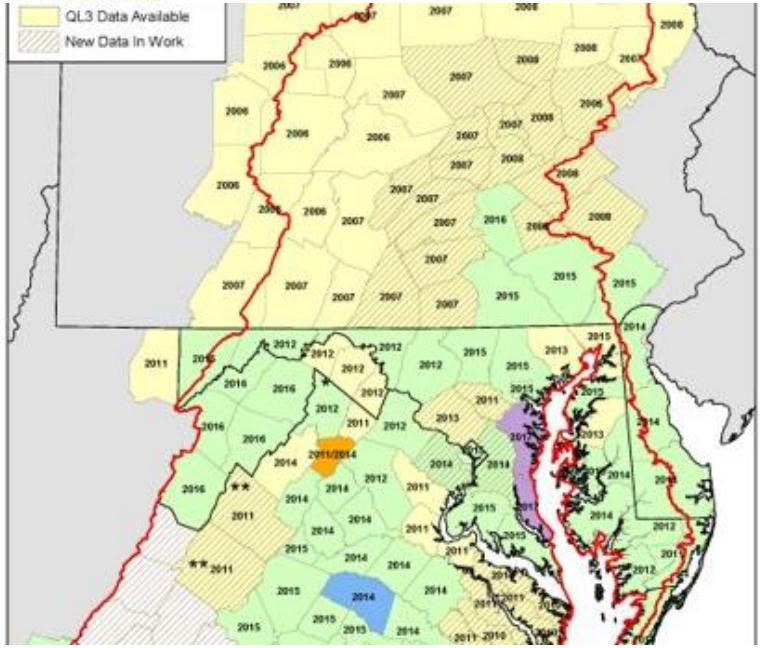
Healthy Watersheds Goal Team Milestones



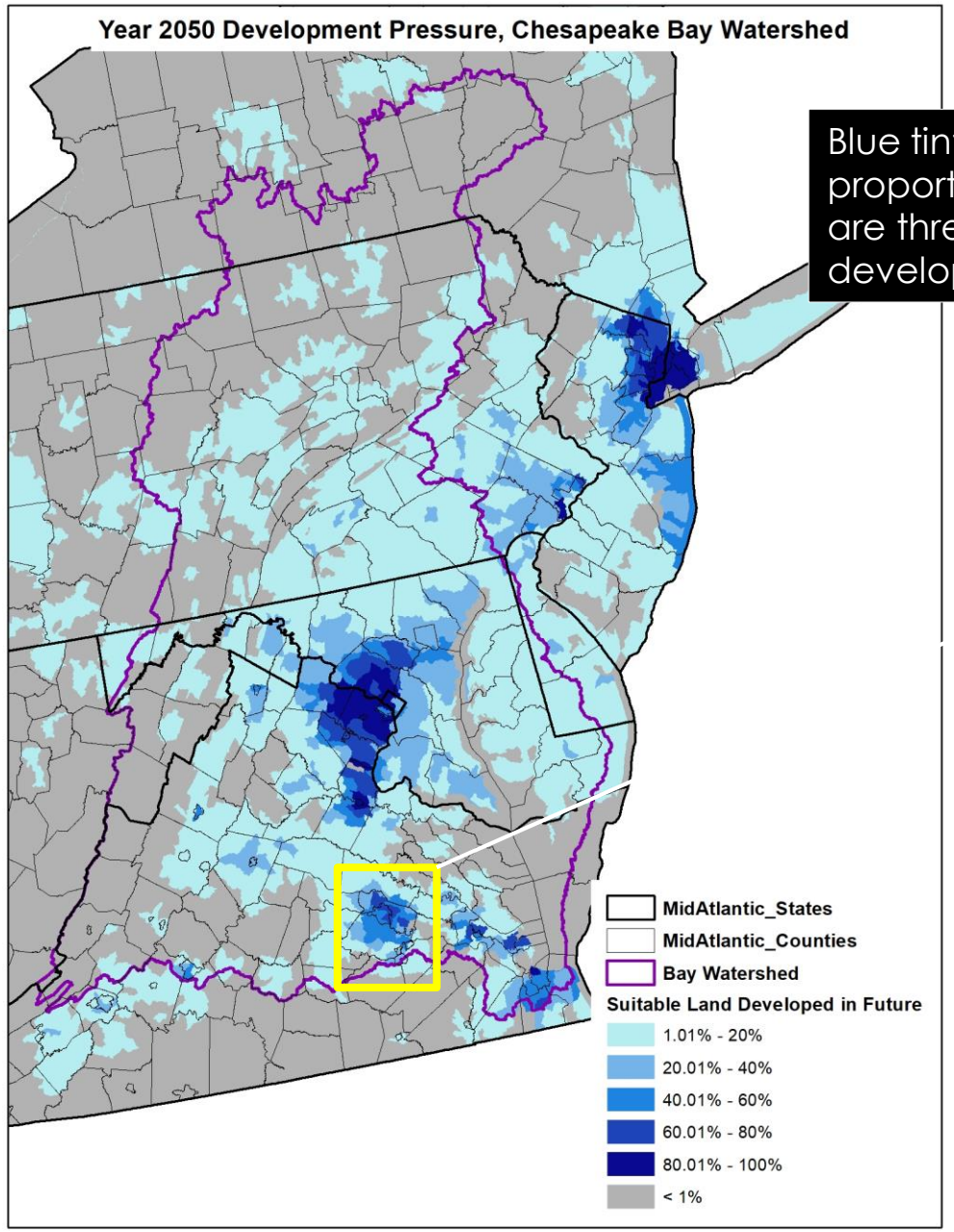
Land Use Methods and Metrics Progress:

- USGS funding for LiDAR acquisitions in the Bay watershed.
- Establishment of a 2013 baseline for monitoring land cover and land use change.
- USGS and CBP support for developing the Chesapeake Bay Land Change Model.
- Forecasts of future development to "account for growth" (TMDL) and to help assess vulnerability of habitats, streams, and watersheds to impairment.

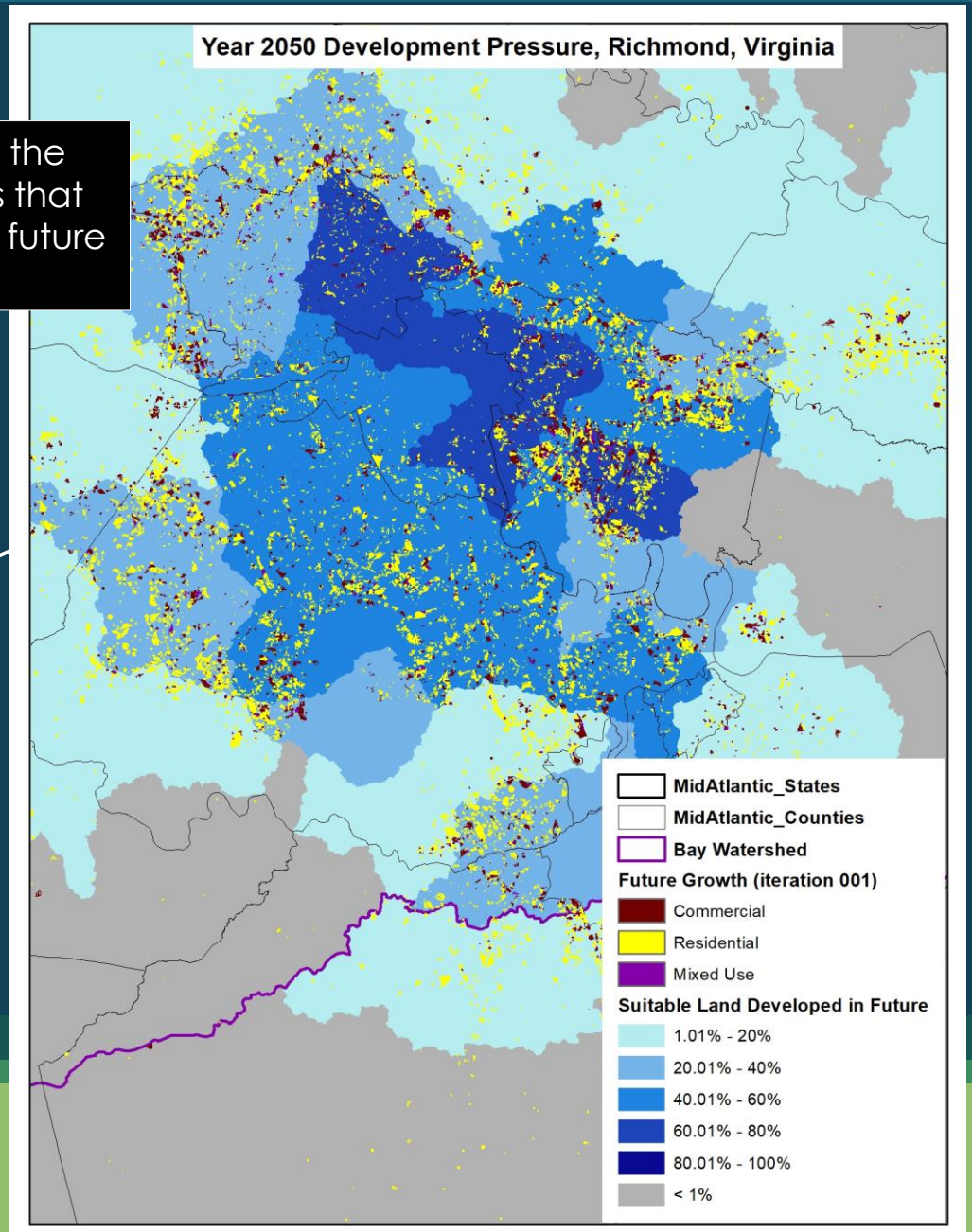




Vulnerability to Land Conversion

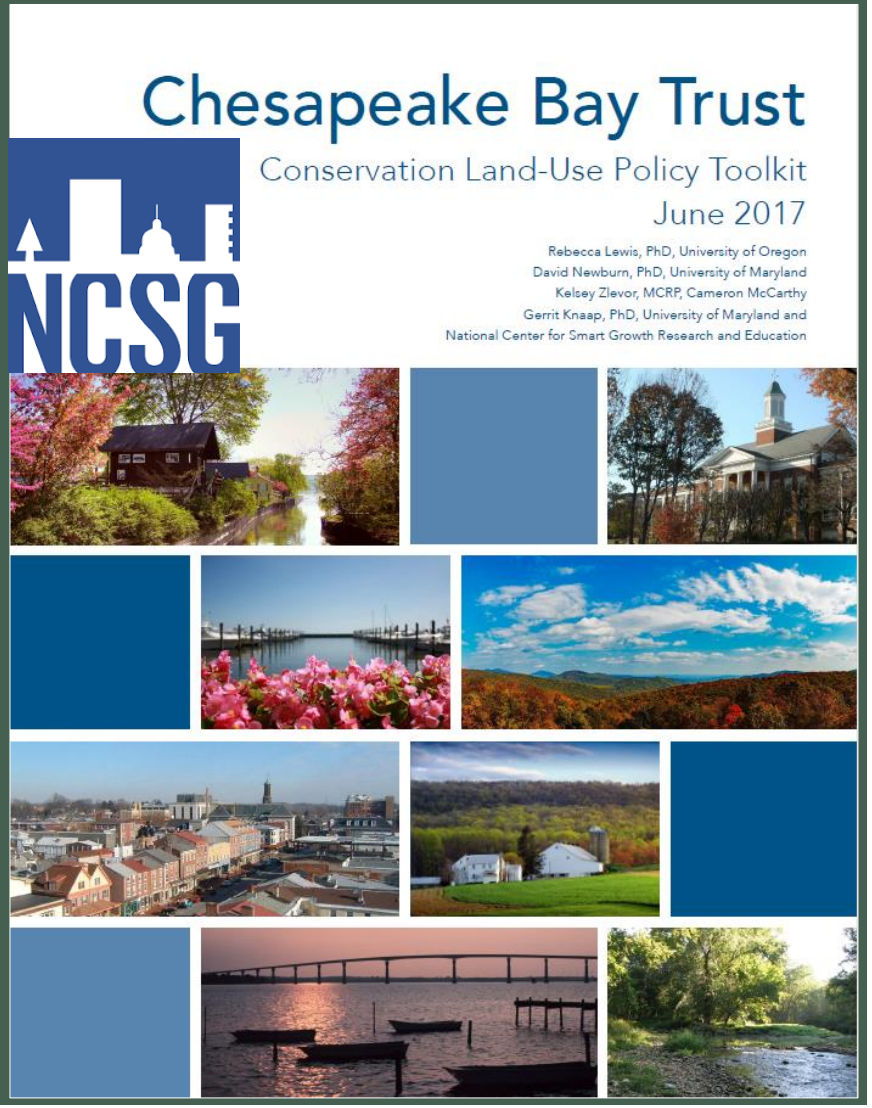


Blue tints represent the proportion of lands that are threatened by future development



Policies, incentives, and planning tools…

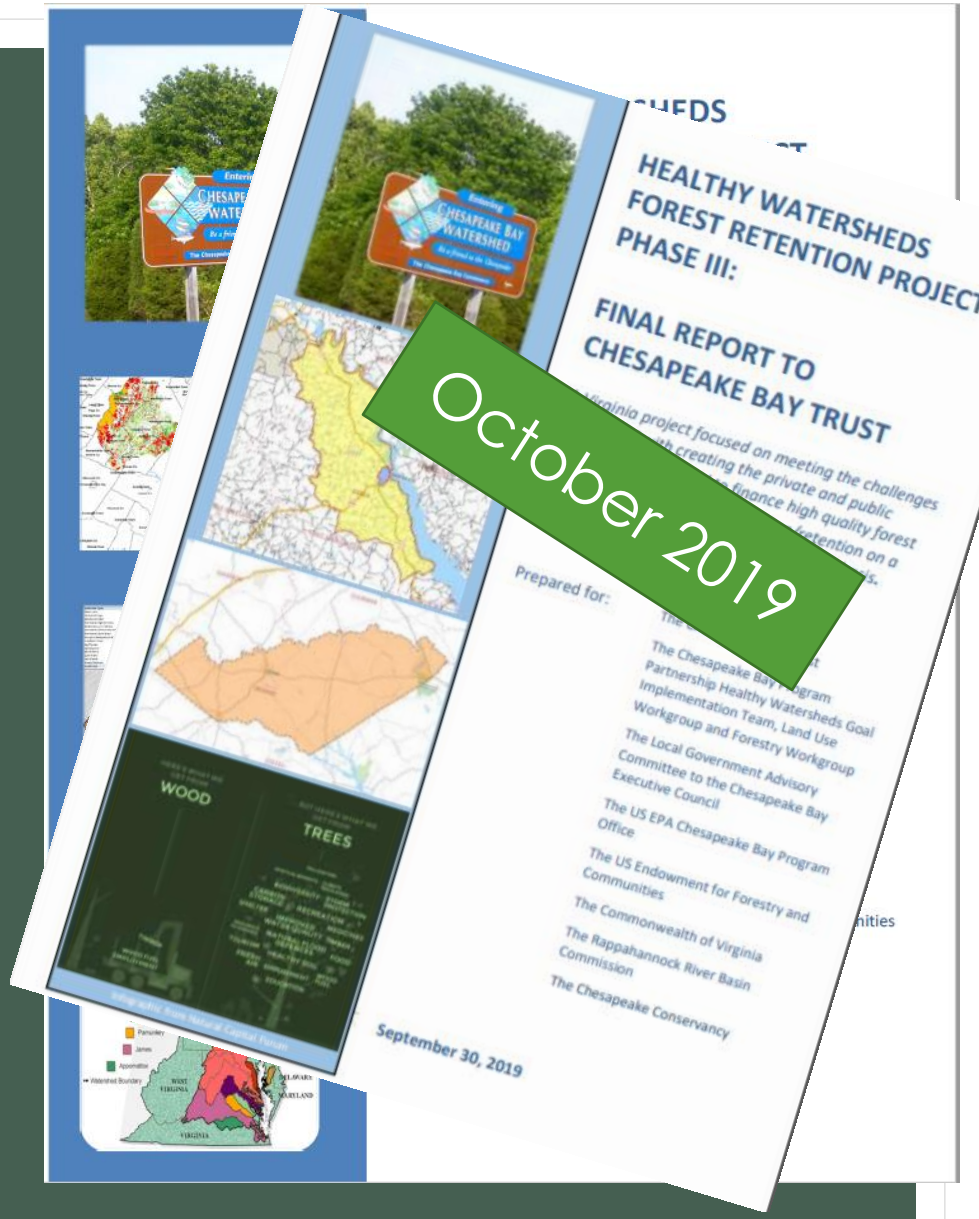
- Conservation Land-Use Policy Toolkit (2017)
- Determined existing policy options, incentives, and planning tools that could be used by local government planners to reduce the rate of ag, forest, and wetland conversion
- Deliverables: Toolkit, Webinar



Policies, incentives, and planning tools…

Healthy Watersheds Forest Retention Project (2014 – 2019)

- Phase I: Quantified the value of retaining forestland (economic case for "crediting conservation")
- Phase II: VA/PA partnership – Worked with localities to identify policy tools and incentives
- Phase III: Implement tools in the field and develop large-scale private sector financing model



- Deliverables: **Toolbox**

What's in the "Toolboxes"?

A Local Engagement Strategy

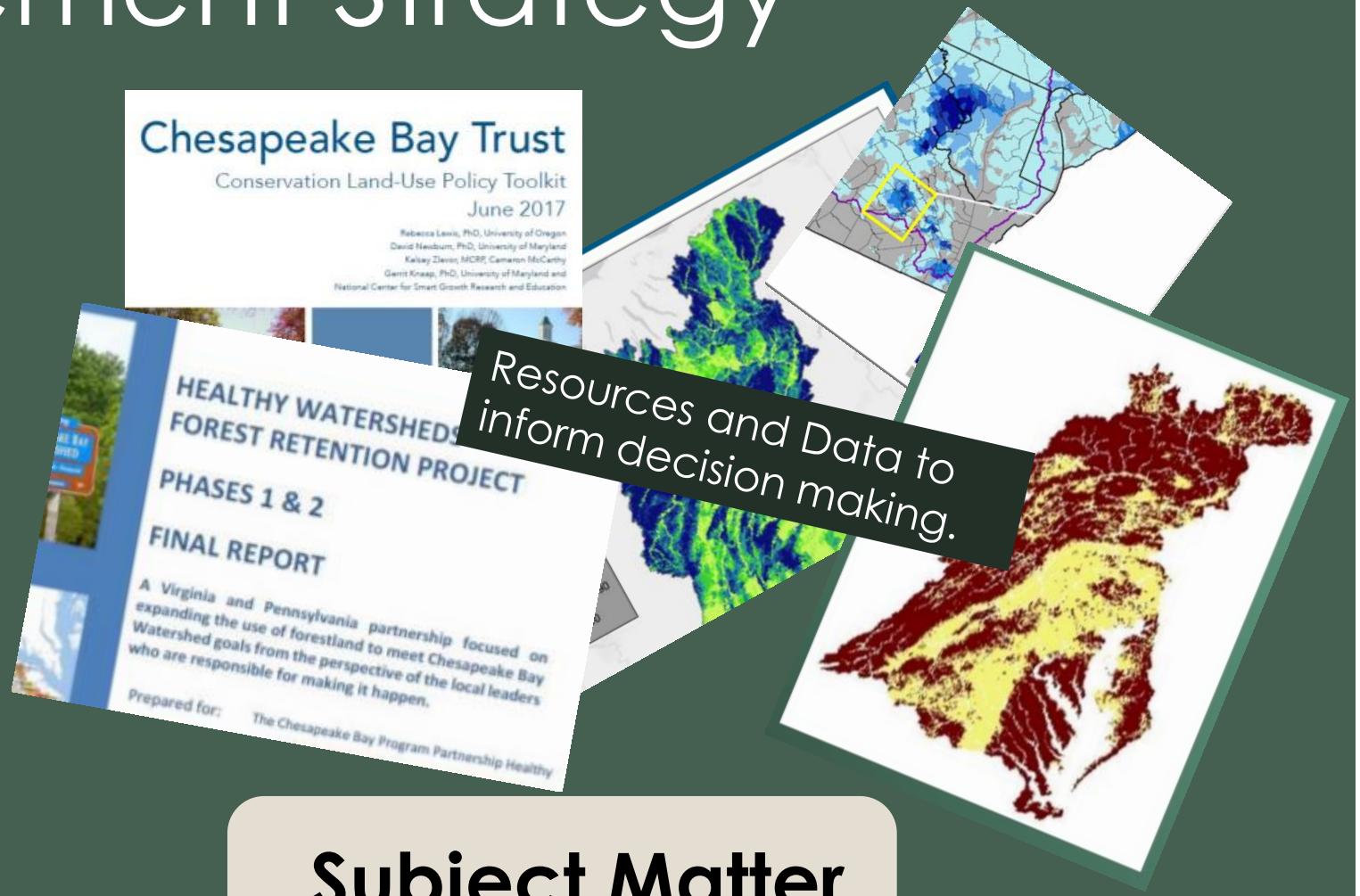
from the Chesapeake Bay Program

Local Engagement Strategy

Audience

Trusted Sources

Translators



Subject Matter Experts

HWGIT Audience

People and entities that influence land use change (policies, restoration, conservation decisions)

- State / Jurisdictional leads in Healthy Watershed programs
- WIP developers
- Local governments
- Planning district commissions
- Watershed organizations
- Others?

Examples of Trusted Sources

State level associations

Maryland Association of Counties

Virginia Municipal League

Pennsylvania Association of Township Supervisors

Council of Governments

Metropolitan Washington Council of Governments

State Universities

Maryland Sea Grant

Virginia Water Resources Center

Penn State Extension Service

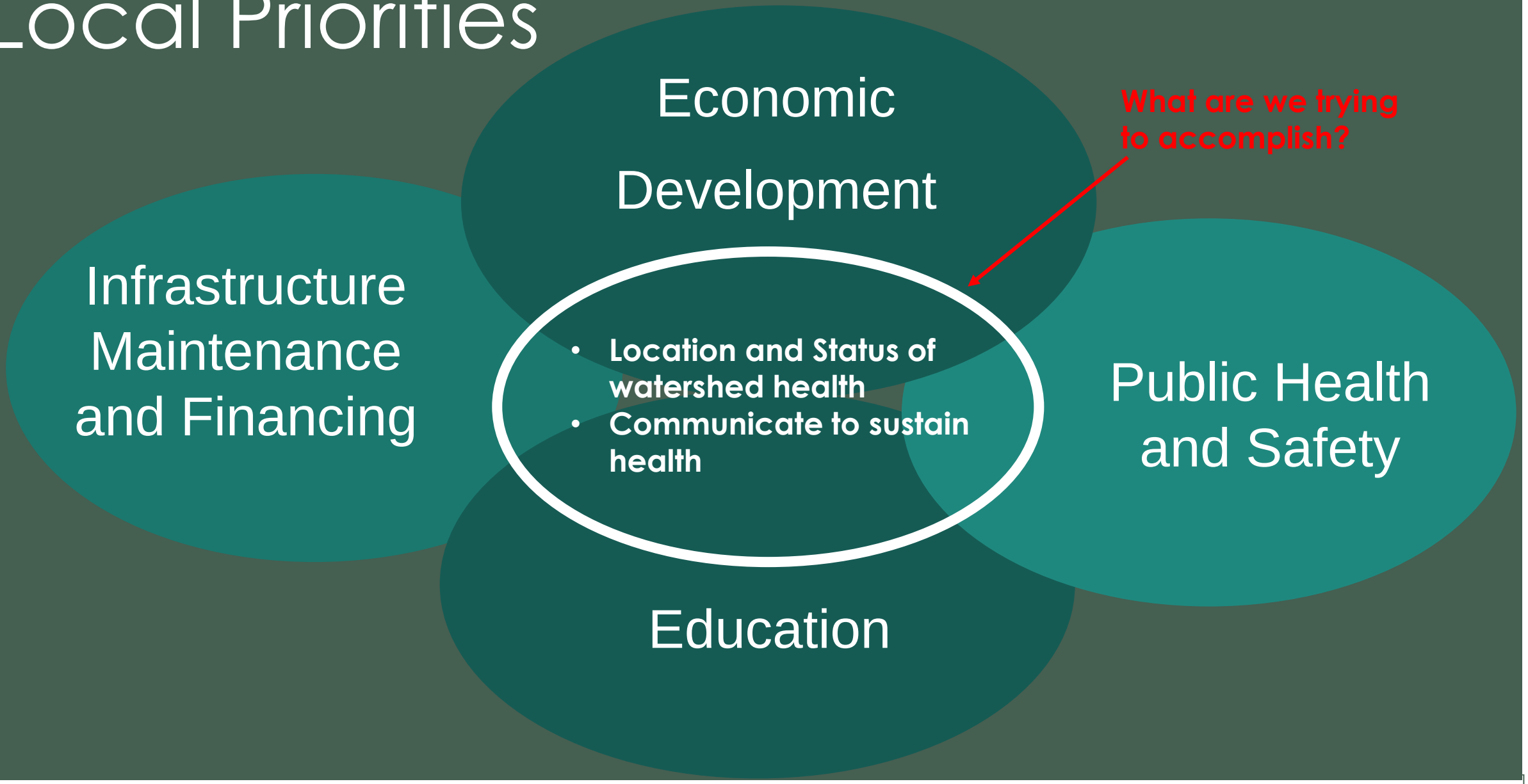
Conservation Districts and Planning Districts

River Basin Commissions

HW GIT Trusted Sources

- State / Jurisdictional leads overseeing Healthy Watershed programs
- WIP Developers
- National Land Conservation groups (e.g., Land Trust Alliance)
- LGAC and Local Leadership workgroup membership (and their trusted sources)
- Others?

Local Priorities

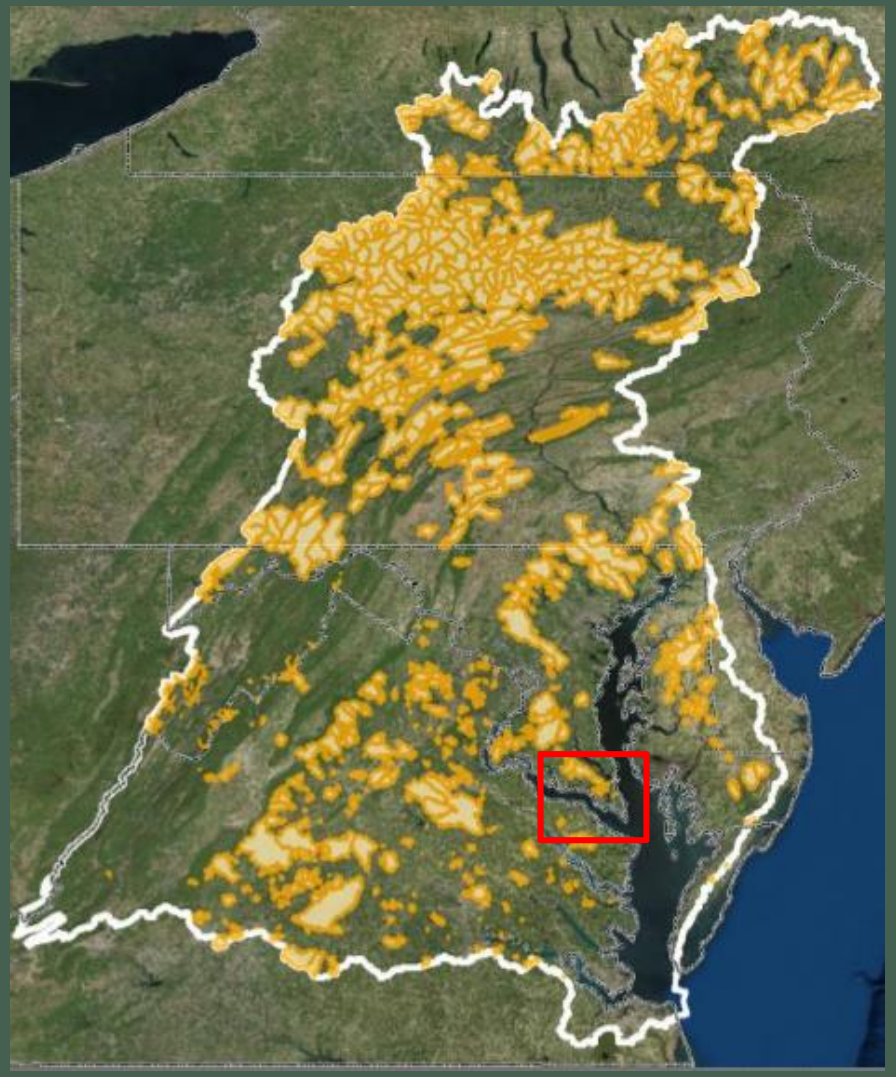


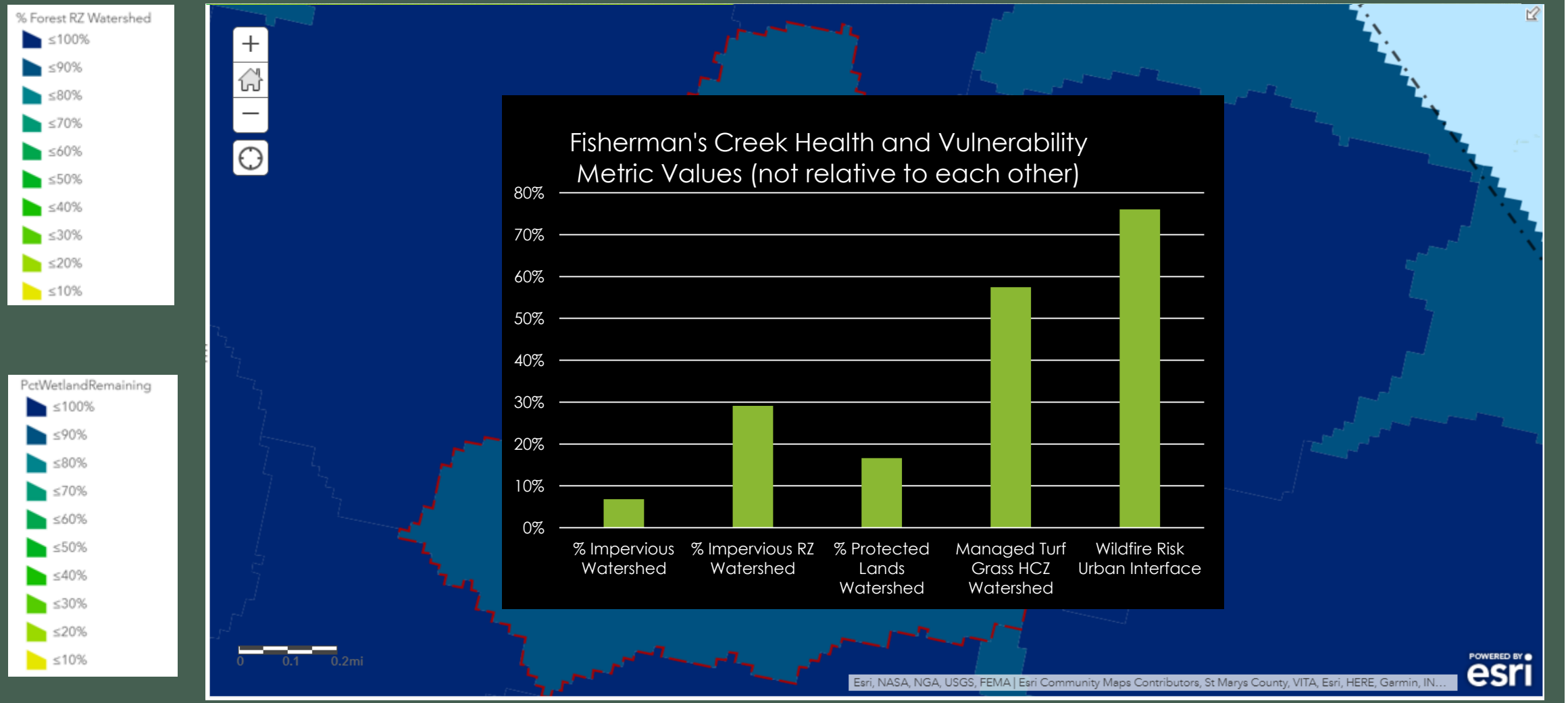
Example Fisherman's Creek St. Mary's County Maryland

- Assessment of the current health as informed by the CHWA
- What are the stressors/vulnerabilities there?
- Can any other work or data also inform what is happening in this watershed?
- What are the potential management responses based on the current health and vulnerabilities
- How can those messages be framed to put them on terms of also meeting local priorities?

Chesapeake Watershed Assessment Example:

Fisherman's Creek St. Mary's County Maryland




% Forest RZ Watershed
≤100%
≤90%
≤80%
≤70%
≤60%
≤50%
≤40%
≤30%
≤20%
≤10%
PctWetlandRemaining
≤100%
≤90%
≤80%
≤70%
≤60%
≤50%
≤40%
≤30%
≤20%
≤10%
Fisherman's Creek Health and Vulnerability Metric Values (not relative to each other)
80%
70%
60%
50%
40%
30%
20%
10%
0%
% Impervious Watershed
% Impervious RZ Watershed
% Protected Lands Watershed
Managed Turf Grass HCZ Watershed
Wildfire Risk Urban Interface
0
0.1
0.2mi
Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, St Marys County, VITA, Esri, HERE, Garmin, IN...
POWERED BY esri

Next Steps, Available and Forthcoming Resources

Current / Future Efforts

GIT funding project:

Cross-outcome Watershed Educational Materials for Local Governments (March 2020 – December 2020)

- Work with CBP Coordinators and Staffers (C/S) to understand and inventory the breadth and depth of available information
- compile summary information on local benefits into a *shareable, organized*, and *easily accessible* online information matrix
- Develop Watershed 101 Module to help local elected officials understand the basics of watersheds and local waterways, the importance and benefits of watershed management for local communities, and their own impact on the larger Chesapeake Bay watershed and ecosystem (Plus 4-8 additional modules)

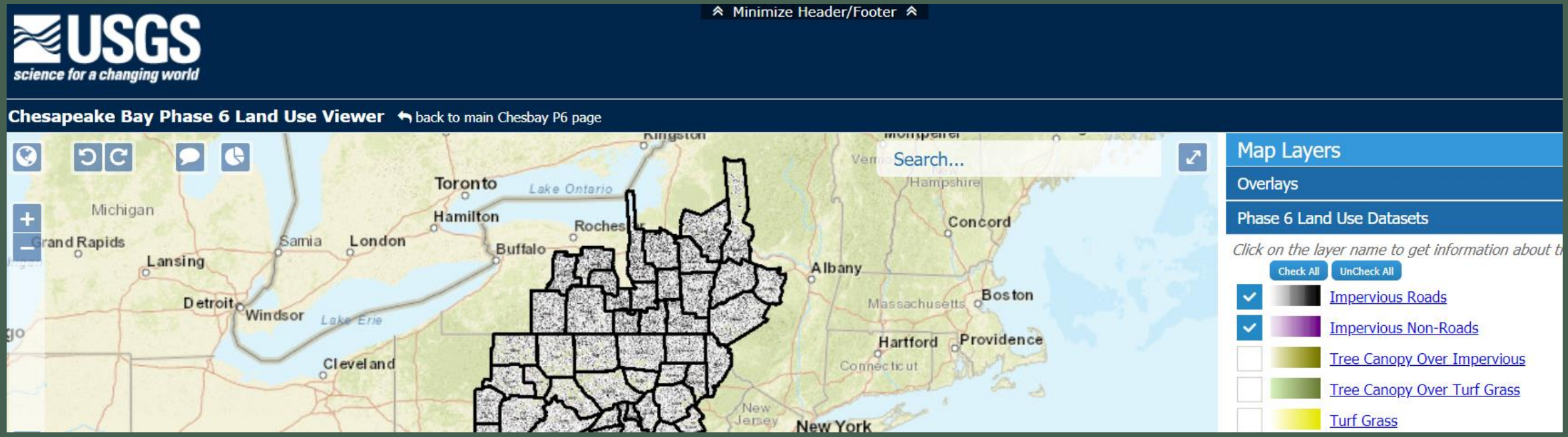
Current / Future Efforts, cont.

Improved Technical Service Delivery to Landowners: Achieving Multiple CBP Outcomes: (March 2020 – December 2020)

Improve technical service delivery across the Bay watershed through the design of a coordinated system that facilitates knowledge exchange between technical service providers (TSPs) and the restoration community

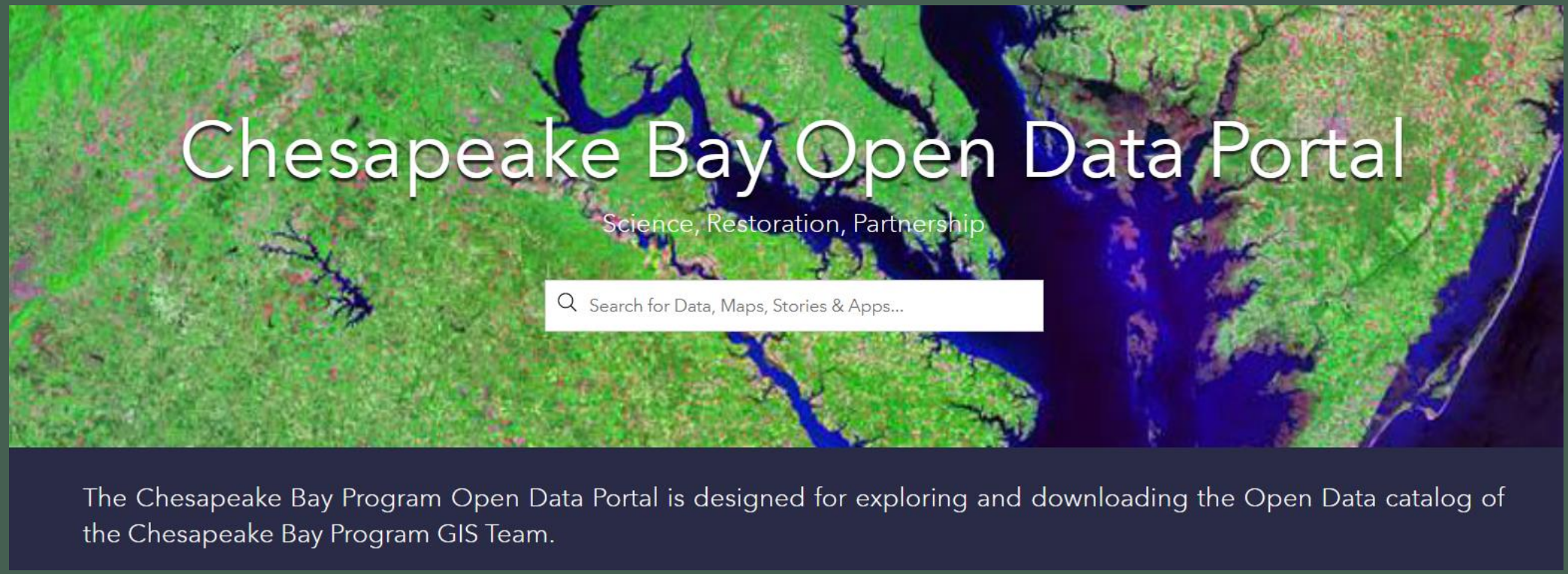
Objectives:

- Collecting and analyzing feedback from TSPs and other stakeholders
  - landowner attitudes toward habitat BMPs
  - current reach and gap of existing services and resources to the diverse
  - population of landowners in the region
  - the effectiveness of existing resources, and
  - creating greater awareness of their availability to improve the design and delivery of these resources and tools over time;



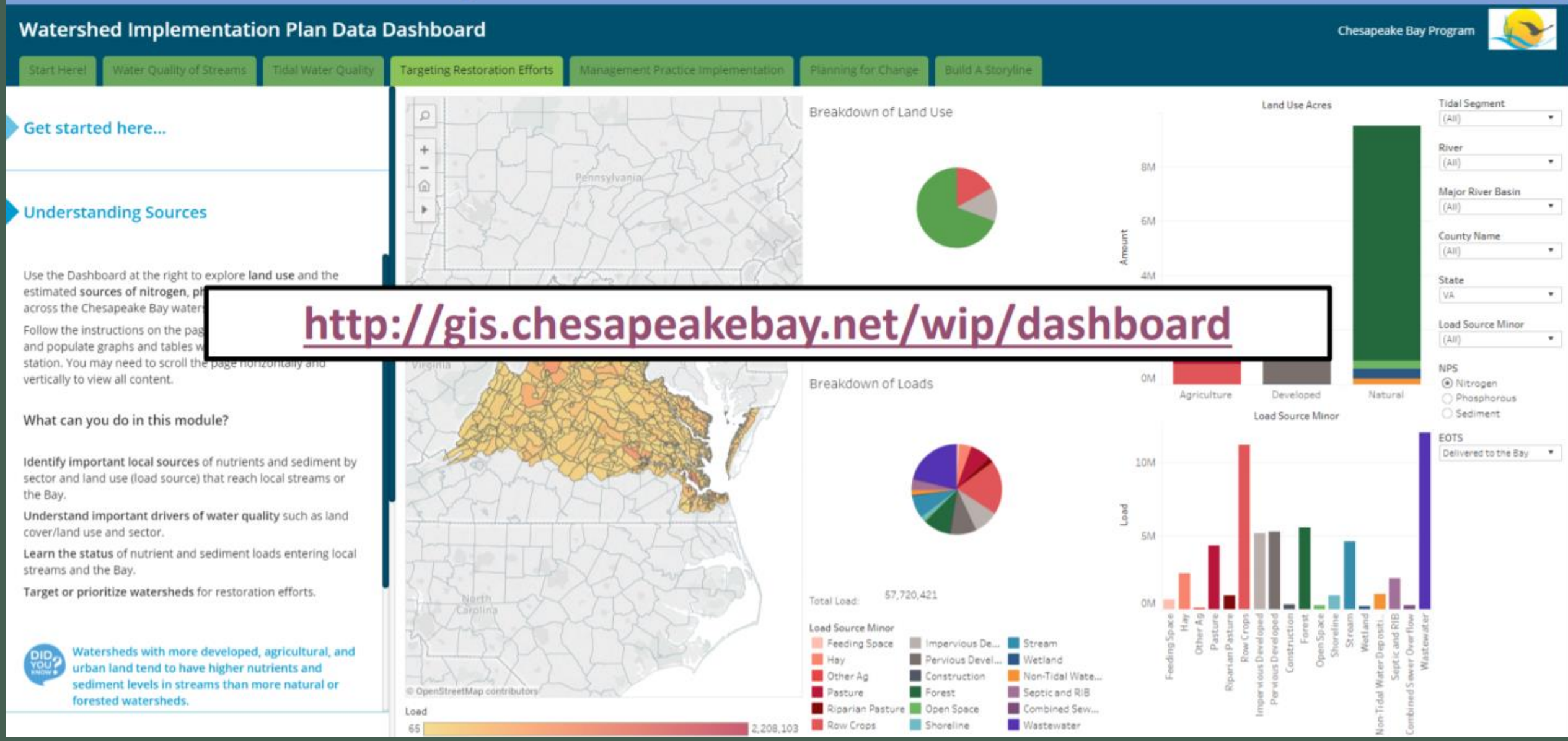
Chesapeake Bay

Phase 6 land use viewer



http://data-chesbay.opendata.arcgis.com/

Watershed Implementation Plan Data Dashboard



http://gis.chesapeakebay.net/wip/dashboard

Thank you!!

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