Brook Trout Outcome

Habitat GIT

Brook Trout Workgroup

Presenter: Dan Goetz (WG Co-chair)

PROPOSED DRAFT OUTCOME LANGUAGE:

Protect and enhance brook trout within the Chesapeake Bay watershed by increasing:

- Occupancy in stronghold and persistent patches by 1% and no net loss in other patches by 2035
- Abundance at 10 (2 per state) sentinel monitoring sites within priority patches by 2035
- Resiliency within stronghold and persistent patches by reducing identified threats by XX% through BMP implementation by 2035

EXISTING 2014 AGREEMENT OUTCOME LANGUAGE:

Restore and sustain naturally reproducing brook trout populations in Chesapeake headwater streams with an eight percent increase in occupied habitat by 2025.

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PROPOSED TARGET	New Target / Update of Existing Target	Date estimate for target being developed
Occupancy in stronghold and persistent patches by 1% and no net loss in other patches by 2035.	Update of Existing	n/a
Abundance at 10 (2 per state) sentinel monitoring sites within priority patches by 2035.	New Target	n/a
Resiliency within stronghold and persistent patches by reducing identified threats by XX% through BMP implementation by 2035.	New Target	Late May 2025

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Target 1: Occupancy in stronghold and persistent patches **by 1%** and **no net loss in other patches** by 2035

- 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
- Conservation as a new pillar of the Bay Program
- Desire to sustain current brook trout populations

Methodology of tracking:

Jurisdictional monitoring of previously documented brook trout populations.

- Where logistically feasible, and at biologist's discretion, the amount of occupied habitat may be inferred through downstream occupancy, as it was in the Trout Unlimited GIT-funded project to identify +0.5% brook trout occupied habitat.

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Target 2: Abundance at 10 (2 per state) sentinel monitoring sites within priority patches by 2035

- Added Abundance metric to be able to **determine if healthy populations are starting to decline**, and
  - Have the ability to **implement corrective habitat practices** to maintain or increase abundance.
- Sustained or increasing brook trout in stronghold and persistent patches is a **good indicator that land use and stream health are improving**.

Methodology of tracking:

- Fish counts at sentinel monitoring sites using electrofishing depletion surveys.
- Before, After, Control, Impact (BACI) sampling efforts prior to and following habitat enhancement projects to determine net adult brook trout population increase.

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Target 3: Resiliency within stronghold and persistent patches by reducing identified threats by XX% through BMP implementation by 2035

- Added Resiliency metric because of the reality of **poor land use practices** and **uncertain changing environmental conditions**

Methodology of tracking:

- Initial GIS analysis to quantify total threats in stronghold and persistent patches.
- Project data, following BMP implementation, will be input into the Chesapeake Bay Habitat Tracker.