



Eastern Brook Trout
**ROADMAP TO
CONSERVATION**



Eastern Brook Trout
JOINT VENTURE
A Fish Habitat Partnership

A photograph of a Brook Trout swimming in a stream. The fish is positioned in the lower center of the frame, facing right. It has a dark, mottled pattern on its back and sides, with a bright orange-red belly. The stream bed is composed of dark, smooth rocks. Above the fish, there are many fallen leaves in various shades of yellow, orange, and brown, some partially submerged and some floating on the surface. The water is clear, and the overall scene is lit with natural, soft light.

Our Brook Trout HERITAGE

The wild Brook Trout is an American symbol of persistence, adaptability, and the pristine wilderness that covered North America prior to European settlement. It is the only native trout that inhabits the cold, clear streams of the eastern United States, and is prized by anglers. It's truly a heritage species.

Unfortunately, detrimental land and water use practices have taken a toll on our landscape, greatly diminishing the presence of wild Brook Trout throughout its native range. Today it's estimated that only 8% of the subwatersheds (HUC 12) that historically supported wild Brook Trout in the eastern portion of the U.S. are classified as Intact (i.e. at least 50% of the catchments in a subwatershed have wild Brook Trout present). Most wild Brook Trout are relegated to headwater streams, where forest cover is still prevalent. Unable to thrive in poor water quality or degraded habitats, wild Brook Trout are excellent indicators of clean water and healthy aquatic systems. Therefore the decline of wild Brook Trout throughout its historic eastern range should serve as a warning about the state of our waters.

However, this set of circumstances is certainly not hopeless. Through a coordinated and focused effort, we have a unique opportunity to reverse the trend of wild Brook Trout decline by collaboratively restoring habitat and improving water quality that will benefit both wild Brook Trout and our well-being for generations to come.

Working together TO BRING BACK WILD BROOK TROUT



The historic distribution of wild Brook Trout populations in the East represents approximately 70% of the wild Brook Trout range in the U.S. and about 30% of its native range in North America. In 2004, state and federal agencies, conservation groups and academics concerned about the decline of eastern Brook Trout formed the Eastern Brook Trout Joint Venture (EBTJV), a Fish Habitat Partnership operating in accordance with the guiding principles of the National Fish Habitat Action Plans. The EBTJV provides leadership in Brook Trout conservation that is grounded by science; and, through its network of the region's top scientists and fisheries managers, the EBTJV identifies priority needs, delivers valuable decision-support tools, and promotes proven techniques for conserving wild Brook Trout populations. The EBTJV also directs funding and leverages other resources towards collaborative, mission-focused Brook Trout conservation projects.

The vision of the Eastern Brook Trout Joint Venture is to ensure healthy, fishable wild Brook Trout populations throughout their historic eastern U.S. range.



Scienced-based CONSERVATION

In response to a need for guidance in setting wild Brook Trout conservation priorities, the EBTJV completed a range-wide assessment of wild Brook Trout distribution and status at the subwatershed-level (HUC 12) in 2006. While this initial assessment provided Brook Trout resource managers, decision-makers, and the public with an essential understanding of the current “state” of wild Brook Trout in the eastern portion of its U.S. range, many EBTJV partners felt that an assessment at a finer scale would yield better assistance by establishing a more workable set of wild Brook Trout conservation strategies. Therefore, the EBTJV conducted a second range-wide assessment of wild Brook Trout at the catchment scale (on average a catchment contains 2-3 miles of stream), which was completed in 2015.



2015 CATCHMENT ASSESSMENT FINDINGS

There were 271,949 catchments assessed within the EBTJV geographic boundary, which had a combined area totaling 628,530 km². Each catchment was classified based on the presence/absence of wild trout (Brook Trout, Brown Trout, and Rainbow Trout). Twenty-two percent (22%) of the assessed catchments contained wild Brook Trout. Among the 61,148 catchments that had wild Brook Trout present, 67% were classified as allopatric Brook Trout (1.1) (Table 1). The remaining wild Brook Trout catchments were classified as Brook Trout sympatric with Brown Trout (1.2), Brook Trout sympatric with Rainbow Trout (1.3), and Brook Trout sympatric with Brown Trout and Rainbow Trout (1.4).

TABLE 1. BROOK TROUT CATCHMENT METRICS

Catchment Classification Code	Number of Catchments	Area (km ²) of the Catchments
1.1	41,070	128,834
1.2	13,099	37,279
1.3	1,688	5,173
1.4	5,291	14,350
TOTALS	61,148	185,636

The analysis of catchment data also entailed identifying wild Brook Trout patches and classifying them using the Catchment Classification protocol. A “patch” is defined as a group of contiguous catchments occupied by wild trout. Patches are not connected physically (i.e., they are separated by a dam, unoccupied warm water habitat, downstream invasive species, etc.) and are generally assumed to be genetically isolated. There were 9,860 Brook Trout patches identified range-wide, with a combined area of 190,473 km² (Table 2).

TABLE 2. BROOK TROUT PATCH METRICS

Patch Classification Code	Number of Patches	Area (km ²) of the Patches
1.1	6,022	108,528
1.2	2,210	45,575
1.3	370	6,049
1.4	1,258	30,321
TOTALS	9,860	190.473

EBTJV's APPROACH



Building from its wild Brook Trout assessment work, the EBTJV has developed strategies that provide the blueprint for Brook Trout conservation actions at multiple scales across the range. As we move forward, the EBTJV and our partners are using this roadmap to guide our conservation decisions at all delivery levels.

CONSERVATION GOALS

Conserve, enhance or restore wild Brook Trout populations that have been impacted by habitat modification, non-native species and other population level threats.

Encourage partnerships among management agencies and stakeholders to seek solutions to regional environmental and ecological threats.

Develop and implement outreach and educational programs to raise public awareness about the challenges that wild Brook Trout populations are facing.

Develop support for program implementation to perpetuate and restore wild Brook Trout populations throughout their historical eastern U.S. range.

CONSERVATION SCALES

Brook Trout conservation occurs at three scales, or levels:

RANGE-WIDE: Conservation goals and habitat objectives are established at this scale in an effort to guide activities at the State scale.

STATE: States identify focal watersheds and determine the conservation actions that will contribute best to meeting range-wide habitat objectives.

LOCAL: Local partners implement wild Brook Trout conservation projects that are congruent with the range-wide habitat objectives and input provided by their respective State.



EBTJV's range-wide HABITAT GOALS + OBJECTIVES

The EBTJV's wild Brook Trout conservation efforts across the eastern U.S. are directed by four range-wide habitat goals, along with their associated objectives. Success in meeting these goals and objectives will require widespread cooperation and collaboration among our many partners. The progress made towards achieving these goals and objectives will be measured using the results of our partnership's 2022 wild Brook Trout assessment.

GOAL:

- Maintain the current number of wild Brook Trout patches (i.e. no net loss).

OBJECTIVES:

- Retain at least 6,022 allopatric wild Brook Trout patches (1.1) across the EBTJV geographic range by 2022.
- Retain at least 3,838 sympatric wild Brook Trout patches (1.2, 1.3, and 1.4) across the EBTJV geographic range by 2022.

GOAL:

- Increase the average size (km²) of wild Brook Trout patches, which is currently 19 km².

OBJECTIVE:

- Increase the size (km²) of 30 wild Brook Trout patches by 2022.

GOAL:

- Increase connectivity within and among wild Brook Trout catchments.

OBJECTIVE:

- Complete Aquatic Organism Passage projects within 45 wild Brook Trout catchments by 2022.

GOAL:

- Restore wild Brook Trout to catchments where they are extirpated.

OBJECTIVE:

- Establish wild Brook Trout in 15 extirpated catchments by 2022.





EBTJV's key CONSERVATION ACTIONS

The EBTJV has also established a number of key conservation actions. Our partnership believes these actions generate additional focus towards strategic elements needed for achieving success in conserving wild Brook Trout.

CONSERVATION ACTIONS

- Increase recreational fishing opportunities for wild Brook Trout
- Conserve and expand habitats that support robust wild Brook Trout populations
- Restore and reconnect suitable habitats adjacent to robust wild Brook Trout populations
- Conserve genetic diversity of wild Brook Trout populations
- Conserve unique wild Brook Trout life history strategies (e.g., lacustrine populations, large river populations, and coastal populations)
- Minimize threats to wild Brook Trout populations (e.g., degraded water quality, non-native species, altered hydrologic regimes)

Examples of what can be done to achieve these actions include: restoring aquatic connectivity by removing small dams and replacing undersized culverts; mitigating acid mine drainage to improve water quality; executing strategies that eliminate competition from non-native species; and, planting native trees in riparian zones to provide shaded waters and stream bank stabilization.





SOME WORDS ON FUNDING

The EBTJV is constantly seeking to bring new funding support to priority wild Brook Trout conservation projects. We are fortunate that our partnership has already benefited from funds provided by many of our partners, along with contributions from a diversity of local organizations. However, there is a need to generate additional funding if we are to be successful in achieving our vision and so we need your help. You can make a huge difference in the effort to conserve wild Brook Trout by making a tax-deductible donation that will assist the EBTJV and its partners in making strong, steady progress in saving healthy coldwater aquatic resources and sustaining fishable wild Brook Trout populations.

Please donate now;
we need and greatly
appreciate your support!

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