Chesapeake Bay Program
Science. Restoration. Partnership.

Fish Passage Outcome

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

Goal: Vital Habitats

Outcome: By 2025, restore historical fish migratory routes by opening 1,000 additional stream miles, with restoration success indicated by the presence of Alewife, Blueback Herring, American Shad, Hickory Shad, American Eel and/or Brook Trout.

What We Want

*__Dam removal incentive programs__ such as tax deductions for dam owners that opt to remove dams that produce significant ecological benefits

* __State dam safety offices__ to consider ecological harm/impacts due to dam failure in addition to public safety concerns

1

Setting the Stage:

What are our assumptions?

Logic Behind Our Outcome

Following the Decision Framework:

* Lack of owner willingness to remove outdated structure

* Letters to owners and dam removal workships

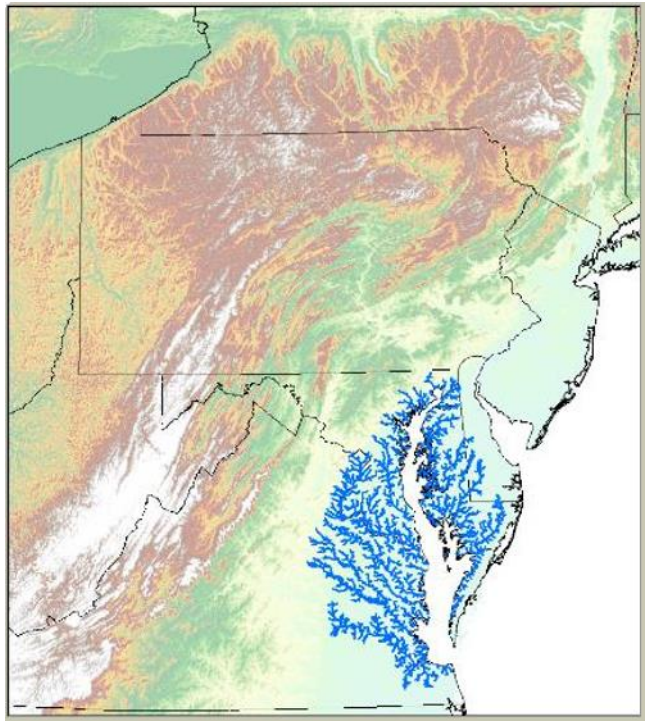
* Other options – “the carrot and the stick”

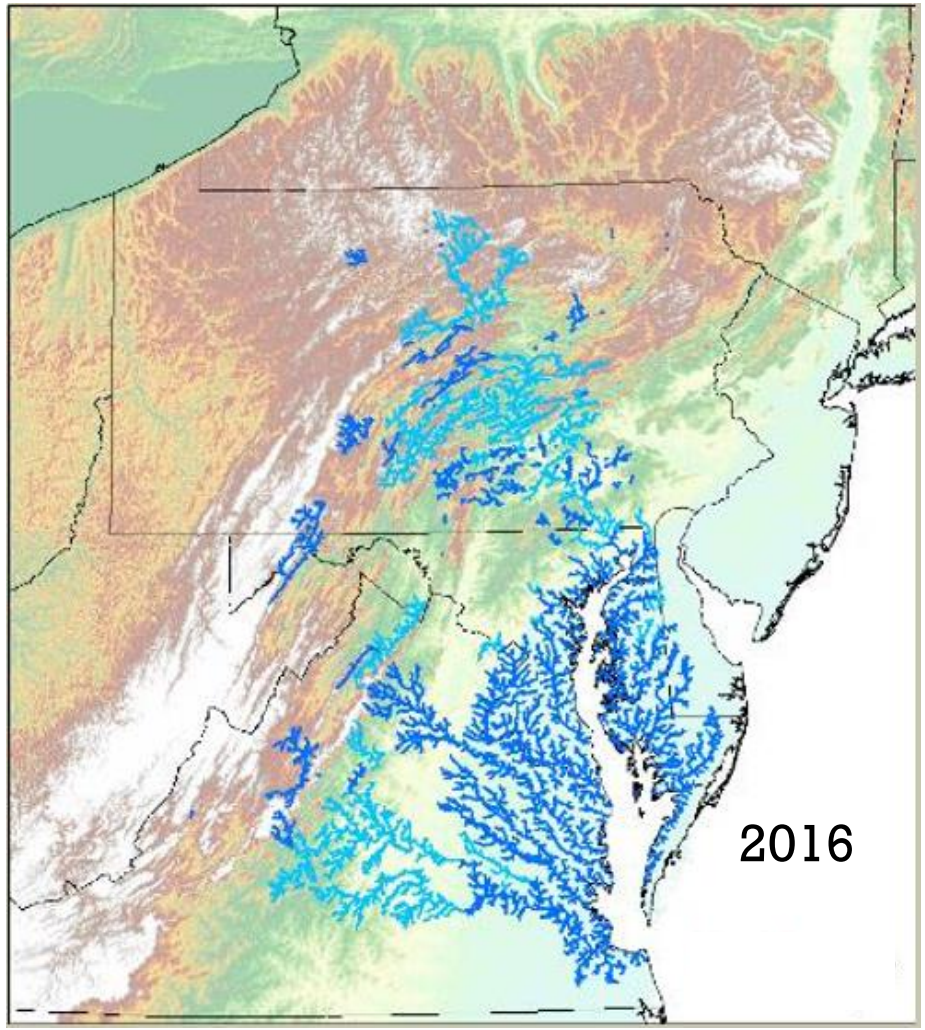
2

Progress:

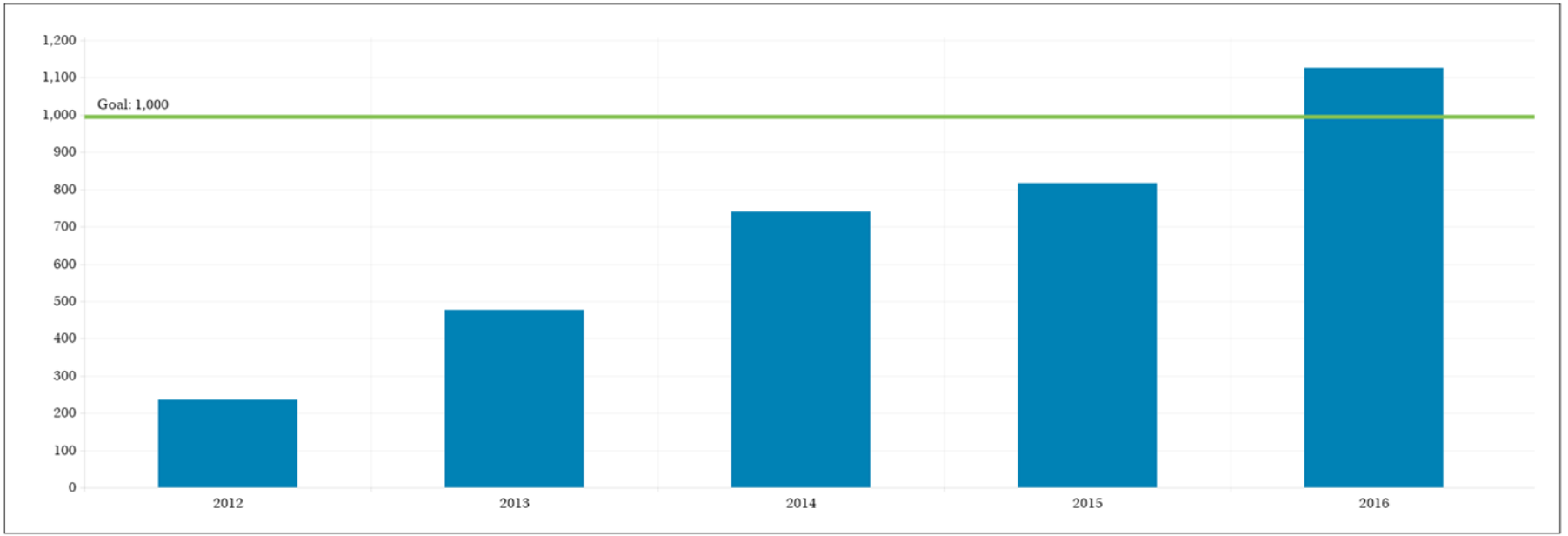
Are we doing what we said we would do?

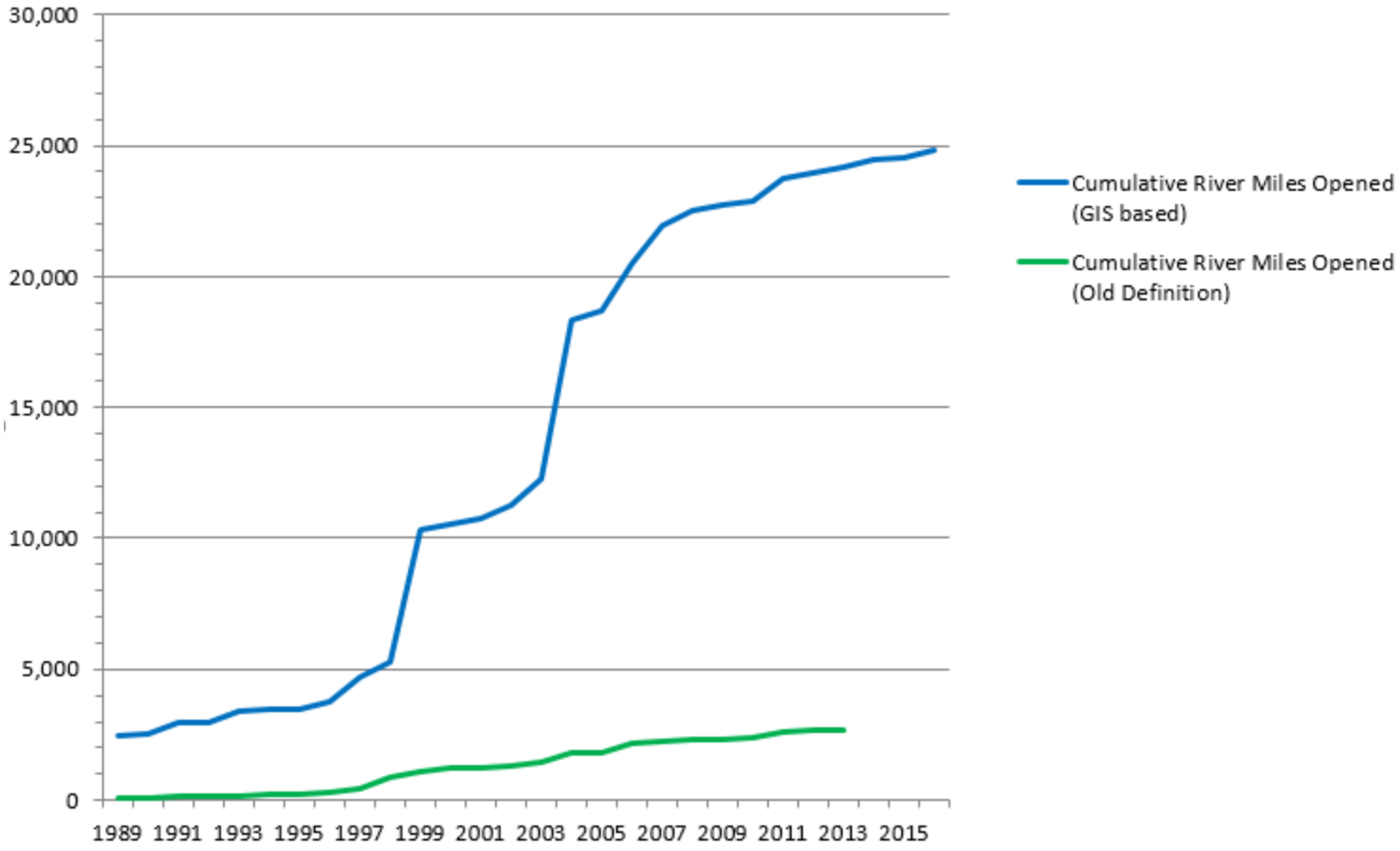
What is our progress?




2016

Are we on track?



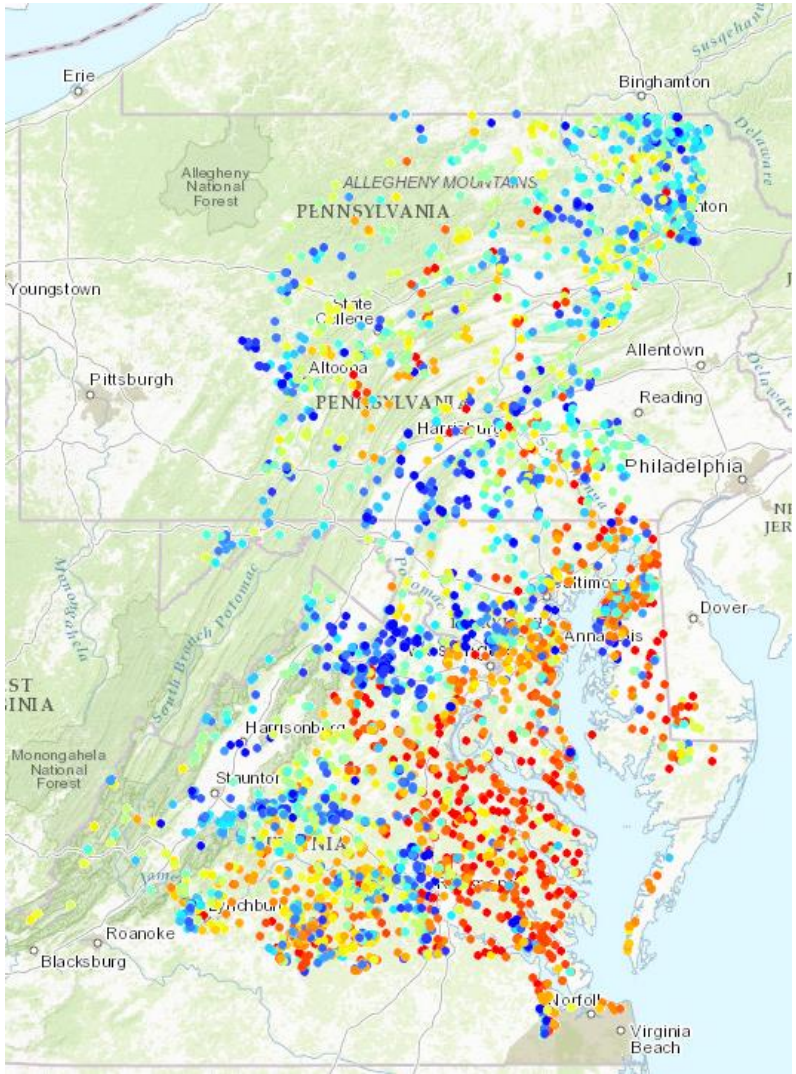

30,000
25,000
20,000
15,000
10,000
5,000
0
1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015
Cumulative River Miles Opened (GIS based)
Cumulative River Miles Opened (Old Definition)

Analysis

Chesapeake Fish Passage Prioritization Tool

- Consensus based tool ranking the existing fish blockages (mostly dams) in the Chesapeake Bay watershed
- Generally, priority blockages are first blockages in bay tributaries that block anadromous fish
- Over 5000 blockages still exist in the watershed and the current map does not include possible fish blockages due to culverts and road crossings

http://maps.tnc.org/EROF_ChesapeakeFPP/



Analysis

Which actions were most critical in progress thus far? And will be carried forward?

- Identification of priority fish passage projects
- Continue dam removal and road-stream crossing assessments
- Continue investigating ways to incentive dam removals
- Monitoring dam removal effectiveness for fish passage, stream function and increasing target fish populations

What gaps have been filled, and how will we build on this in the future?

- Coordinate dam removal activities with state Dam Safety Programs
- Use road-stream crossing assessments to develop future culvert replacement projects

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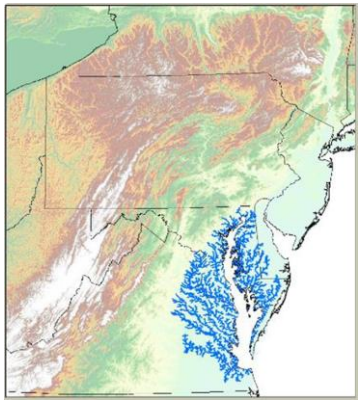
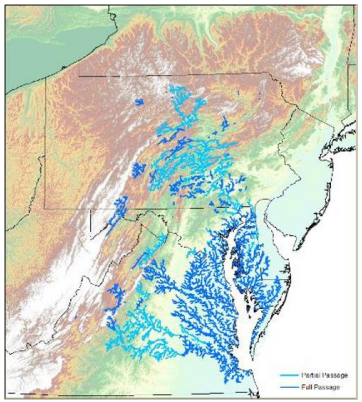
Challenges:

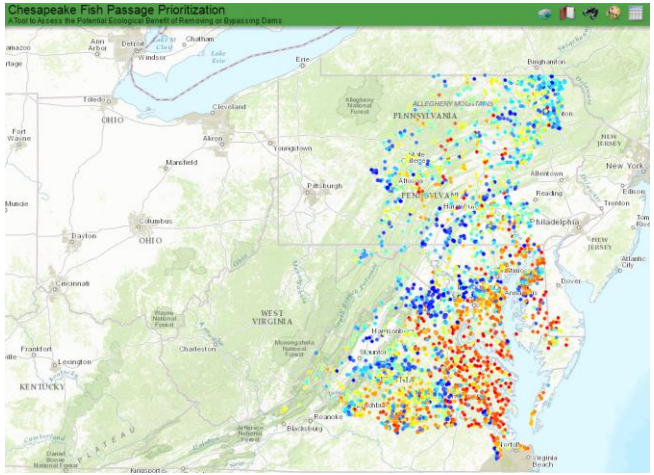
Are our actions having the expected effect?

Challenges

- Private owners not willing to remove dams
- Overall shrinking pool of dam removal projects due to work group success! Low hanging fruit gone - Harder more costly dam projects remain
- Lack of Resources







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Adaptations:

How should we adapt?

Based on what we've learned, we plan to…

- Shift some work group attention and resources to road crossings/culverts (infrastructure)
- Coordinate higher level meetings in MD and VA to discuss more effective ways for state coordination on dam removals
- Determine ways to encourage private dam owners to remove dams (incentives)

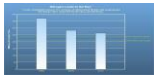
Agreement Goals and Outcomes

Sustainable Fisheries

- Blue Crab Abundance
- Blue Crab Management
- Oyster
- Forage Fish
- Fish Habitat

Vital Habitats Goal

- Wetlands
- Black Duck
- Stream Health
- Brook Trout
- Fish Passage
- Submerged Aquatic Vegetation (SAV)
- Forest Buffer
- Tree Canopy



Water Quality Goal

- 2017 Watershed Implementation Plans (WIP)
- 2025 WIP
- Water Quality Standards Attainment and Monitoring

Toxic Contaminants Goal

- Toxic Contaminants Research
  Toxic Contaminants Policy and Prevention

Healthy Watersheds Goal

- Healthy Waters

Stewardship Goal

- Citizen Stewardship
- Local Leadership
- Diversity

Land Conservation Goal

- Protected Lands
- Land Use Methods and Metrics Development
  Land Use Options Evaluation

Public Access Goal

- Public Access Site Development

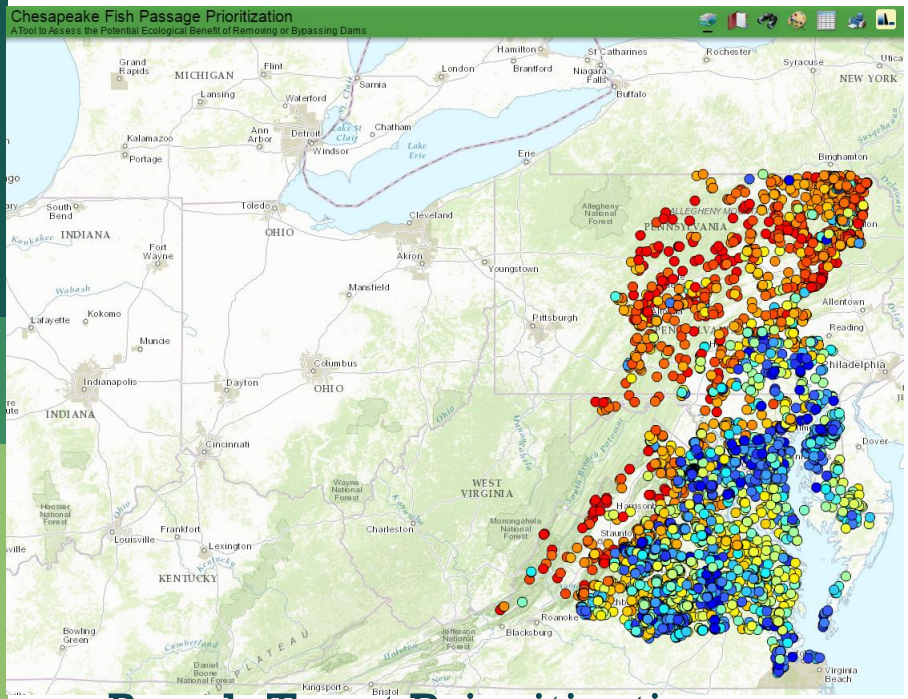
Environmental Literacy Goal

- Student
- Sustainable Schools
- Environmental Literacy Planning

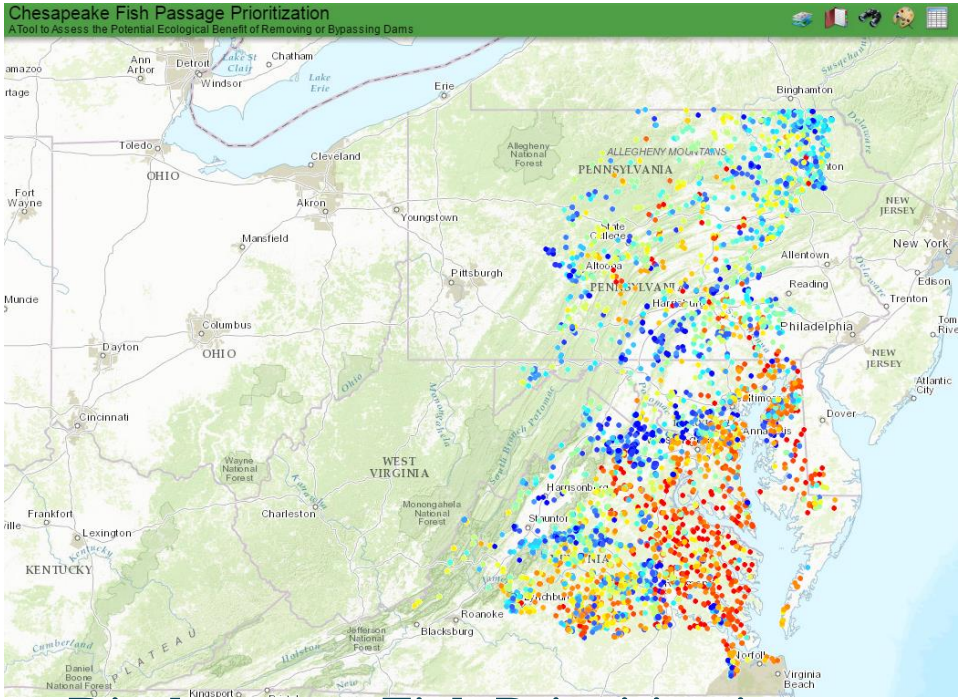
Climate Resiliency Goal

- Monitoring and Assessment
- Adaptation Outcome

Cross-Outcome Considerations



Brook Trout Prioritization



Diadromous Fish Prioritization

What We Want

***Dam removal incentive programs** such as tax deductions for dam owners that opt to remove dams that produce significant ecological benefits

* **State dam safety offices** to consider ecological harm/impacts due to dam failure in addition to public safety concerns; better coordination within state agencies to encourage removals when appropriate

Discussion