Brook Trout Outcome: 2024-2025 Workplan
Presented to the Management Board on December 14, 2023

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

TWO-YEAR TARGET: 137 km^2 of restored brook trout habitat per year.

MANAGEMENT STRATEGY OBJECTIVES:
1. Identify and communicate priority focal areas for brook trout conservation.
2. Consider climate change and emerging stressors in determining restoration priorities.
3. Refine and apply decision support tools.
4. Continue and expand brook trout monitoring efforts.

#	Action Description	Performance Target(s)	What are the goals or metrics you will use to determine the impact of your action?	How will we collect and assess the data that we want to monitor? How will we use it?	How will we communicate results?	How do we expect the action to fill the priority factor or gap?	Responsible Party (or Parties)	Expected Timeline for Completion
1	Collaborate with other workgroups on communication strategies and products.	Meet and coordinate with other workgroups.	Identify overlapping priorities with Fish Passage, Forestry, Water Quality, Stream Health and Healthy Watersheds	Use the GIT-funded Tracking Tool (in development); use GIS mapping applications to identify and prioritize overlapping priorities among workgroups.	Report progress to WG, GIT, MB, and PSC as appropriate	Facilitate collaborative efforts between multiple action teams to focus more resources in watersheds where overlapping goals exist	USGS, BTWG, CBP Workgroups, CBP Communications Team, LGAC.	Continuous efforts through December 2024
2	Identify and increase engagement with local government and non-profit work benefiting brook trout conservation and restoration.	Work to identify groups outside of governmental agencies that are conducting brook trout restoration and conservation projects in order to better capture all of the activities in the watershed affecting progress toward the Outcome Goal.	Develop agreements with willing jurisdictions to prioritize restoration activities in brook trout patches.	Develop a workshop with participating jurisdictions to draft language for an agreement.	Signed agreements with willing Jurisdictions	Provide a vehicle to scale up brook trout restoration work at the local level	WV DNR, MD DNR, PA PFBC, NY DEC, VA DWR, County Gov, NRCS	December 2025

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3	Model groundwater influence on stream temperature to forecast future change scenarios at the reach-scale across the Chesapeake Bay headwaters.	Apply multiple modeling techniques to evaluate covariate relationships to observed mean-daily temperatures and evaluate model predictive performance.	Establish relationship with Conte/Leetown/Patuxent Labs to develop methodologies for identifying sensitive groundwater inputs in brook trout patches.	Work with WG members to identify data sources	Publish findings in peer reviewed journals and white literature	Identify priority strongholds where groundwater inputs are especially critical for protection	USGS, and BTWG members	December 2024/ongoing
4	Model groundwater influence on stream temperature to forecast future change scenarios at the reach-scale across the Chesapeake Bay headwaters.	Evaluate state groundwater management programs to better understand approaches for implementing science and modeling recommendations.	Updating a regional stream temp model to account for HUC-level effects that could improve predictions in karst terrain.	Work with state database managers to obtain necessary data sources to model HUC level groundwater impacts.	Publish findings in peer reviewed journals and white literature	This will help identify which watershed/ stream reaches are more or less sensitive to warming temperatures	USGS, BTWG members	Ongoing
5	Model impacts of ponds on stream temperatures by evaluating a suit of landuse and	Evaluate impacts of constructing ponds in sensitive coldwater watersheds and/or the thermal	Provide a tool for assessing the thermal impacts of pond construction and pond removal in coldwater watersheds.	Utilize MD DNR's temperature monitoring database and NHD Landcover dataset to model	Publish findings in peer reviewed journals and	Currently no tools exist for determining thermal impacts of ponds in	USGS, MD DNR, BTWG members	December 2024

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	geomorphological characteristics	benefits of removing them		impacts of ponds on stream temperature regimes.	white literature	coldwater watersheds		
6	Work with partners to identify stronghold populations and smaller threshold populations and prioritize restoration efforts.	Identify possible prioritization approaches for culverts and riparian reforestation.	Utilize NAACC data to identify AOP blockages for removal in priority watersheds	Overlay NAACC mapping applications with EBTJV and/ or state brook trout mapping applications to identify overlapping watersheds.	Publish findings in peer reviewed journals and white literature	Outcome will help improve resiliency within priority watersheds by restoring connectivity for enhanced gene flow and access to more suitable habitats upstream.	BTWG, EBTJV, Trout Unlimited	December 2025
7	Develop Indicators for BP progress	Use GIT funded tracking tool to provide annual progress and updates to living resources data manager at BP to develop indicators and update CBP progress.	Derive agreed upon metrics that indicate BKT progress with BKWG members	Data contacts obtained from GIT funded tracking tool	Report progress to WG, GIT, MB, and PSC as appropriate	Provide WG, GIT, MB, and PSC with measurable progress updates	BTWG, Habitat GIT, CPB data analyst/ indicators team, TU, EBTJV	December 2025

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8	Work with state abandoned mine agencies, state resource agencies, TU and EBTJV to identify priority watersheds for AMD mitigation that will result in increased BKT occupancy in CB watershed	Quantifiable list and mapped stream reaches that will result in increased BKT occupancy through AMD treatment applications	Increased BKT occupancy throughout the Chesapeake Bay	Obtain AMD impacted stream reaches where BKT aren't present and work with state resource agencies to determine likelihood of presence post AMD treatment.	Publish findings in peer reviewed journals and white literature	Outcome will increase occupancy of BKT and show progress towards BP BKT outcome goal	BTWG, State resource agencies, state abandoned mine departments	Continuous (ongoing)