Science-Based Approaches and Tools for Targeting Chesapeake Resources

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and Ken Hyer
USGS and CBP

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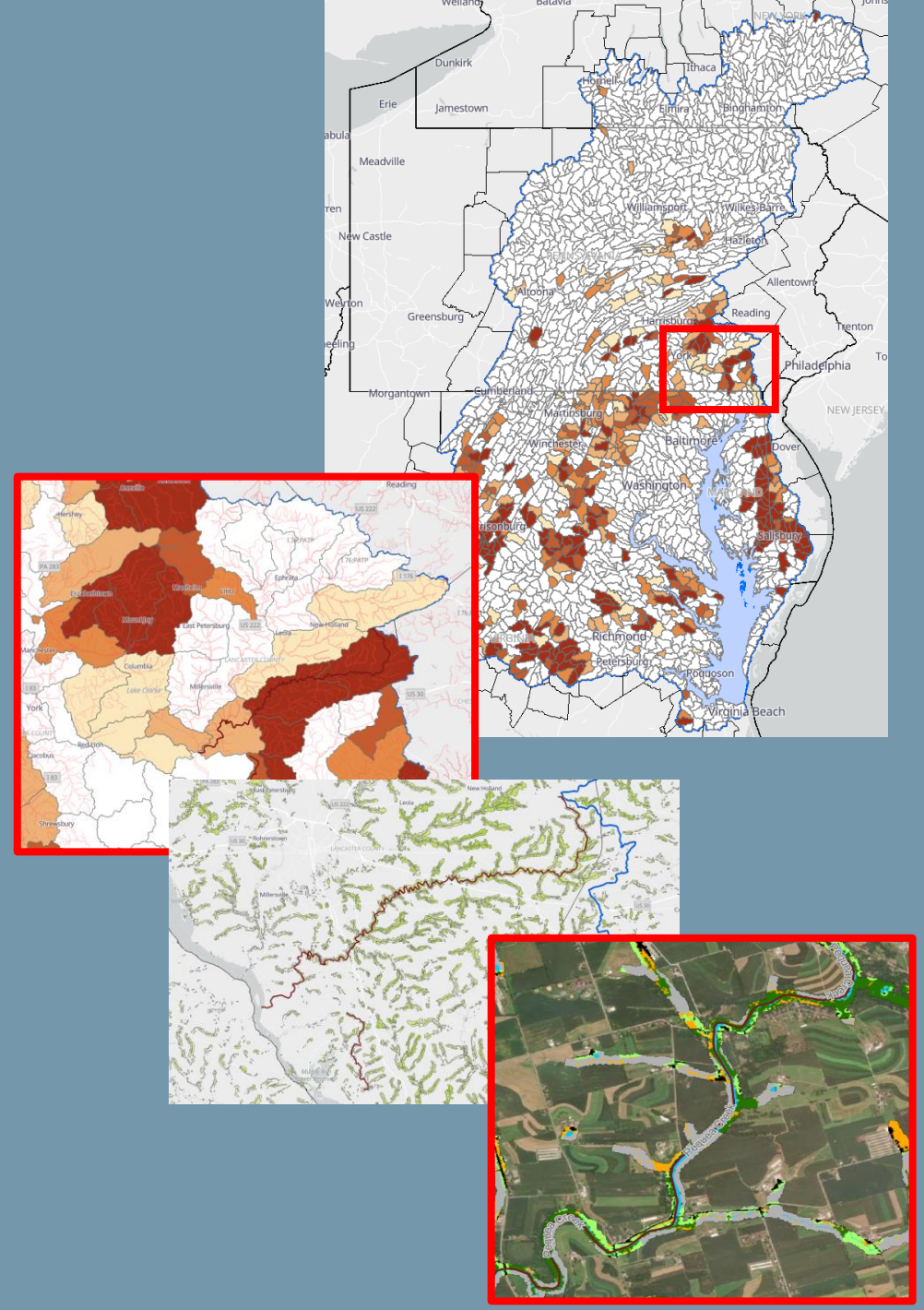
Purpose of Today's Presentation

- Inform MB of approach and tools for targeting resources
- Provide examples for achieving multiple CBP outcomes
- Feedback on next steps



Targeting Resources: Benefits to People, Wildlife, and Habitats

Current Approach

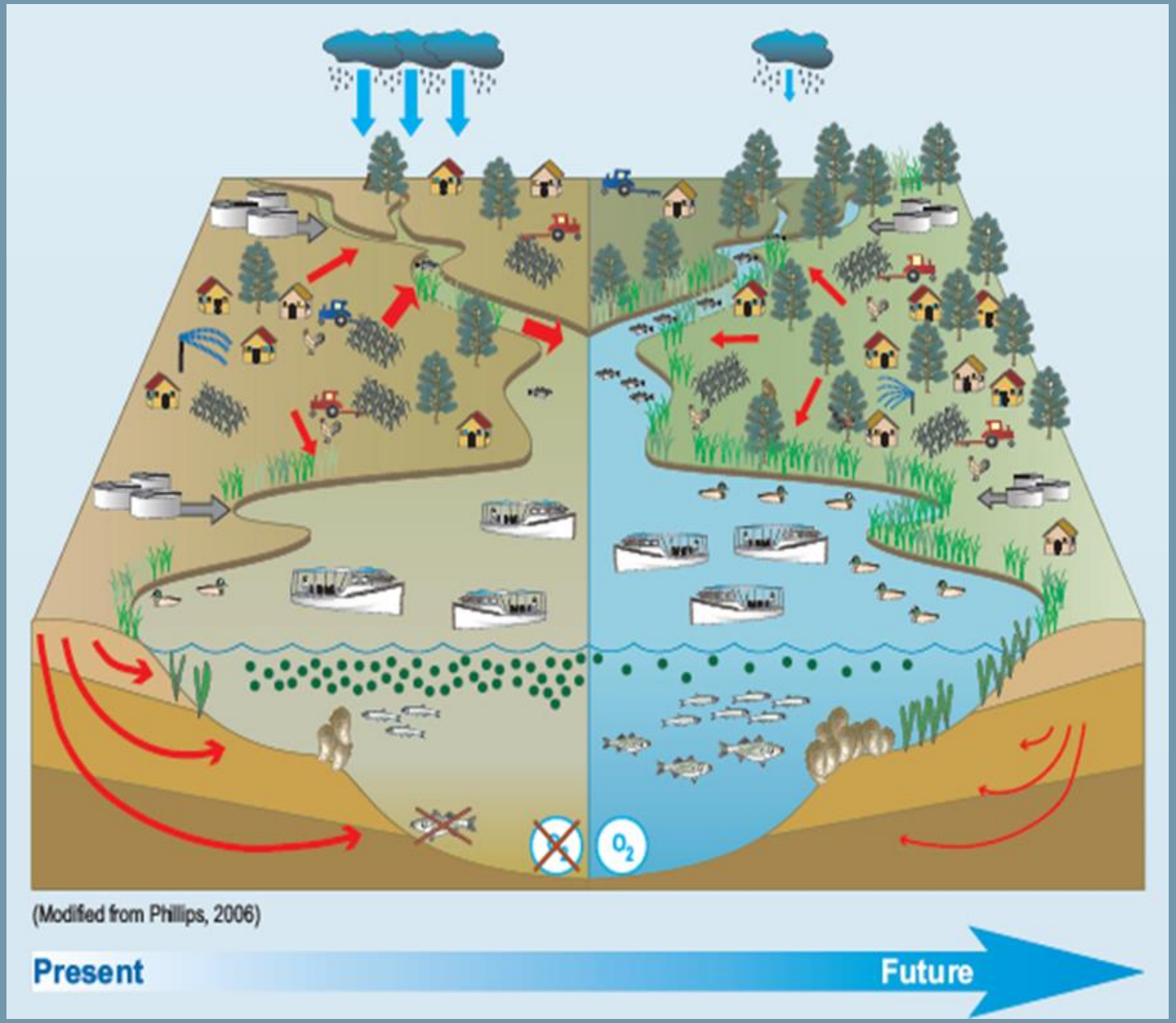
- Nutrient reduction
- TMDL: behind schedule for 2025

Increase emphasis on people, wildlife, and habitats

- More return on WQ investments
- Achieve multiple CBP outcomes
- Promote local benefits

Targeting

- Places
- Programs
- Web Hub



Now is the Time to Address Multiple Outcomes

- Accelerate progress to meet 2025 deadlines:
  - Water-quality practices
  - Lagging CBP outcomes
  - More emphases on climate resiliency and diversity

- New Funding Opportunities
  - $1.2B federal and state existing funding
  - Infrastructure Law and other federal programs
  - State and local govt. programs
  - NGOs and private capital

- Growing interest from stakeholders
  - Federal and state agencies, CBC, local governments, NGOs
  - Expand their tools and resources

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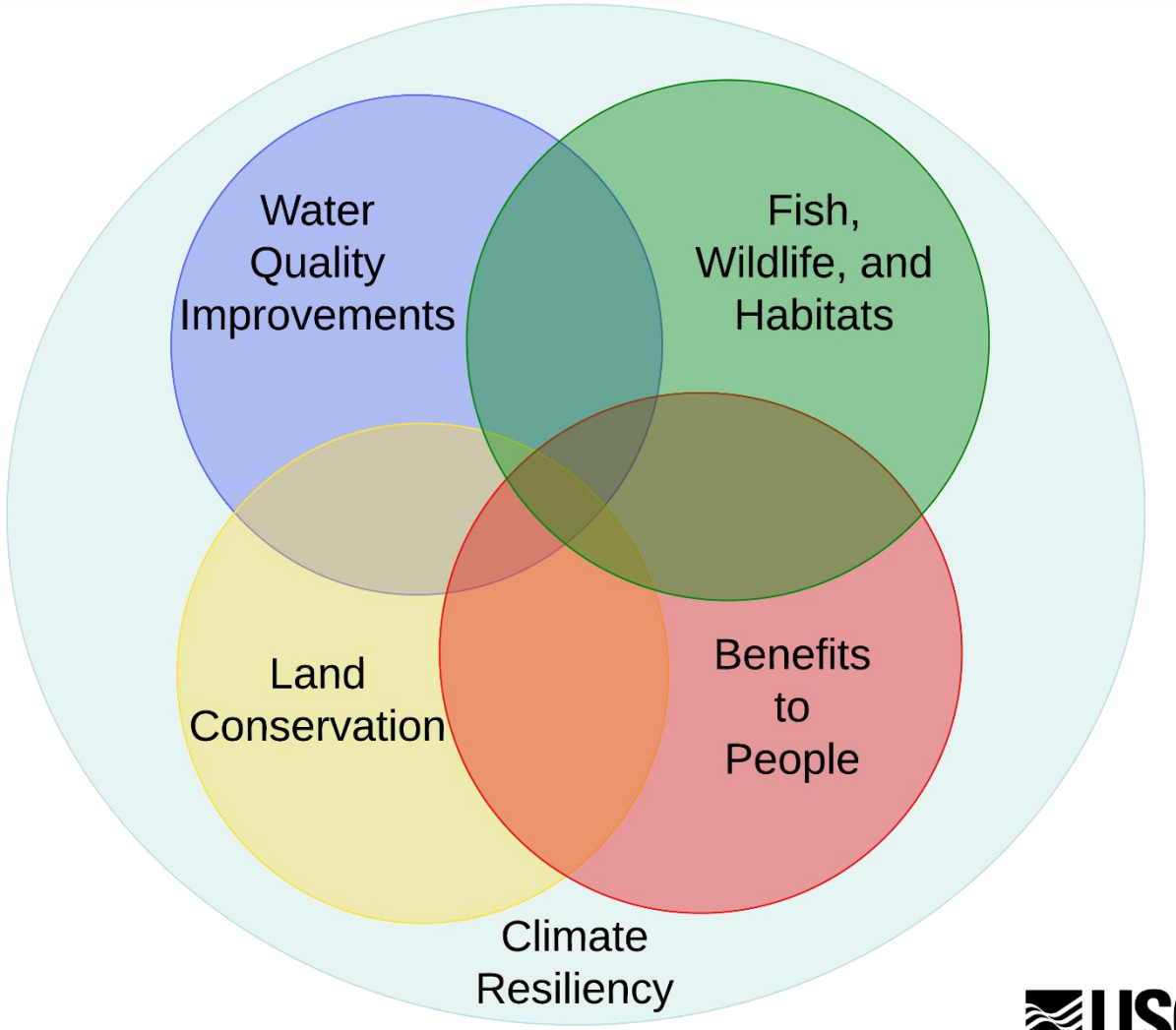
Science Approach for Targeting Resources



- Organize around topics:
  - Water-quality improvements
  - Fish, wildlife, and habitat
  - Land conservation
  - Benefits to people
  - Improve climate resiliency
- Strive for multiple benefits
- Build from existing tools & stakeholder programs
- USGS, EPA, Chesapeake Conservancy, & NOAA

Federal

States and DC

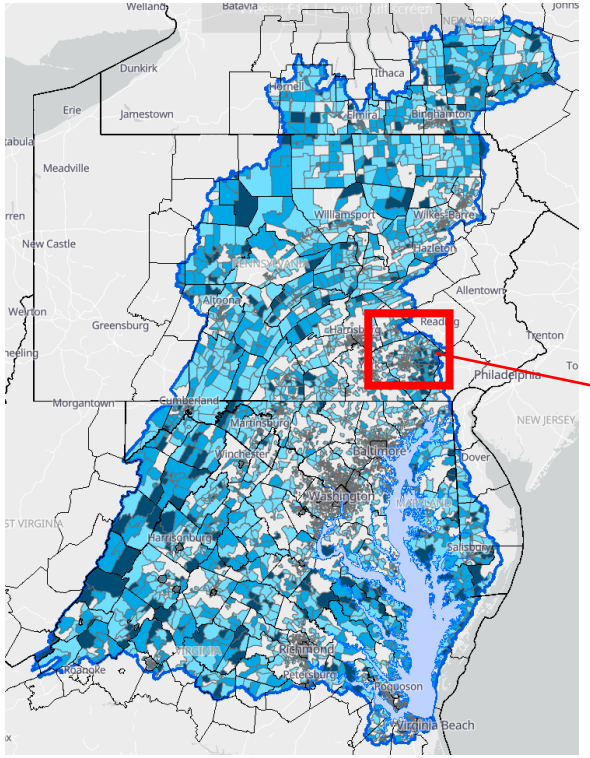
Local Govt., NGOs

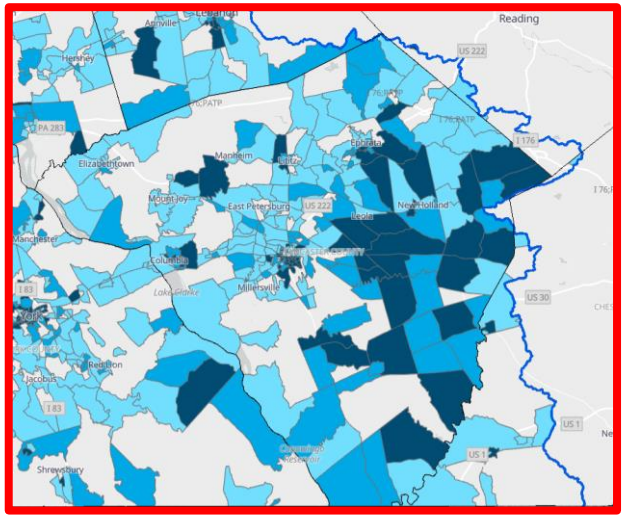
Multiple Outcomes

-Expand existing efforts

-New places

-Additional funding

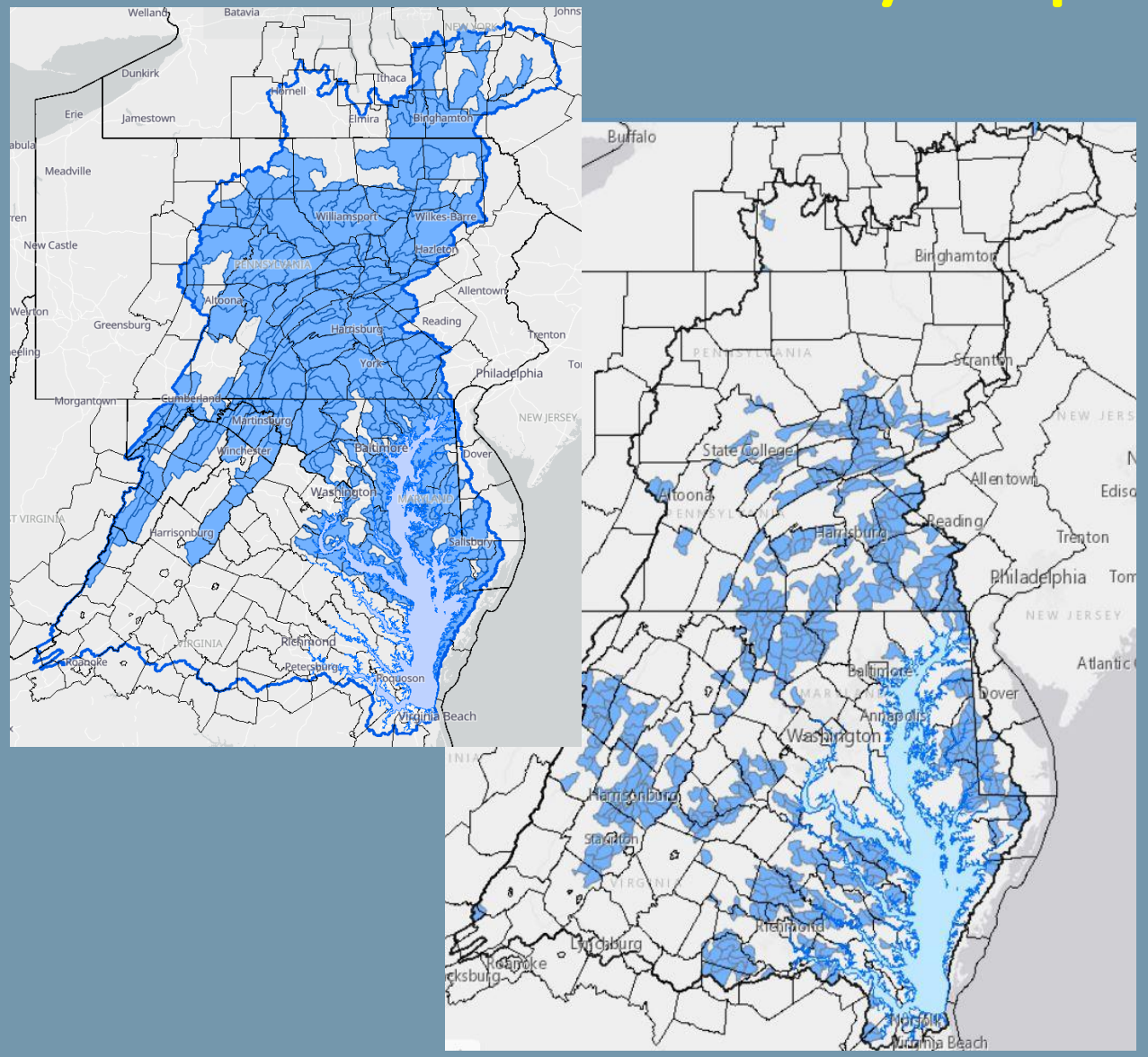




Water-Quality Improvements

Need

- Accelerate implementation
- Tidal waters improvements
- Local WQ benefits
- Address other CBP outcomes
- Increase climate resiliency and DEIJ



Existing Tools

- Most effective basins
- Ag priority watersheds
- Watershed dashboard
- CAST

Opportunities

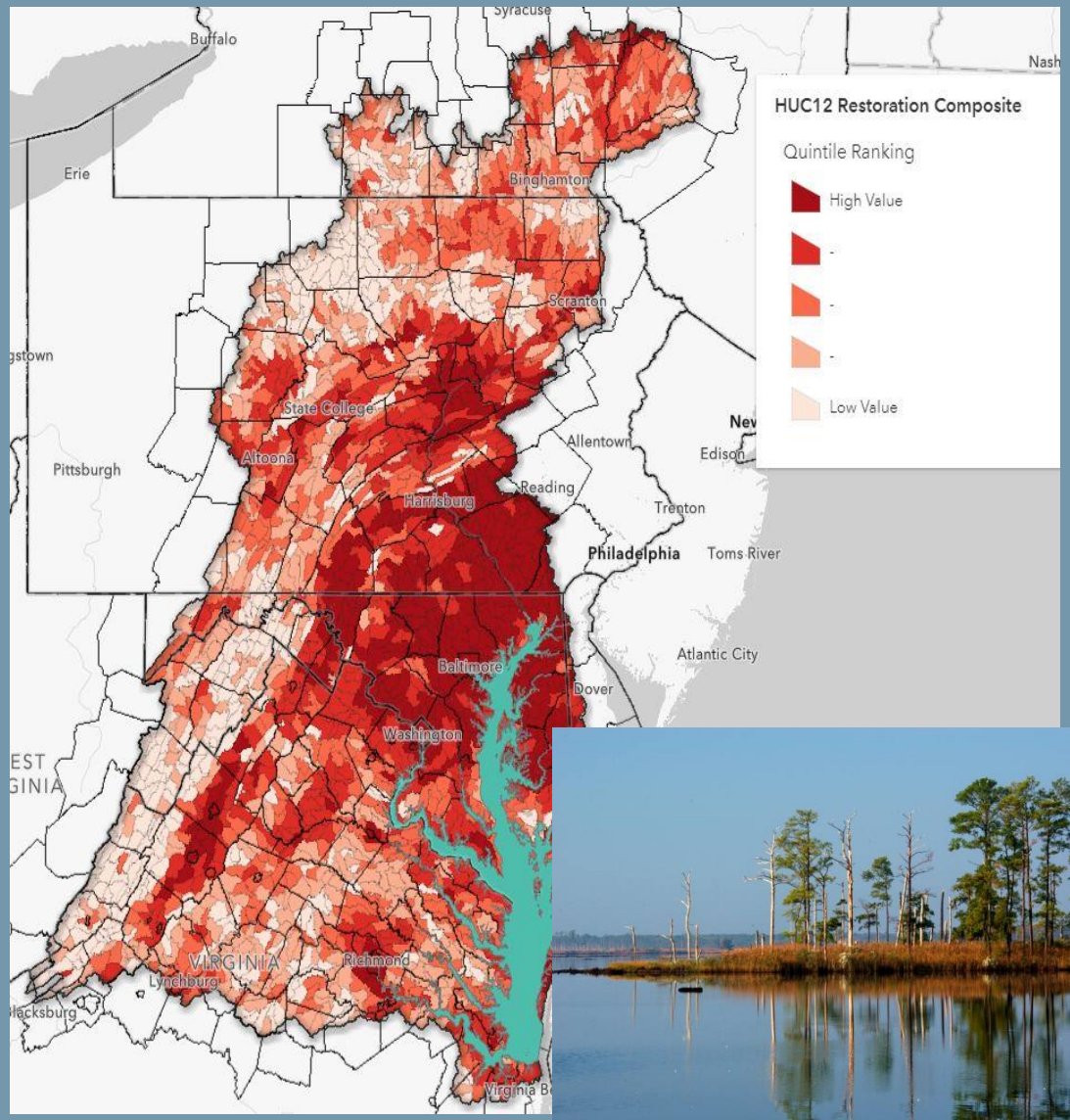
- Infrastructure funds
- NRCS and ag programs

- Benefits to other CBP outcomes
- Ecosystem services for selected BMPs

Fish, Wildlife, and Habitat

Needs

- Accelerate buffers and wetlands
- Connect WQ, habitat, and fisheries
- More habitat information



Existing Tools

- NFWF tools
- Cross-Outcome Mapping

Opportunities

- Expanded NFWF programs
- USFWS Chesapeake WILD
- New habitat data for coasts and watershed

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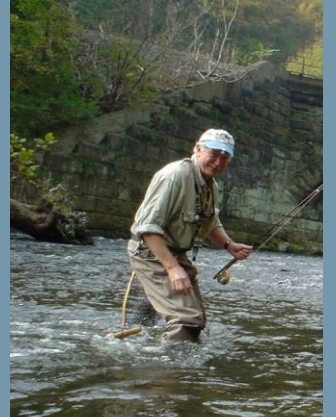
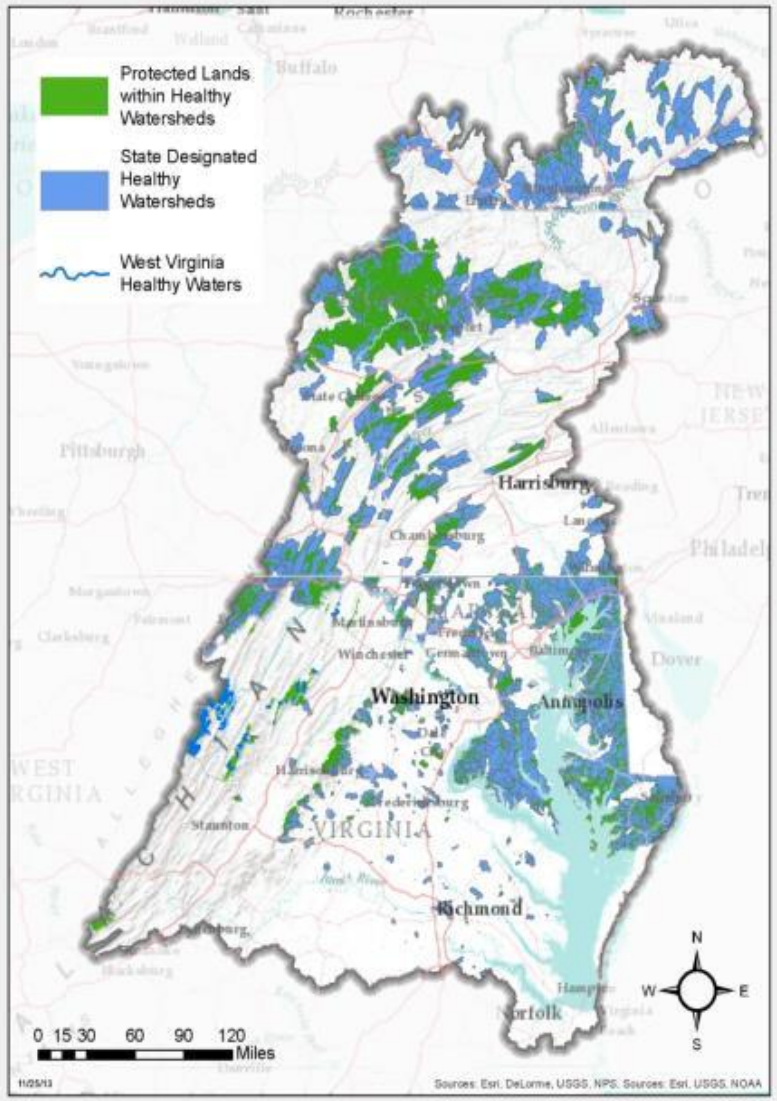
Land Conservation





Need

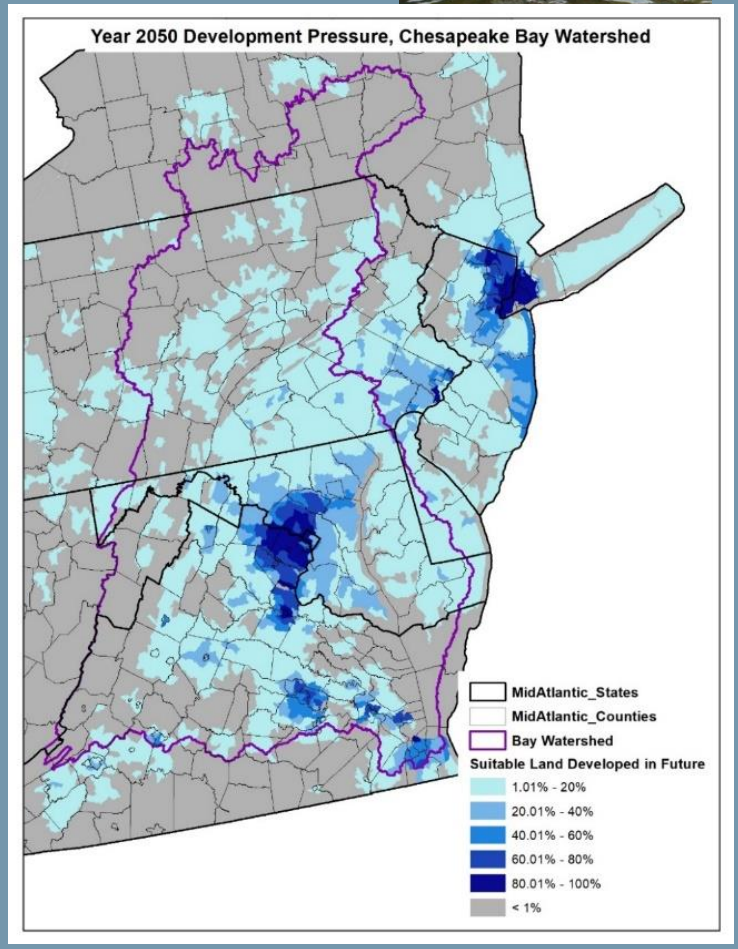
- Increase land protection
- Support local decisions

Existing Tools

- CCP Conservation Atlas
- Healthy Watershed Assessment
- Land-change model

Opportunities

- America the Beautiful
- High-resolution land data



Benefits to People

Need

- Increase stewardship & public access
- Focus on underserved communities
- Benefits to local govts

Existing Tools

- Conservation Atlas
- Chesapeake Diversity Dashboard

Opportunities

- New funding for underserved communities
- Climate resiliency programs

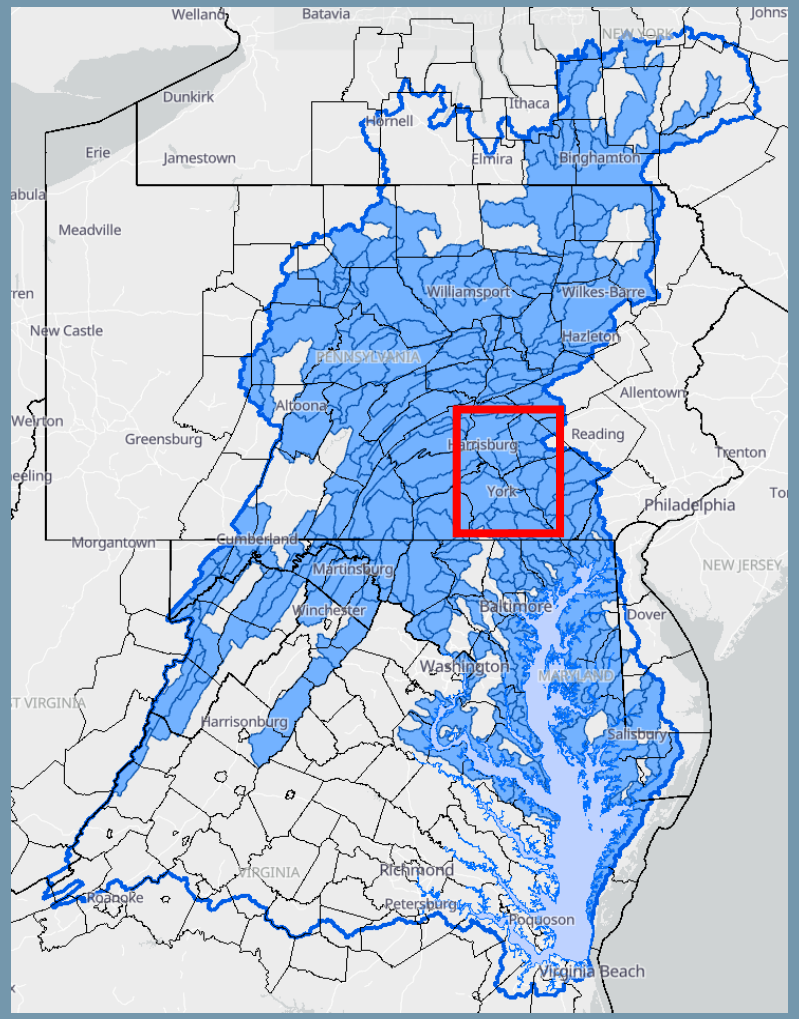
Management Questions and Examples

- Web Hub of tools for multiple outcomes
- Where can additional CBP outcomes for habitats and people be achieved in the Most Effective Basins?
  - Example: Lancaster County
- How can multiple CBP outcomes be considered by several programs?
  - Example: Middle Peninsula of VA
- Where can conservation activities achieve CBP outcomes for healthy watersheds, land protection, and habitat?

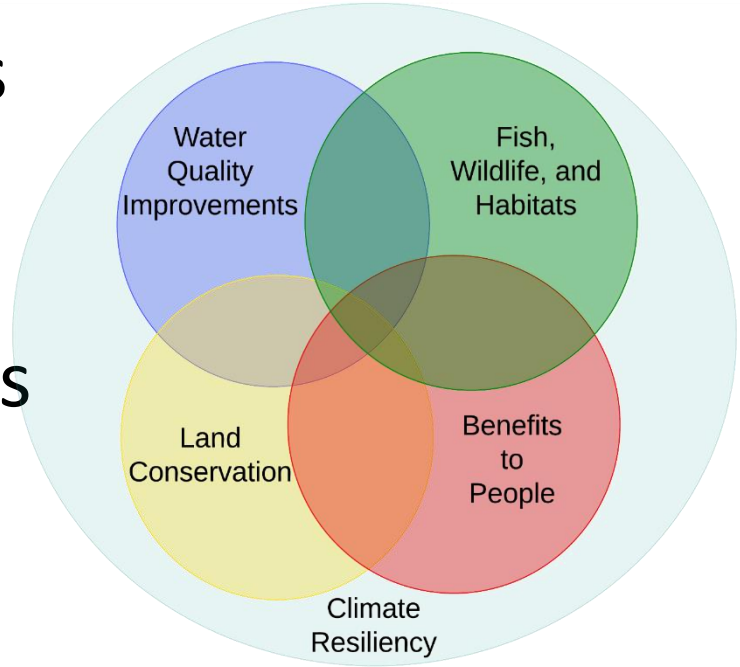
North America's Largest Estuary

Management Question:

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



- Example Application: Lancaster County
- Multiple outcomes
- Tools & integrating maps
- Programs



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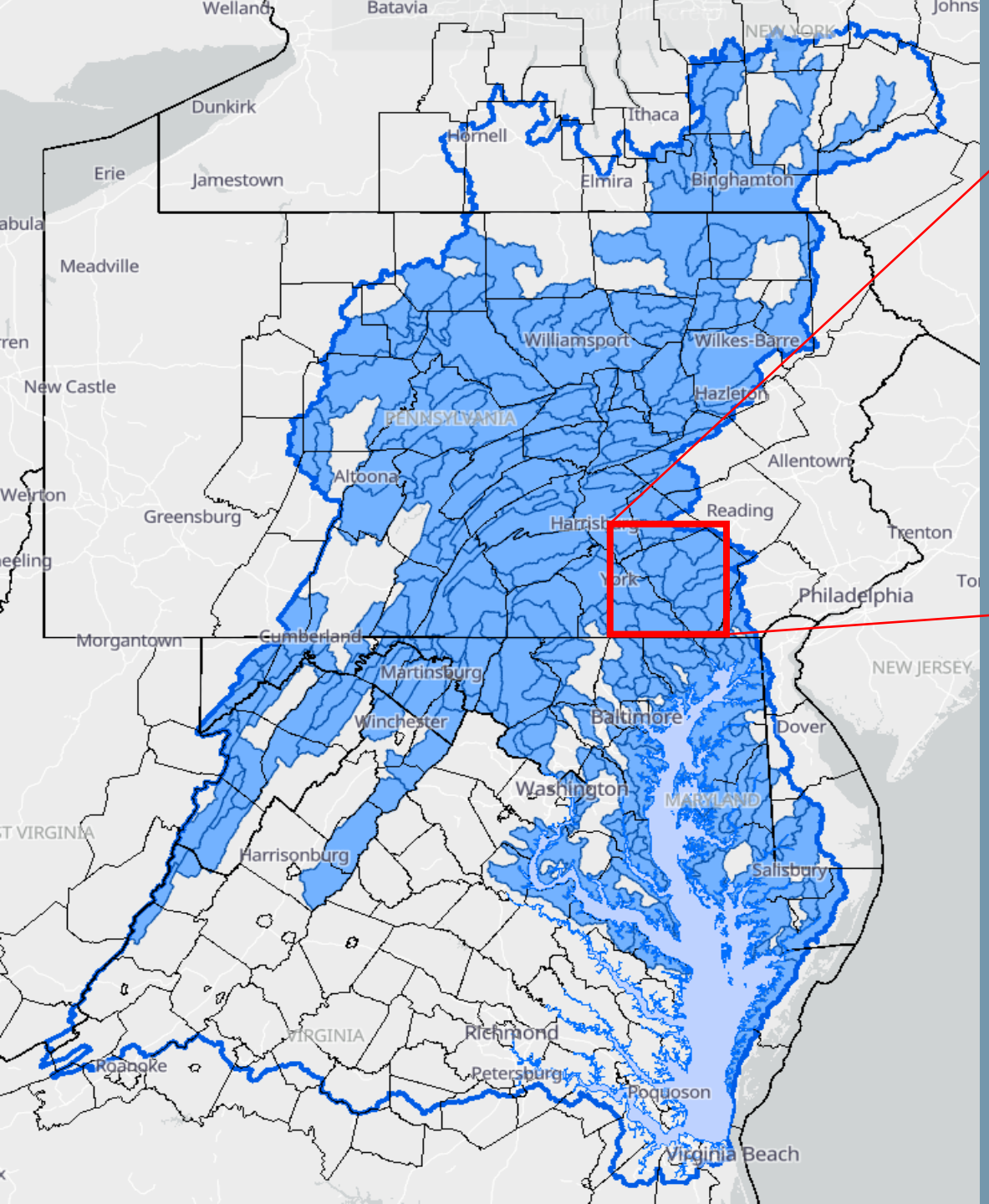
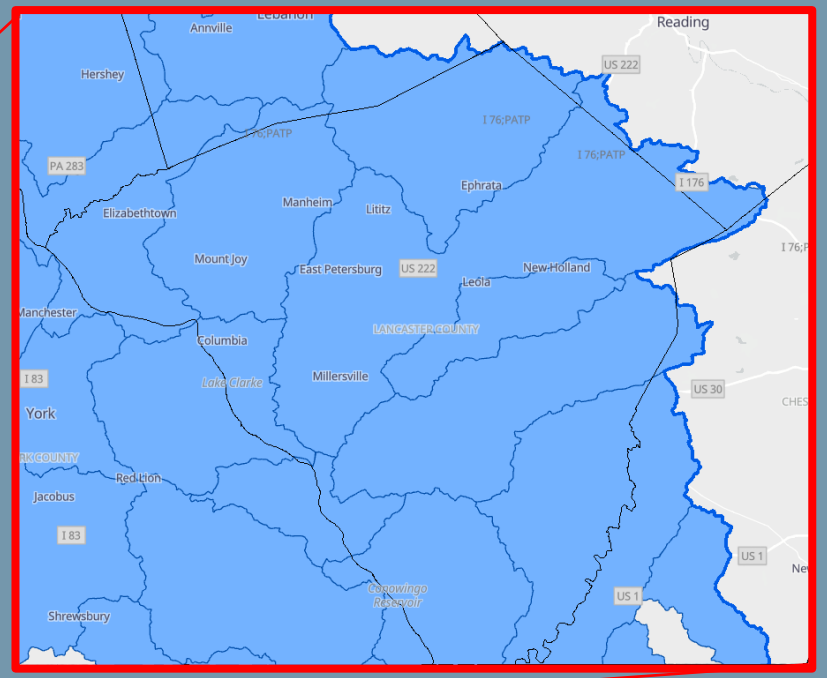


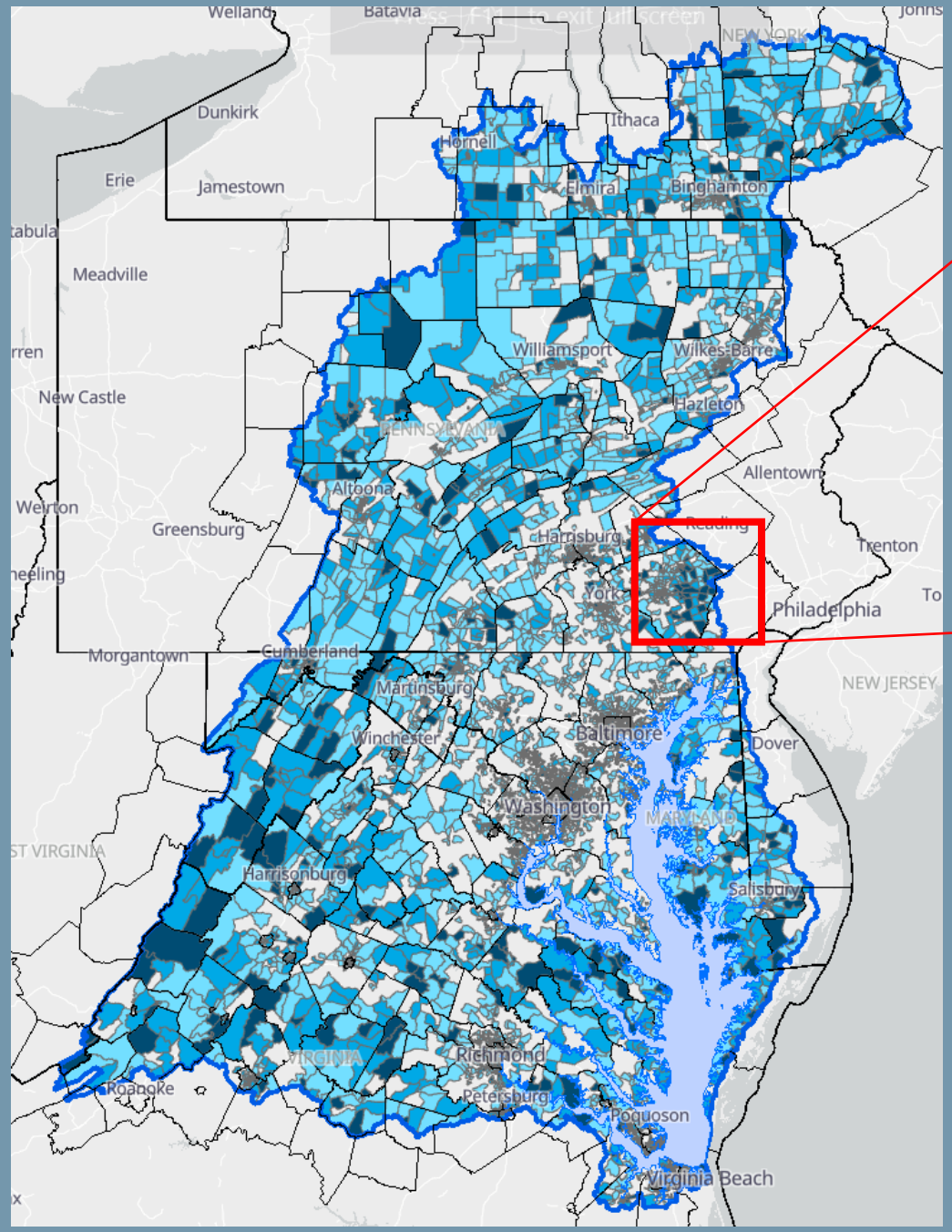


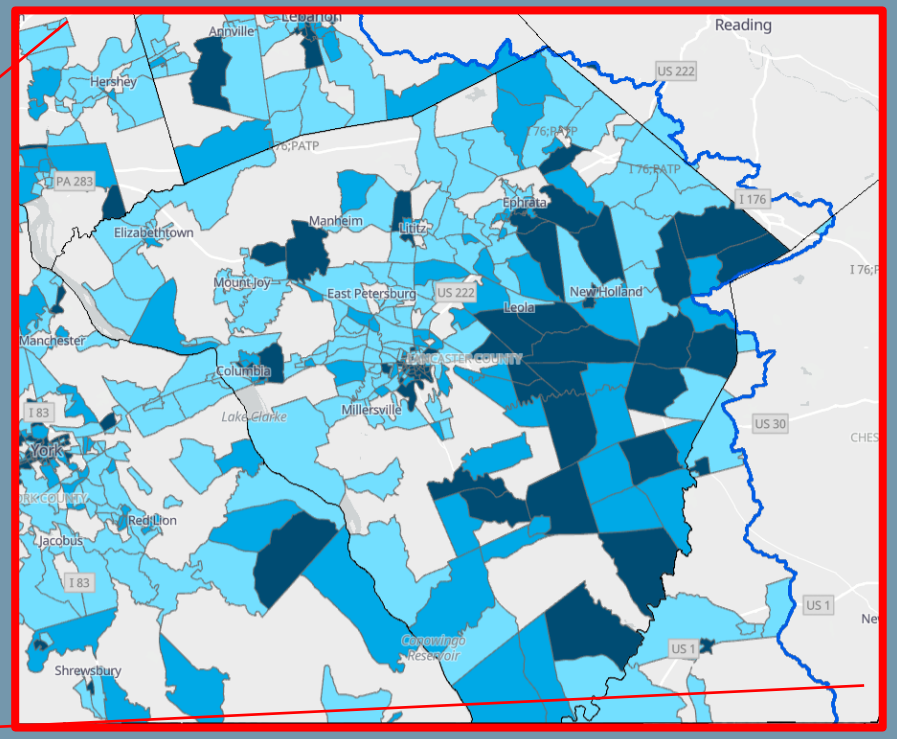
2 CBP Outcomes

- Bay TMDL & Standards Attainment

Tool: Most Effective Basin Map

Programs: EPA CBP Grants & State Programs



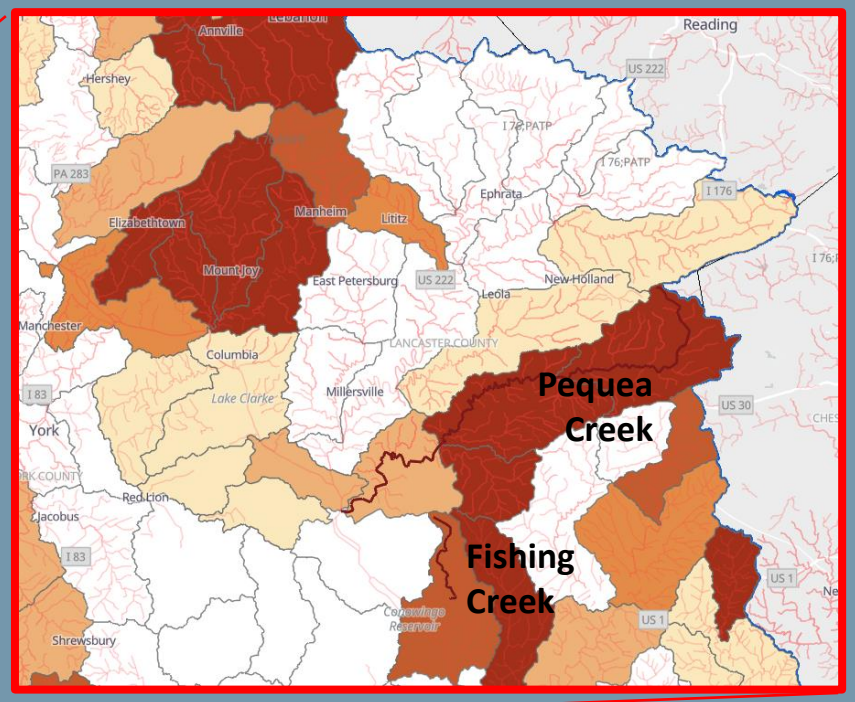


3 CBP Outcomes

- Bay TMDL & Standards Attainment
- *Diversity*

Tools: MEB + *Disadvantaged communities*

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

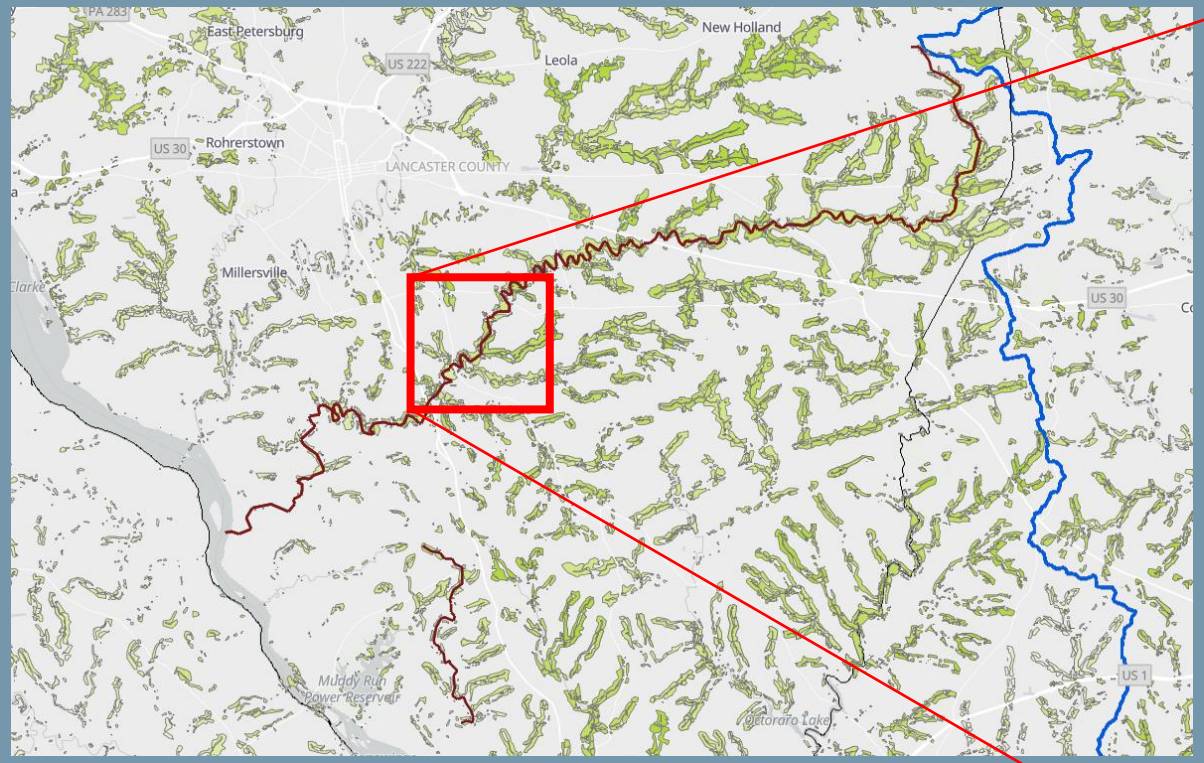


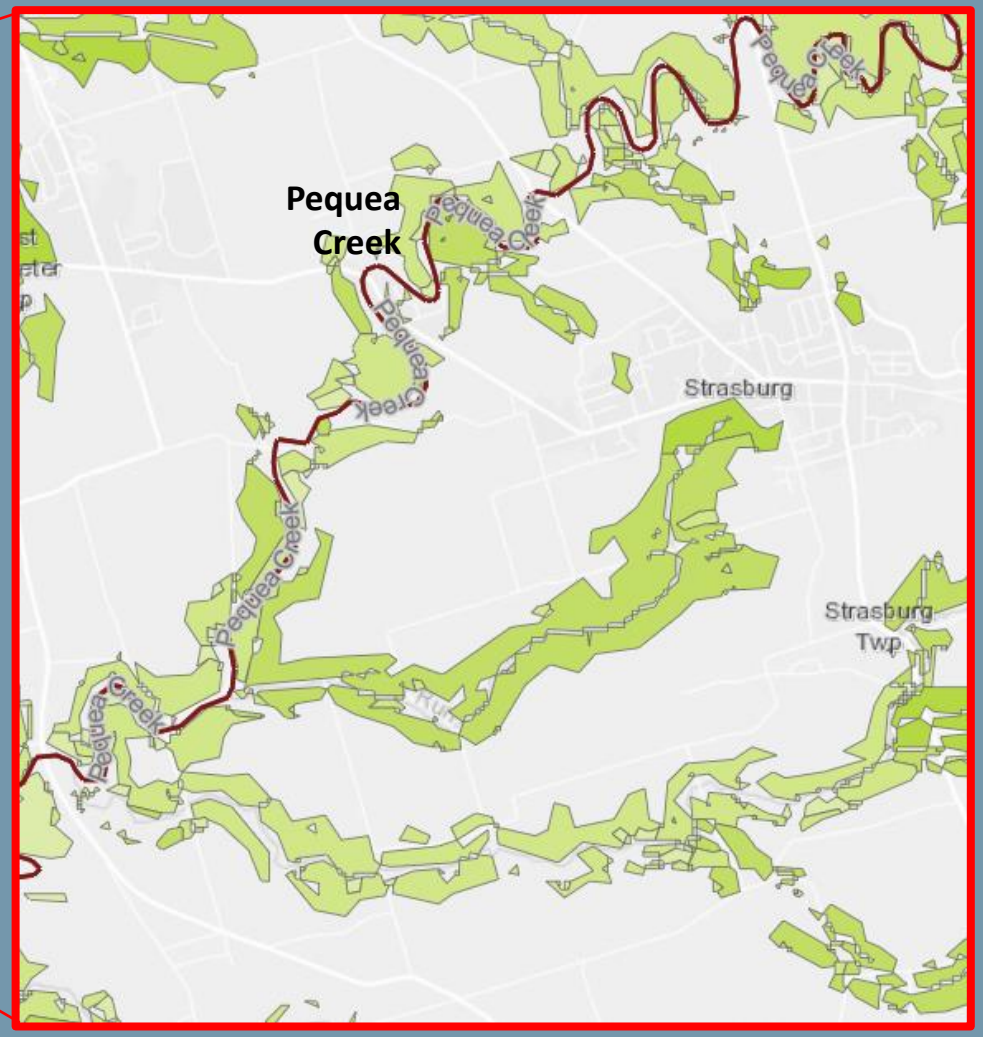
4 CBP Outcomes

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

Tools: *+ Ag Priority Watersheds*

Programs: – EPA, States *+NRCS Programs*





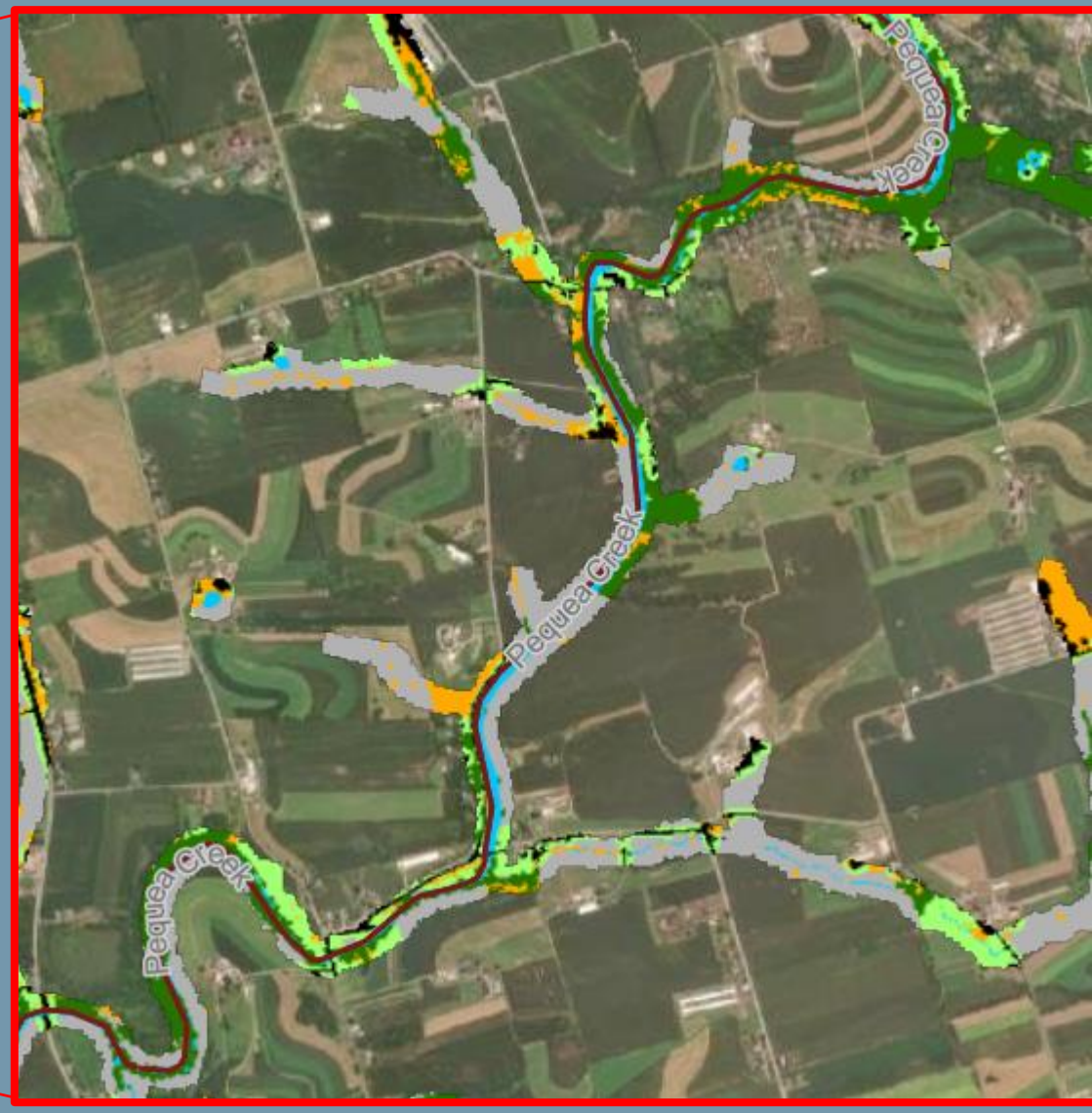
5 CBP Outcomes

- Bay TMDL & Standards Attainment
- Diversity
- Stream condition
- *Forest buffers*

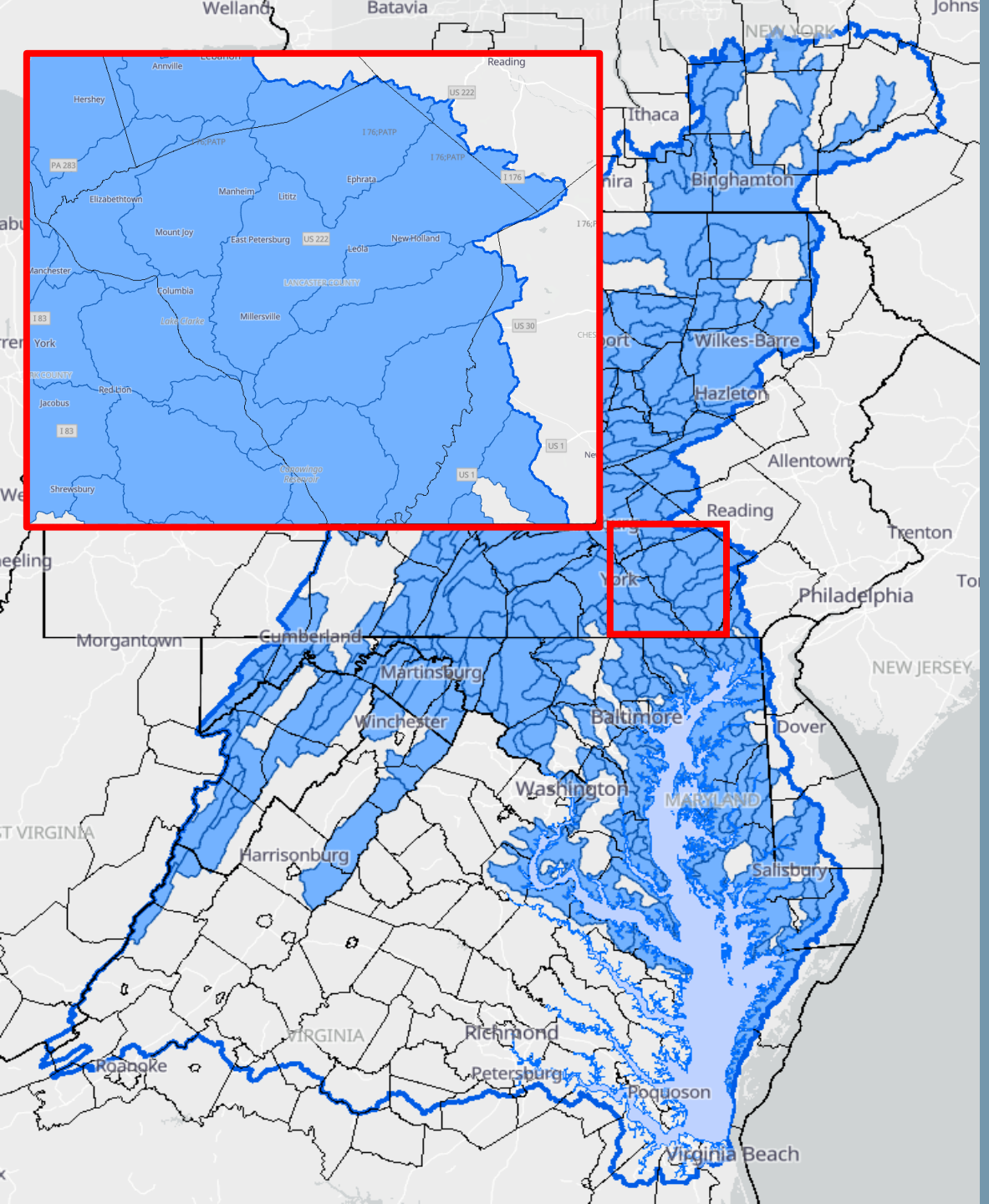
Tools: *+ Forest buffers*

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

Current land cover:
30 meters



New High-Resolution
Land Data



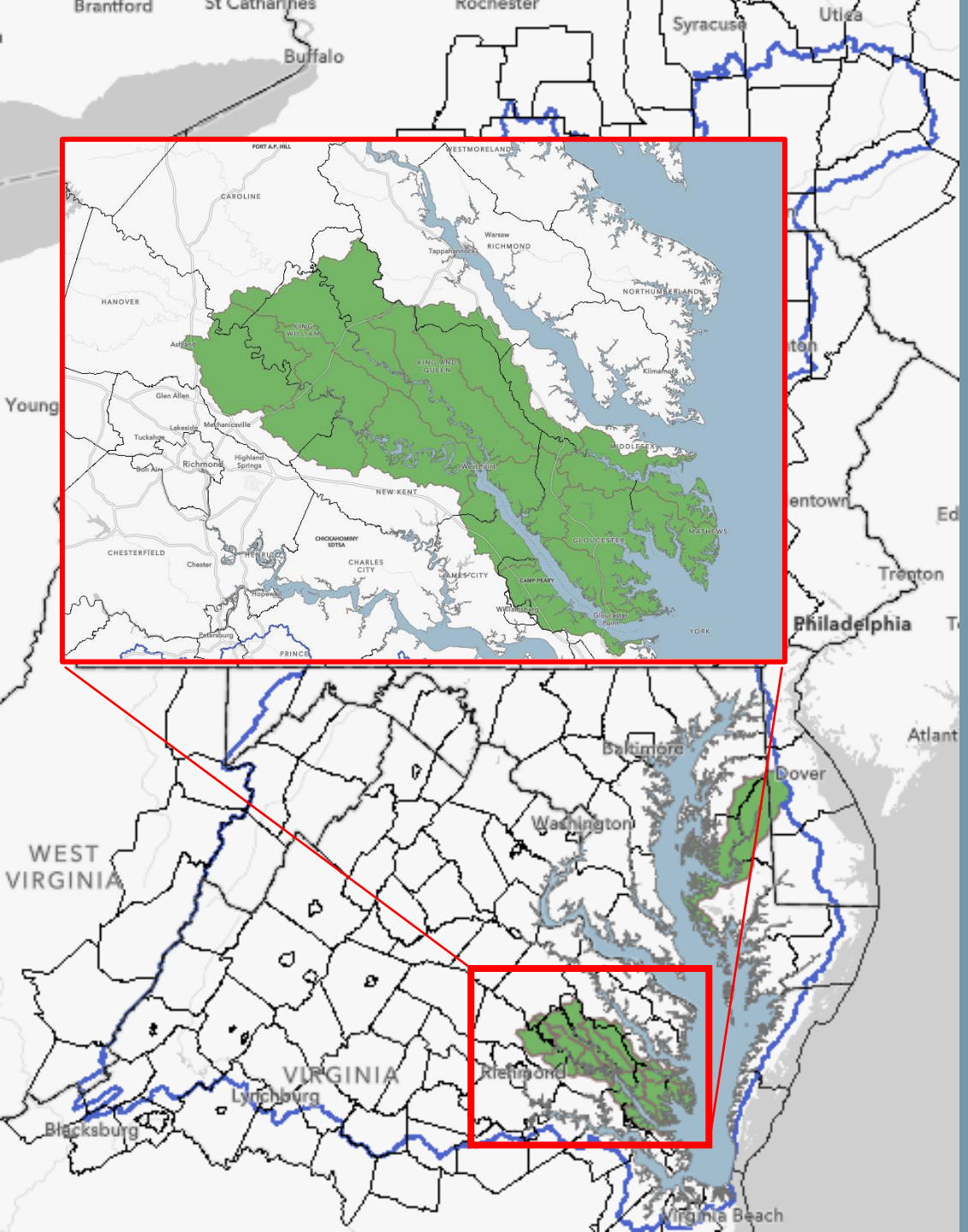
Lancaster Opportunities

CBP Outcomes: Multiple benefits for WQ, Habitat, and People

Opportunities

Demonstrate how resources can be targeted through multiple programs

- *What other outcomes would you like considered?*
- *What other programs could be included?*
- *What other information would help?*



Management Question:

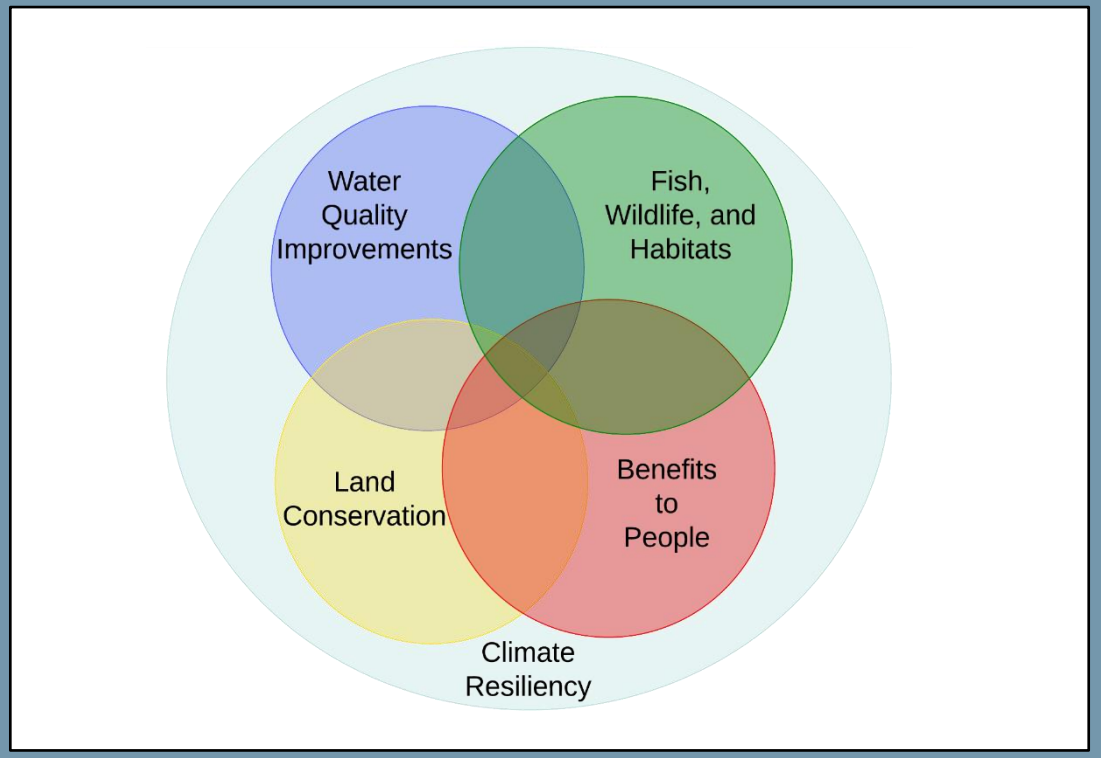
How can multiple CBP outcomes be considered by several programs?

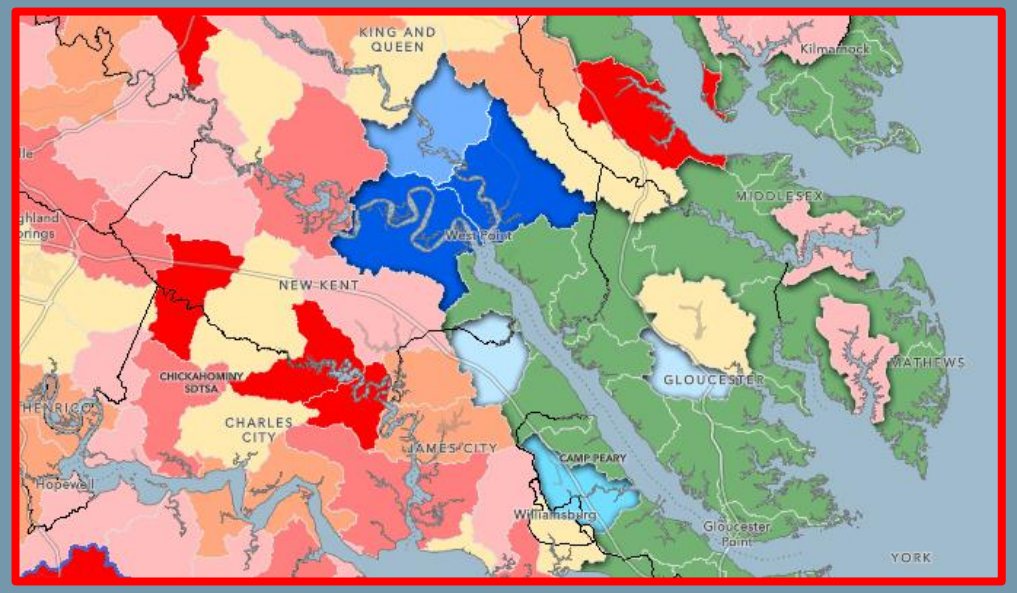
Example: Middle Peninsula, VA

Potential Programs:

- NOAA Habitat Blueprint
- USCOE Comprehensive Plan
- NFWF Business Plan
- America the Beautiful

CBP outcomes: Wildlife/habitat, Conservation, WQ, People, and Climate



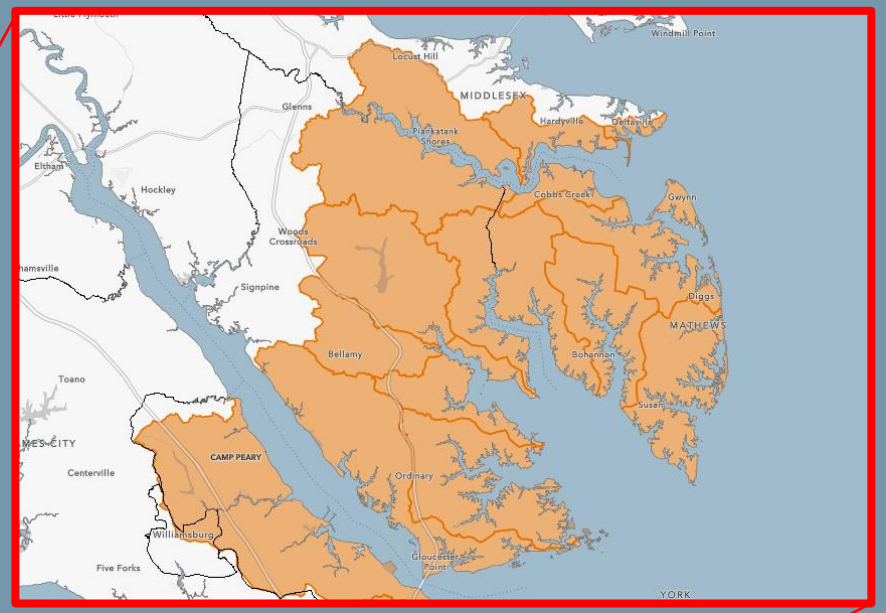


Habitat and Fisheries Outcomes:

- Black Duck, Wetlands, Fish Passage, Fish Habitat

Tools: Watershed Resources Registry, Fish Passage Prioritization Tool, ACJV Black Duck Viewer, NFHAP

Programs: Atlantic Coast Joint Venture, NOAA Habitat blueprint, NFWF

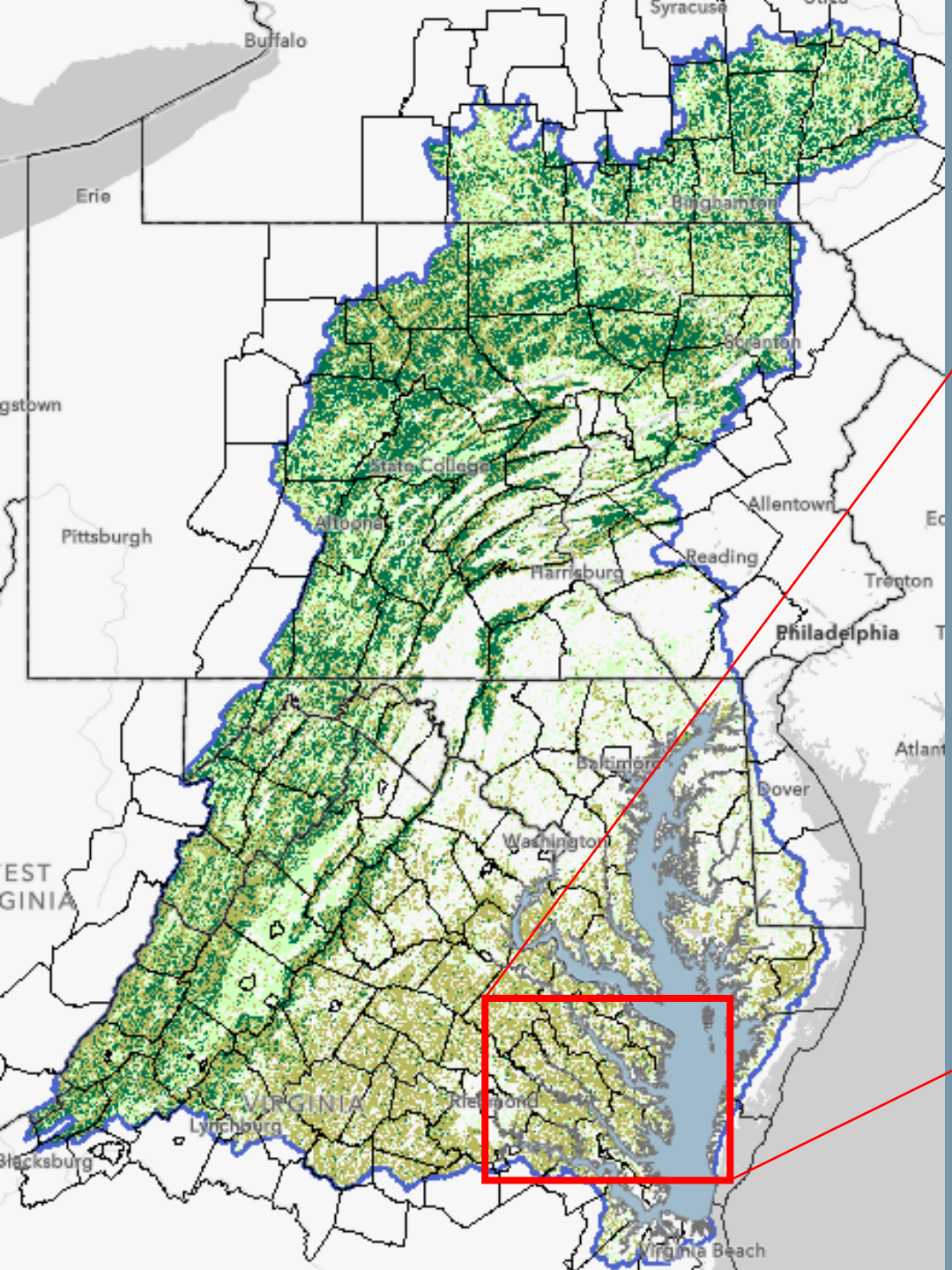


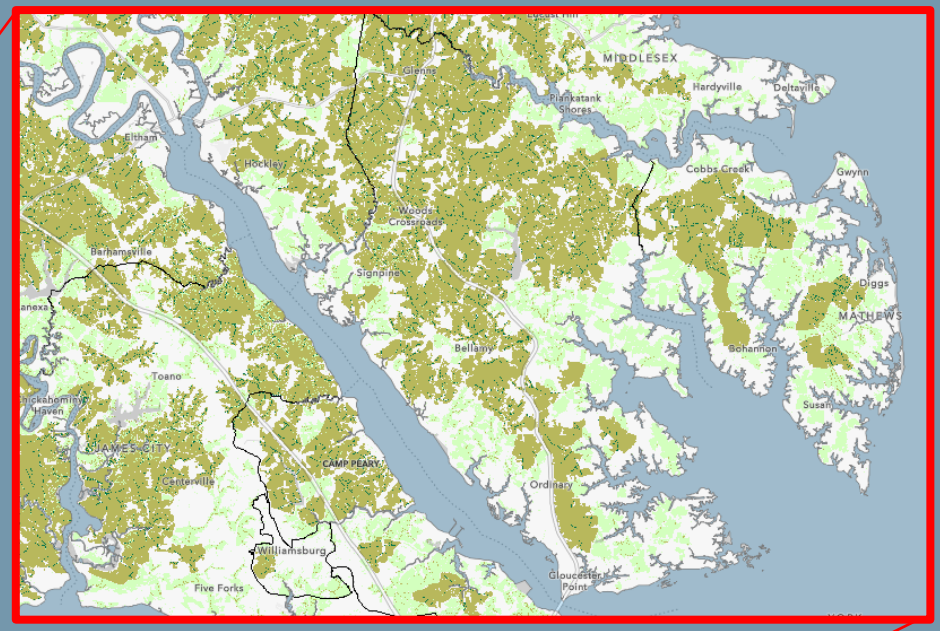
Water-Quality Outcomes:

- WIP 2025, WQ Attainment, Toxic Contaminants

Tools: NFWF Business Plan 2018/CAST; Ag priority watersheds, PCB maps

Programs: NFWF, NRCS, EPA State Grants,



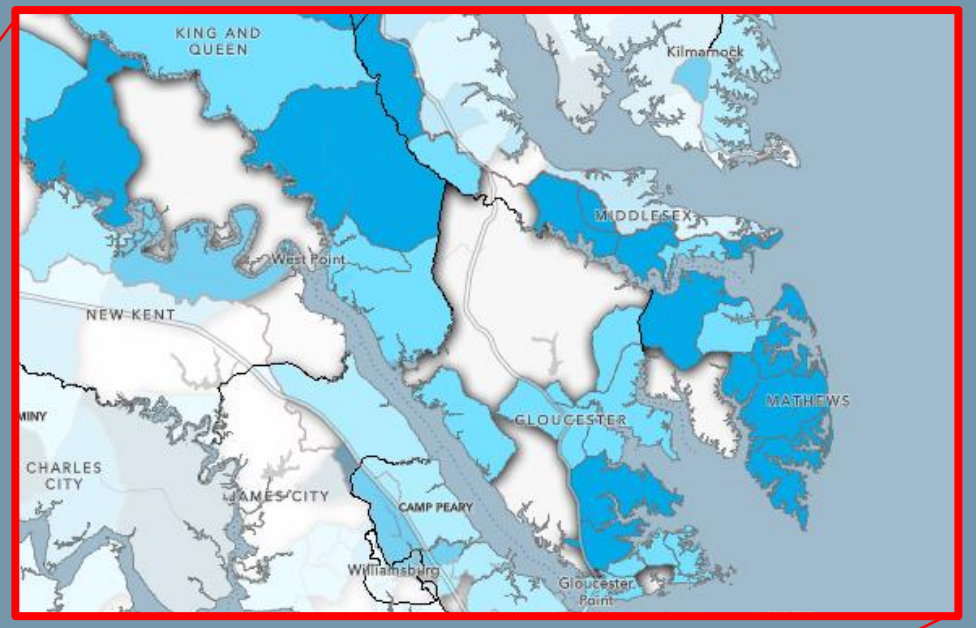


Conservation Outcomes

- Land protection, healthy watersheds

Tools: CCP Forests, Habitat, Farmland, Heritage and Public Health Models, Public Access

Programs: Chesapeake Conservation Partnership: federal, state, and NGO programs. America the Beautiful

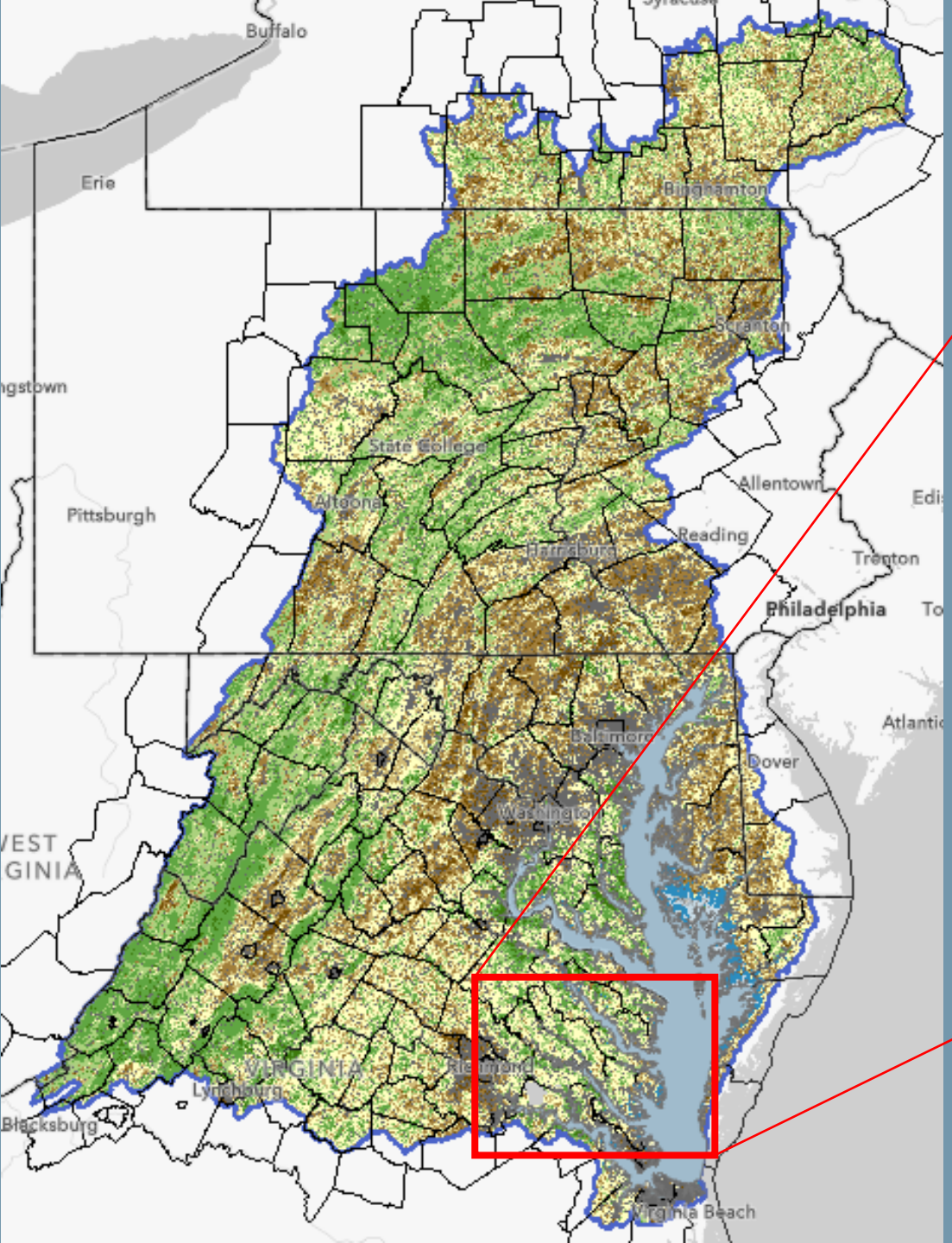


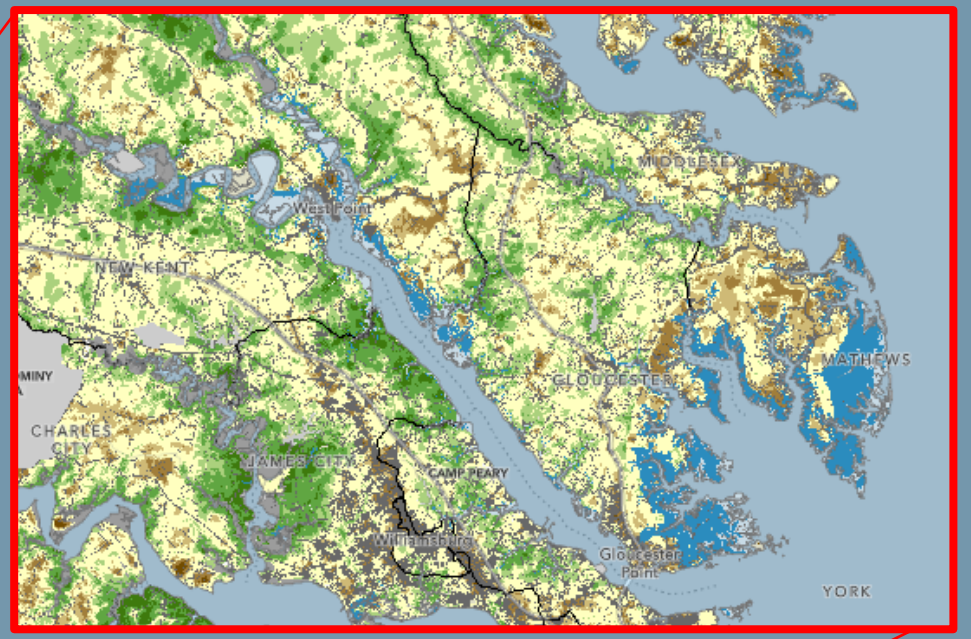
Benefits to People Outcomes:

- Diversity, Public Access

Tools: Environmental Justice and Equity Dashboard, ELit Tool, Ecosystem Services, Public Access, Organizational Capacity

Programs: Multiple programs for disadvantaged communities





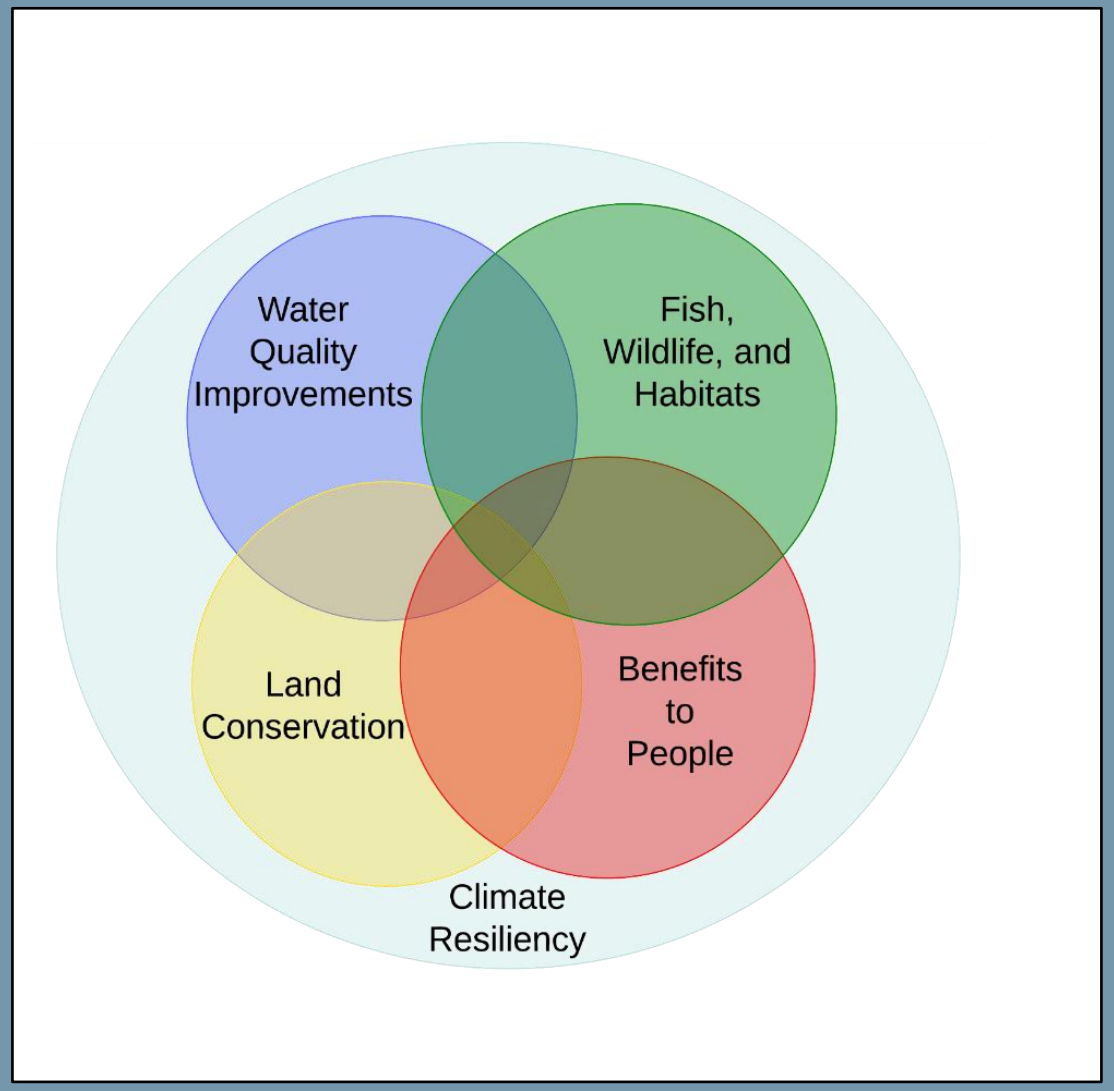
Climate Resiliency Outcomes

- Adaptation

Tools: TNC Resilient Sites, NOAA Sea Level Rise Viewer, National Flood Hazard Layer, Urban Heat Island Mapping

Programs: Infrastructure Law, State Local Programs

Middle Peninsula Opportunities



CBP Outcomes: Multiple outcomes for Habitat/Fisheries, WQ, Conservation, People, and Climate Resiliency

Opportunities

Demonstrate how resources can be targeted through multiple programs

- *What other outcomes would you like considered?*
- *What other programs could be included?*
- *What other information would help?*

Next Steps for Targeting Effort

- CBP interaction
  - GITs: stakeholder interaction
  - MB and PSC: Agencies involved in funding and polices
  - NGOs and local governments
- Short-term actions
  - Web Hub
  - 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

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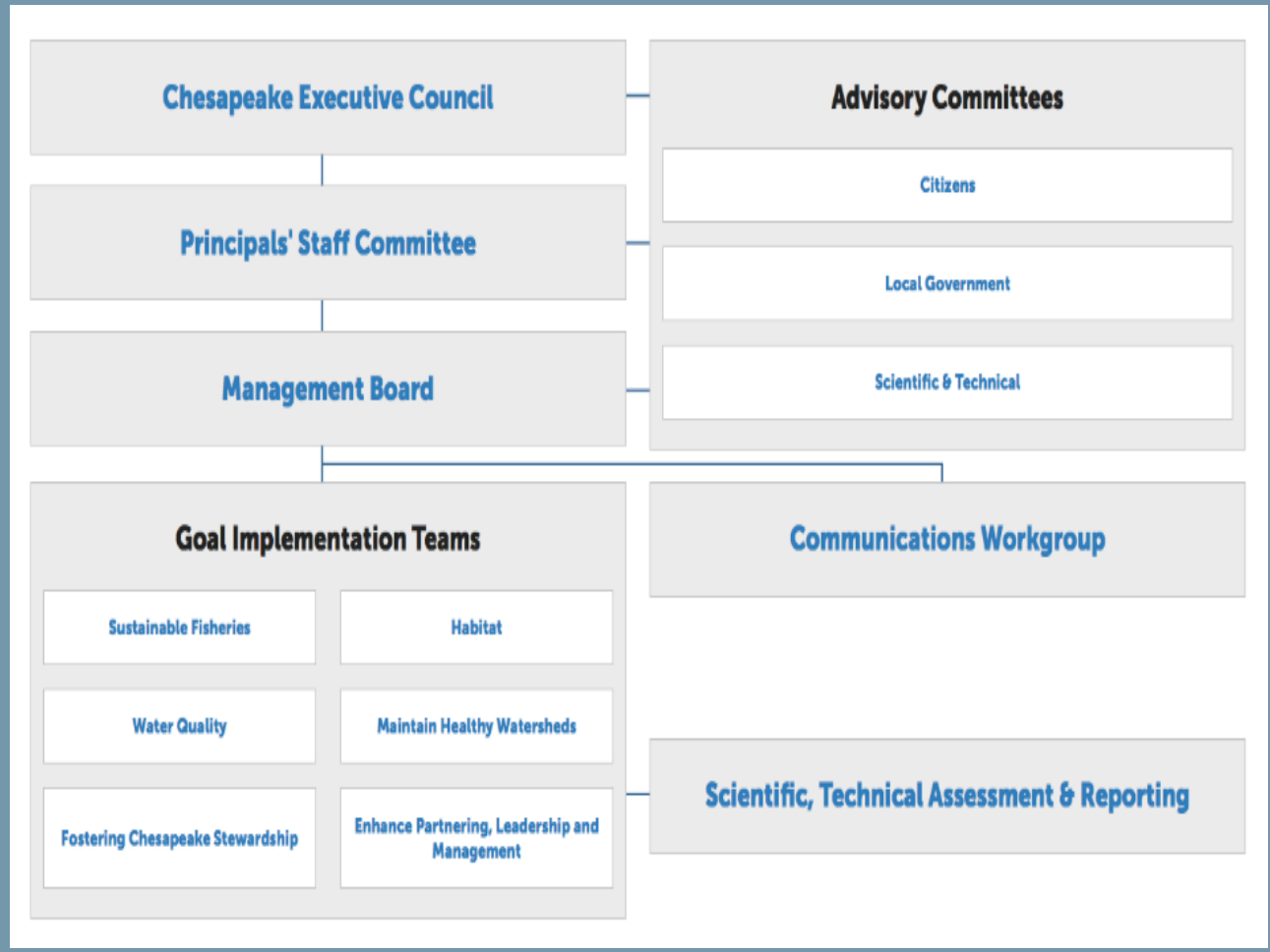

Discussion Questions

Q1: What are some of the highest priority, multi-outcome management questions your jurisdiction or agency are considering?

Q2: How does your agency or jurisdiction envision using the tools for targeting resources for multiple CBP outcomes?

Q3: What would help your agency or jurisdiction with targeting efforts for multiple CBP outcomes?

Q4: What future improvements would your jurisdiction or agency like to be considered for the WebHub or targeting efforts?

Answer using mentimeter

Contacts and More Information

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Contacts

- John Wolf, USGS and CBP GIT Leader jwolf@chesapeakebay.net
- Scott Phillips, USGS Chesapeake Bay Coordinator swphilli@usgs.gov
- Ken Hyer, USGS CB Associate Coordinator kenhyer@usgs.gov

- Targeting Chesapeake Resources to Achieve Multiple Outcomes and Local Benefits

approaches_for_targeting_cbp_resources_latest_updated_april_28_2022.pdf (chesapeakebay.net)

- Web Hub Targeting (chesapeakebay.net)