# High Resolution Land Cover for the Chesapeake Bay Watershed

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# Management Challenges Land Cover Data can help address in the Chesapeake Bay Watershed

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- Reducing Nutrient (N and P) and Sediment Pollution
  - Agricultural Landscapes
  - Urban/Suburban Stormwater
- Conserving Remaining High Functioning Landscapes
- Restoring Ecosystem Functions to Under Performing Landscapes
- Monitoring the impacts of climate change on critical habitats
  - Wetland loss and upland migration
  - Resilience and connectivity

# Precision Conservation in the Chesapeake Bay Watershed

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*“Getting the right practices, in the right places, at the right scale, at the right time and making sure they are working”*

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# Previously Available Data

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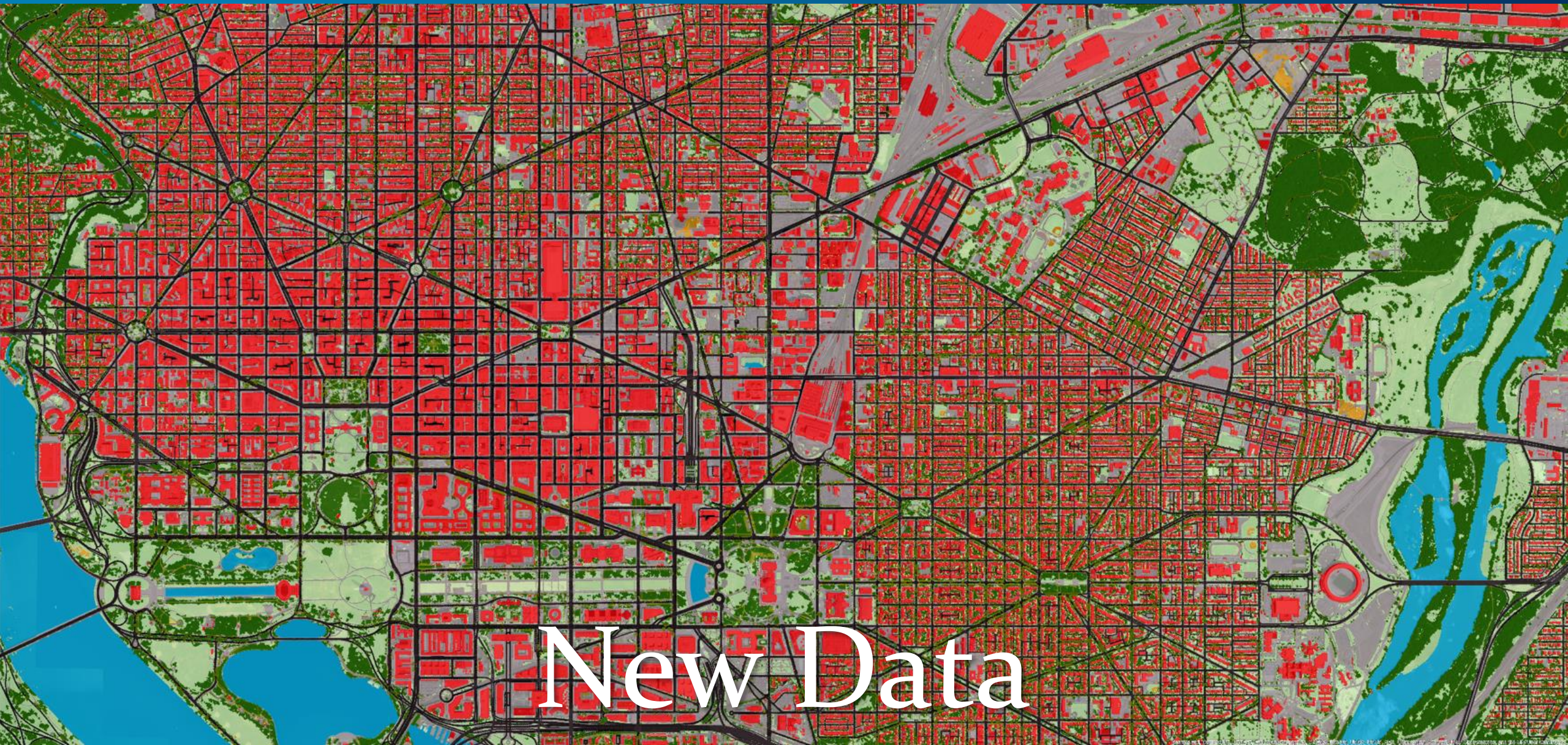
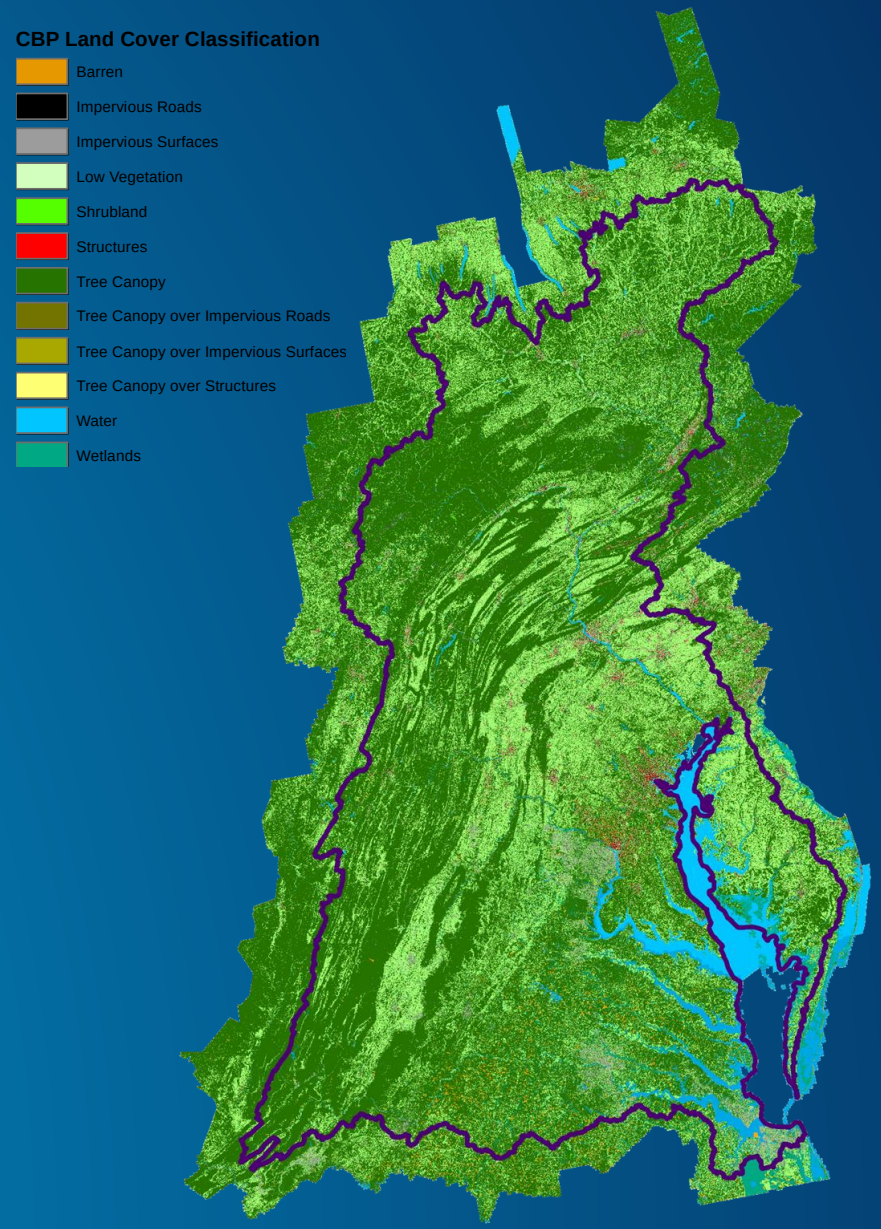


# New Data

# Chesapeake Bay Watershed
# High Resolution Land Cover Data

- **Total cost to produce: $3.5 Million**
  - **$1.3 million for DE, PA, MD, DC, NY, WV**
  - **$2.2 million for VA**
- **Total Area Covered: ~100,000 mi²**
  - **Data Coverage in 206 counties that compose the watershed**
- **Processing took 10 months with three teams working on the data analysis**
  - **Chesapeake Conservancy: MD, DC, NY, WV**
  - **University of Vermont: PA, DE**
  - **Worldview Solutions: VA**



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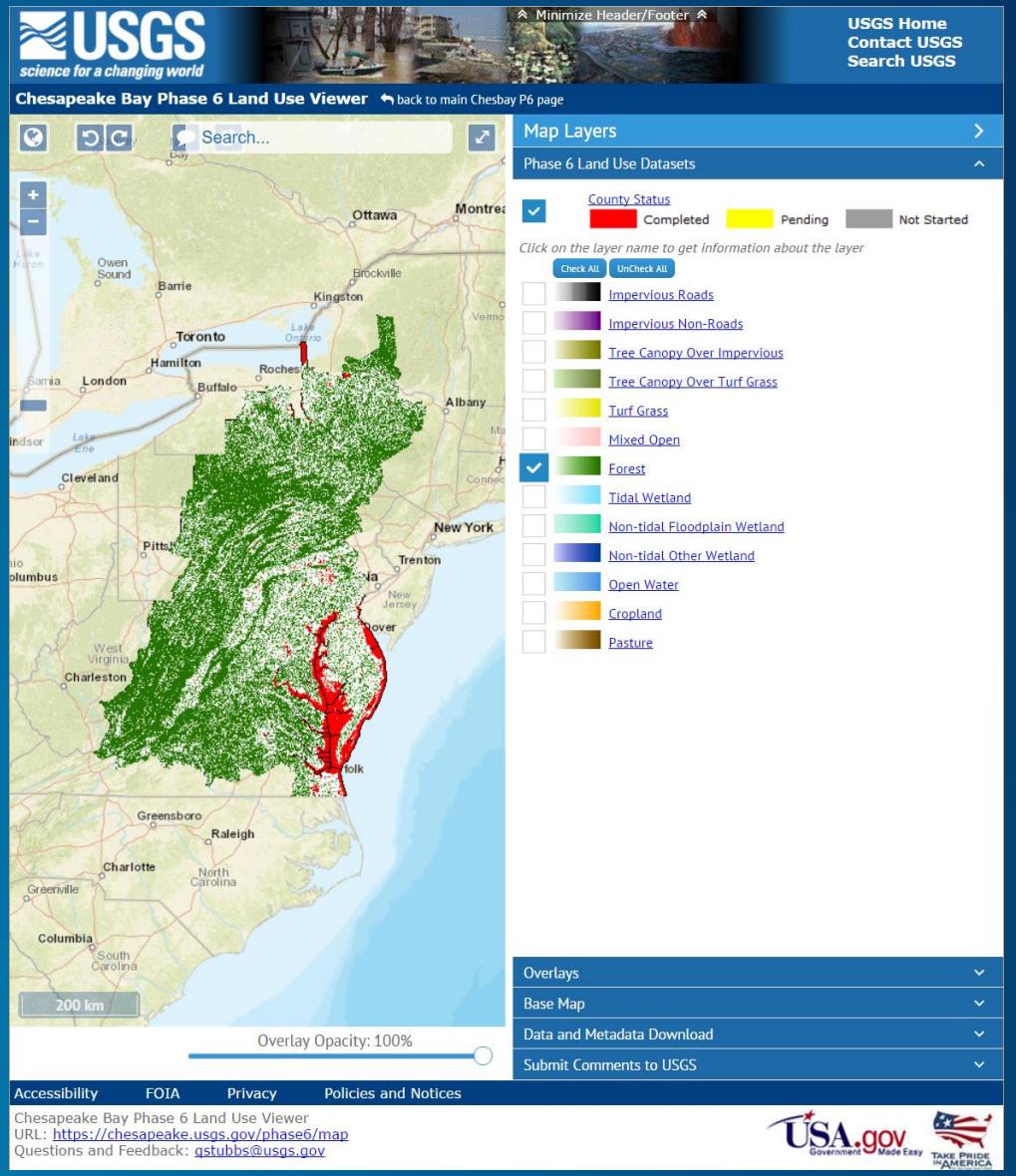
# Supports Management Efforts of ***All*** Bay Agreement Goals and Outcomes

1. Sustainable Fisheries
2. Vital Habitats
3. Water Quality
4. Toxic Contaminants
5. Healthy Watersheds
6. Stewardship
7. Land Conservation
8. Public Access
9. Environmental Literacy
10. Climate Resiliency

# Significance to CBP Management Efforts

- Provides higher resolution inputs for the Chesapeake Bay Program's Phase 6 suite of models
- Provides a baseline for tracking:
  - *Development trends*
  - *Conversion of forest and agricultural lands*
  - *Wetland loss*
- Increases the resolution of GIS-based management and prioritization efforts
- Engages local governments through the review process and provides them with actionable data products



# Partners are already using the data for management efforts

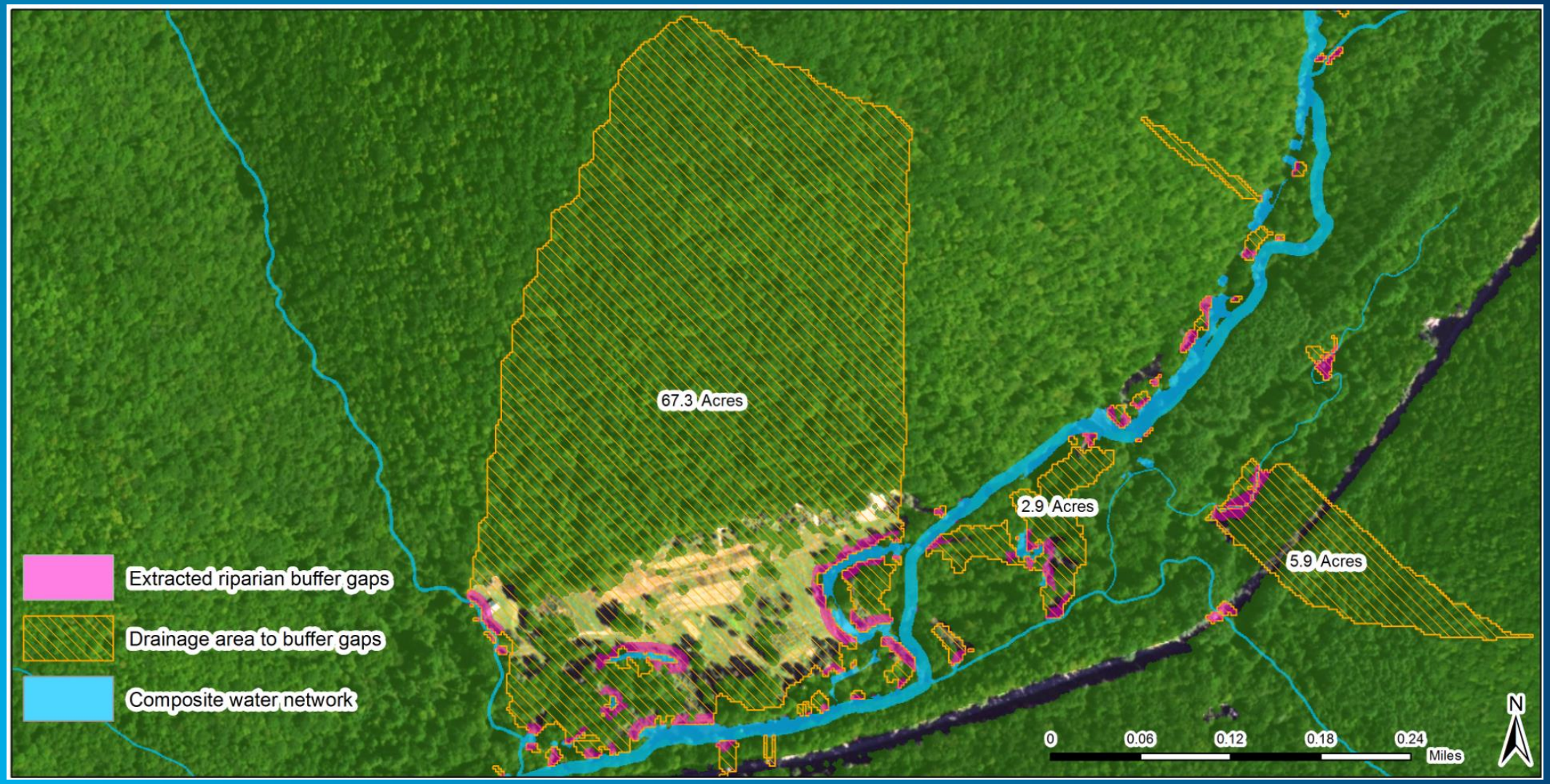
- **Army Corps of Engineers and National Fish & Wildlife Foundation**
  - ***Chesapeake Bay Comprehensive Water Resources and Restoration Plan***
- **Commonwealth of Pennsylvania and Envision the Susquehanna Partners**
  - ***Riparian Buffer Restoration Prioritization***
- **York County, PA**
  - ***Stormwater Consortium Restoration Funding Prioritization***
- **Smithsonian Environmental Research Center**
  - ***Anadromous fish spawning habitat analysis***

# *From analysis to action: PA Buffers*


Bay Agreement: Restore and Conserve Riparian Forested Buffers until 70% buffer coverage is achieved

PA DCNR Buffer Initiative: the goal is to plant an additional 95,000 acres of buffers by 2025

# *Kettle Creek case study – Prioritization*



# Web-Based Tools to Evaluate, Compare, and Track Proposed Projects

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YCSWC YORK COUNTY STORMWATER CONSORTIUM
York County, Pennsylvania

Account

- Home
- All Projects
- My Projects
- Documentation
- Logout

## Geography

1. Verify current project:

Sovereign Bank Stadium Bioswale

2. Search for closest address (note: may zoom in directly on map):

Find address or place

3. Draw Project Area

4. Generate Treatment Area

5. Adjust Treatment Area (Optional)

6. Calculate Land Use/ Land Cover Values

7. Save Data


| Individual land use / land cover classes | Within project area (acres) | Within treatment area (acres) Details |
|---|---|---|
| Please complete steps 4-6 to calculate these values. | | |