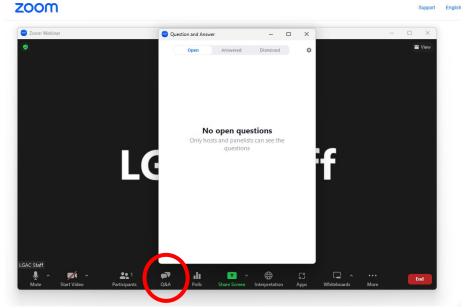


Housekeeping

- All participants are muted.
- Please ask questions!
 - Type them into the Q & A Box located at the bottom of the webinar. We'll answer it during the Q & A portion.
- This webinar is being recorded. It will be posted within 48 hours to the Chesapeake Bay Program's YouTube page: https://www.youtube.com/c/chesbayprogram.



Presenters



Bruce Vogt
Ecosystem Science Manager,
National Oceanic and
Atmospheric Administration



Ray LiFishery Biologist,
U.S. Fish and Wildlife Service



Alison Santoro
Restoration Scientist,
MD Department of Natural
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Paniel Goetz
Regional Operations Manager,
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Resources

Presenters



Pam Mason Research Scientist, Virginia Institute of Marine Science



Brooke Landry
Biologist,
Maryland Department of
Natural Resources

People & Process











University of Maryland

CENTER FOR ENVIRONMENTAL SCIENCE





















Environmental Research Center







July 8, 2025

Blue Crab Sustainability Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Maintain a sustainable blue crab population based on the current 2012 target of 215 million adult females. Refine population targets through 2025 based on best available science.

www.chesapeakeprogress.com

Blue Crab Outcome Updates

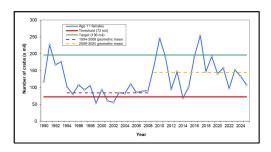
Blue Crab Management
Outcome = Complete



Continuing cross-jurisdictional management



New benchmark stock assessment



Draft Outcome and Targets for Revised Watershed Agreement

Achieve a sustainable bay wide blue crab fishery through cross jurisdictional coordination that supports healthy blue crab populations and thriving fishing communities.

- Continually maintain abundance and harvest rate targets as determined by the 2026 benchmark stock assessment.
- Achieve cross jurisdictional coordination by jointly evaluating and communicating stock status annually through the blue crab advisory report and refining targets, as needed, through the next stock assessment.



Questions?



July 8, 2025

Oyster Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Continually increase finfish and shellfish habitat and water quality benefits from restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.

www.chesapeakeprogress.com

Oyster Outcome Updates

Incorporation of the oyster fishery



Continue oyster reef restoration efforts



Maintenance of reefs from the 2014
Watershed
Agreement



Draft Outcome and Targets for Revised Watershed Agreement

Increase ecosystem benefits from oysters through reef habitat restoration, sustainable harvest, and aquaculture.

- Restore or conserve at least 1800 additional acres of oyster reef habitat concentrated primarily in restoration focus areas to provide ecosystem service benefits.
- Maintain sustainable oyster abundance through oyster fishery and aquaculture practices.
- Maintain reefs established under the 2014 Chesapeake Bay Watershed Agreement to achieve restoration success metrics.



Questions?



July 8, 2025

Fish Passage Outcome

Draft Revised Chesapeake Bay Watershed Agreement

Outcome Language

Current*:

Continually increase access to habitat to support sustainable migratory fish populations in Chesapeake Bay freshwater rivers and streams. By 2025, restore historical fish migration routes by opening an additional 132 miles every two years to fish passage. Restoration success will be indicated by the consistent presence of alewife, blueback herring, American shad, hickory shad, American eel and brook trout, to be monitored in accordance with available agency resources and collaboratively developed methods.

Proposed Update:

Improving habitat, water quality, and creating more resilient and sustainable populations of fish and other aquatic organisms throughout the Chesapeake Bay's coastal and freshwater rivers and streams by removing barriers to aquatic organism passage to restore connectivity to at least 150 miles of aquatic habitat every two years.

Outcome Language

Current*:

Continually increase access to habitat to support sustainable migratory fish populations in Chesapeake Bay freshwater rivers and streams. By 2025, restore historical fish migration routes by opening an additional 132 miles every two years to fish passage. Restoration success will be indicated by the consistent presence of alewife, blueback herring, American shad, hickory shad, American eel and brook trout, to be monitored in accordance with available agency resources and collaboratively developed methods.

Proposed Update:

Improving habitat, water quality, and creating more resilient and sustainable populations of fish and other aquatic organisms throughout the Chesapeake Bay's coastal and freshwater rivers and streams by removing barriers to aquatic organism passage to restore connectivity to at least 150 miles of aquatic habitat every two years.

Rationale for Outcome Updates

- Shift focus to include fish and other aquatic communities:
 - Habitat connectivity for non-migratory fish
 - Relevance for all jurisdictions
 - Coordination across Goal Implementation Teams and Outcomes

- Increase stream mileage goal:
 - 2014 Agreement trends
 - Broader focus
 - Road-stream crossings



Questions?



July 8, 2025

Fish Habitat Outcome

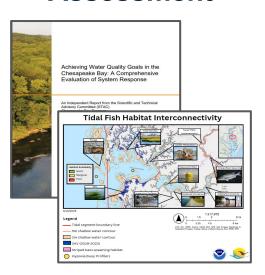
Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Continually improve effectiveness of fish habitat conservation and restoration efforts by identifying and characterizing critical spawning, nursery and forage areas within the Bay and tributaries for important fish and shellfish, and use existing and new tools to integrate information and conduct assessments to inform restoration and conservation efforts.

Fish Habitat Outcome Updates

Living Resource Assessment



Reclassification of Forage Outcome under Fish Habitat



Tidal & Non Tidal Fish Habitat



Draft Outcome and Targets for Revised Watershed Agreement

Achieve and maintain suitable shallow water fish habitat in tidal and non-tidal areas for key species through focused water quality, conservation and restoration improvements informed by a synthesis of fisheries science and habitat assessments.

- Continually improve the quantity and quality of shallow water fish habitat in tidal area above baseline conditions as determined by a Bay-wide assessment of fish habitat conditions completed in 2026.
- Increase the consideration of forage species in fishery management decision making for key predators by annually developing reports of prey status as good, uncertain, or poor.
- Establish a baseline and assess the overall condition and suitability of fish habitat in the watershed to support healthy communities and inform effective restoration, conservation and management actions.
- Develop an acid-mine drainage target, in collaboration with the Brook Trout outcome, that strives to better understand the impacts and mitigation opportunities for Acid Mine Drainage throughout the watershed
- Develop freshwater mussel conservation plans for 5 tributaries and begin implementation by 2035.



Questions?



July 08, 2025

Brook Trout Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Restore and sustain naturally reproducing brook trout populations in Chesapeake headwater streams with an 8% increase in occupied habitat by 2025

www.chesapeakeprogress.com

How Did We Get Here?

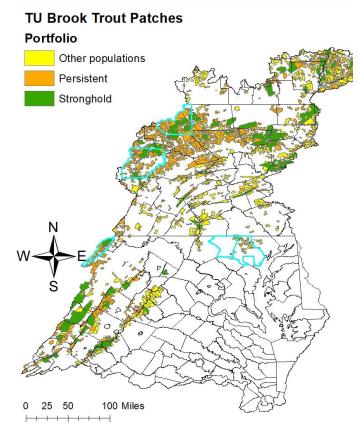
Brook Trout Outcome Goal 2014-2024: Increase Brook Trout occupied habitat by 8 percent by 2025.

- 2024 GIT Project, 0.5% Increase through 2025,
 - 5,419 Projects in Bay watershed
 - Only 94, 1.7% of projects BKT were know present at site
 - 1,645 Projects BKT presence unknown
 - 3,557 BKT data missing

Where are Brook Trout?

 Brook Trout Patch area makes up 22.7% of CB Watershed land area

 Stronghold and Persistent Patches make up 13.7 %



Eastern Brook Trout Conservation Portfolio - Trout Unlimited

***Next update Dec. 2026

Project Locations 2017-2023

Table 6. Costs reported in database by project type.

Project Type	Total Number of Projects	Number of Projects Reporting Costs	Sum of Total Project Cost	Average of Total Project Cost
Abandoned Mine	5	0	NA	NA
Drainage Restoration		. A C		
AOP	233	11	\$1,895,377	\$172,307
Brook Trout	3	1	\$184,969	\$184,969
Reintroduction				
Dirt and Gravel Road	1566	1	\$333,187	\$333,187
Improvement				
Instream Habitat	678	38	\$6,400,383	\$168,431
Land Protection	157	25	\$741,099	\$29,644
Other	222	28	\$6,715,291	\$239,832
Riparian Restoration	2555	34	\$8,798,490	\$258,779
Grand Total	5419	138	\$25,068,796	\$181,658

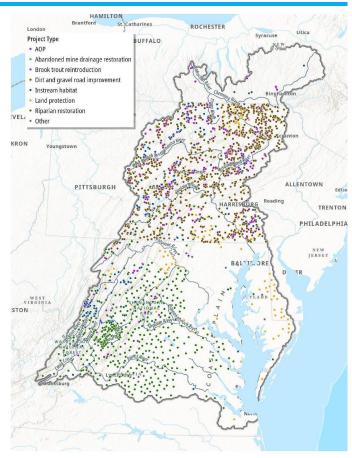


Figure 1. Project type and location within the Chesapeake Bay watershed.

What needed to be updated with this outcome?

How did your outcome need to be revised? Did language need to be deleted because of new science or policy? Did new targets need to be set? Why are these changes happening? What was the process to change—with your workgroup, MB and PSC? (Use as many slides as needed)

Brook Trout Outcome

How did your outcome need to be revised?

- Original 8% did not take into consideration the expansion of brook trout stressors
- Actual increase since 2014 was actually +0.5% in occupied brook trout habitat
- Jurisdictional effort concentrated on documenting presence, little resources to enhance existing "healthy" populations
 - State biologists wanted to improve angling opportunities in stronghold streams with ongoing monitoring, i.e. abundance
 - Consensus on focusing effort in best of the best to improve resiliency

Path to New Outcome

- Hosted two ad hoc workgroup meetings and our regular spring meeting to discuss changes
- Provided recommendation to MB to UPDATE our language and include three outcomes, Occupancy, Abundance and Resiliency
- Working to derive outcome targets using previous GIT report, gis analysis and ongoing state, federal, university, and ngo monitoring programs.

Draft Outcome and Targets for Revised Watershed Agreement

Protect and enhance brook trout within the Chesapeake Bay watershed by increasing occupancy, abundance and resilience to changing environmental conditions.

- By 2035, increase brook trout occupancy by 1% in watersheds supporting healthy populations while achieving no net loss in other watersheds.
- By 2035, increase abundance at 10 long-term monitoring sites.
- By 2035, reduce identified threats by XX% to increase brook trout resilience in watersheds supporting healthy populations.

Deriving Goal Targets

Type	Number Projects/miles/acres (GIT Report)	10 Year Adjustment Percent in BKT Patches (13.67	
AMD	5	7	7
AOP (miles opened)	232	331	45
Brook Trout Reintroduction	3	4	1
Dirt Gravel Roads (miles)	730	1043	143
nstream Habitat Enhancement (miles)	78	111	15
Land Protection	13881	19830	2711
Riparian Restoration (acres)	3421	4887	668
Other	222	317	43

Applying 13.7 % to each 10 year adjusted "Number of projects/miles/acres", we are left with the amount of projects/miles/acres that should be strived for by 2035 to keep current momentum of brook trout threat mitigation.

Note I: An assumption was made that all AMD projects were being done in brook trout strong/persistent patches, so the 13.7% was not applied to this output type.

Note II: 668 "Riparian Restoration (acres)" was reported in the GIT-Funded Report, there was a suggestion to use Chesapeake Bay Annual Progress 2017-2023, which showed 23,548 riparian buffer acres planted within the Bay Watershed. Applying 13.7% to this number and extrapolating for a 10 year goal you get 4608.68 acres. Dividing by 10 you conclude at an annual goal of 500 Acres/year.

Achieving Success

- Held STAC workshop in PA and MD to develop plan for scaling conservation efforts in stronghold watersheds
- Pending final report, will serve as blueprint for all counties within the Bay watershed.





July 8, 2025

Stream Health Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the Chesapeake Bay watershed.

www.chesapeakeprogress.com

Draft Outcome and Targets for Revised Watershed Agreement

Continually improve and protect local stream health and function, including their living resources and ecosystem services throughout the watershed using the best available science to inform land management, planning and conservation.

 Improve health and ecological integrity of at least 3% of non-tidal stream miles every six years.

What was updated with this outcome?

Prevents the degradation of existing ecological resources

Describes the general approach to achieve the outcome

Continually improve and protect local stream health and function, including their living resources and ecosystem services throughout the watershed using the best available science to inform land management, planning and conservation.

Better defines what is meant by "stream health and function"

 Improve health and ecological integrity of at least 3% of non-tidal stream miles every six years.

Target: Measurable and time-bound. Percent improvement is considered achievable.

6 years is the outcome indicator time-frame





July 8, 2025

Wetlands Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Continually increase the capacity of wetlands to provide water quality and habitat benefits throughout the watershed. Create or reestablish 85,000 acres of tidal and non-tidal wetlands and enhance function of an additional 150,000 acres of degraded wetlands by 2025. These activities may occur in any land use (including urban), but primarily occur in agricultural or natural landscapes.

What needed to be adressed with this outcome?

- Achieved a bit less than 10% of original outcome acres
- More specificity with separate tidal and nontidal wetlands targets
- Highlighting the benefits of wetlands in the outcome will create more buy-in
- Added protection as a target that is equally important as creation, restoration, and enhancement
- Integration of waterbirds target as indicators of wetland health

Draft Outcome and Targets for Revised Watershed Agreement

Restore, create, enhance and protect wetlands to support people and living resources, including waterbirds and fish, provide water quality, flood and erosion protection, recreation and other valuable benefits to people.

- Tidal Wetlands Target: Restore or create 1,000 acres and enhance 15,000 acres by 2035.
- Non-tidal Wetlands Target: Restore or create 2,000 acres and enhance 15,000 acres by 2035.
- Protected Buffer Target: Part of the Protected Lands Outcome and will be tracked under that goal.





July 07, 2025

SAV Outcome

Draft Revised Chesapeake Bay Watershed Agreement

2014 Chesapeake Bay Watershed Agreement Outcome Language

Sustain and increase the habitat benefits of submerged aquatic vegetation (SAV) in the Chesapeake Bay. Achieve and sustain the ultimate outcome of 185,000 acres of SAV Bay-wide necessary for a restored Bay. Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.

What needed to be updated with this outcome?

- To align the SAV Outcome with associated water clarity standards in Maryland, Virginia, and DC, the SAV Outcome needed to be increased to 196,000 acres. This alignment provides a more accurate reflection of potential SAV extent in each Bay segment.
- New interim targets were determined using linear regression on annual Bay-wide totals and assume steady growth.
- The interim targets were established for five-year intervals (2030 and 2035) and are based on the **average** 1.1% growth exhibited per year.
- To accommodate the variability in SAV community trends in different parts of the Bay, the updated SAV Outcome language includes specific SAV acreage targets for each salinity zone.

Draft Outcome and Targets for Revised Watershed Agreement

Sustain and increase the habitat and ecosystem benefits of SAV in the Chesapeake Bay. Achieve and sustain the outcome of 196,000 acres of SAV Bay-wide necessary for a restored Bay.

Progress toward this outcome will be measured against interim targets of 90,000 acres by 2030 and 95,000 acres by 2035.

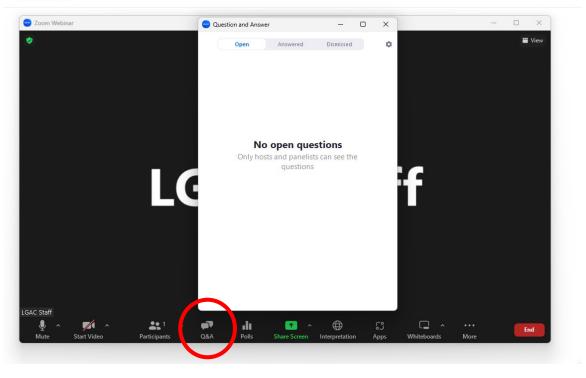
Progress will also be measured against the following targets for each salinity zone:

- Tidal Fresh: 21,330 acres
- Low Salinity: 13,094 acres
- Medium Salinity: 126,032 acres
- High Salinity: 35,790 acres



Time for Questions!

ZOOM Support English



Upcoming Beyond 2025 Webinars

July 15

- Clean Water for a Healthy Bay: Exploring the next revised

 Goal of the Watershed Agreement
- (Reducing Excess Nitrogen, Phosphorus and Sediment, Toxic Contaminants Mitigation, Water Quality Standards Monitoring and Assessment)

• July 24

- Understanding another revised Goal of the Watershed
 Agreement: Healthy Landscapes
- (Land Use Decision Support, Protected Lands, Healthy Forests and Trees, Adapt to Changing Environmental Conditions)

July 30

- Engaged Communities: A Closer Look at Final Proposed
 Goal of the Watershed Agreement
- (Workforce, School District Planning, Local Leadership, Student Experiences, Public Access)



Thank You!