VITAL HABITATS GOAL

Brook Trout Outcome

2025 PROGRESS
OFF COURSE

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

PROGRESS AS OF 2021: The Brook Trout Outcome is off course. While the Brook Trout Action Team has achieved many successes—including 22 of the 28 items listed in their most recent Logic and Action Plan—challenges remain in meeting this outcome. There are two aspects to this issue. First, and most importantly, changes in land use and climate continue to have significant detrimental impacts on brook trout habitat. The resources available to mitigate these impacts are insufficient to adequately sustain and restore brook trout populations at the necessary scale to achieve the outcome. Second, a more accurate and comprehensive system to document gains and losses in brook trout habitat is needed as current data are incomplete. Both aspects have, and continue to play, a significant role in the lack of progress toward meeting this outcome. Data support and intervention is needed to increase the rate of implementation and monitoring of conservation and restoration activities.

BACKGROUND: Brook trout are an essential part of the headwater stream environment and a valuable recreational resource. As the fish needs clean, cold water to survive, and is sensitive to rising water temperatures, its presence is an indicator of a healthy headwater stream. According to an assessment completed in 2015 by the Eastern Brook Trout Joint Venture, wild brook trout occupy 33,200 square kilometers of habitat in the watershed. This includes streams shared with brown and/or rainbow trout. There are 13,500 square kilometers of allopatric—or wild brook trout only—streams, which are comprised of 990 separate patches, or groups of contiguous catchments. This means that 14,622 square kilometers (an eight percent increase) of habitat occupied by wild brook trout serves as the restoration goal for this outcome. The annual restoration target is 137 square kilometers of habitat.

BASELINE: This outcome is focused on conserving "Wild Brook Trout Only" patches and therefore is using the current area of occupancy as determined by the Eastern Brook Trout Joint Venture as the baseline for measuring progress. This area of occupancy is currently 13,500 square kilometers.

DATA SOURCE: The Eastern Brook Trout Joint Venture's five-year range-wide assessment of occupied habitat was initially adopted for measuring progress toward this outcome. To assess interim progress, pertinent jurisdictions would annually report the amount of habitat occupied by wild brook trout only that was added to or removed from the baseline using a standardized occupancy reporting protocol. These annual gains would be combined with the outputs of the monitoring protocol to determine overall progress. However, it is now apparent that this methodology does not capture the full extent of conservation and restoration activities in the watershed at the timescale necessary to meet the outcome target by 2025.