



Inland Fisheries Management Division

Maryland Brook Trout Conservation Strategies

Priority 1. Assessment

Short Term Goals

1.1 Complete the Maryland DNR's Statewide Brook Trout Fisheries Management Plan (BTFMP).

Strategy: Complete the BTFMP by August 2006 (*in progress*).

1.2 Develop a statewide database on historical and current brook trout population information from all state and university agencies, including a GIS layer that incorporates distribution, genetics, co-occurring trout species, population density, and habitat variables.

Strategy: Complete the development of this database by the end of 2008.

1.3 Complete the genetics assessment of Maryland brook trout populations.

Strategy: Genetic analysis has been completed for approximately 75% of Maryland brook trout populations, complete the analysis for the remaining 25% by 2010.

1.4 Complete the GEP (genetically effective population-size) investigation for Maryland brook trout populations.

Strategy: Develop a statewide GEP index for all brook trout populations by 2008 (*in progress*).

1.5 Re-survey brook trout distribution and population densities for brook trout populations in Garrett county, and develop summer upper and lower population boundary limits.

Strategy: Re-survey the brook trout streams investigated during 1988-1990 in Garrett County, MD (58% of all brook trout stream miles in state) and determine upper and lower brook trout population limits during peak summer water temperature period, by 2008.

Long Term Goals

1.6 Continue and refine annual brook trout population monitoring surveys.

Strategy: Survey the remaining 42% of brook trout streams in MD not covered in Objective 1.5 by 2010.

Strategy: Refine annual monitoring schedule of statewide brook trout populations to insure that each population is surveyed at least once every three years.

1.7 Conduct research to determine brook trout population life history characteristics.

Strategy: Develop cooperative projects with University researchers in order to address data gaps and develop a complete life history description for Maryland brook trout by 2010.

1.8 Investigate angler use and exploitation of Maryland brook trout populations.

Strategy: Develop cooperative projects with University researchers to investigate angler use and exploitation information for Maryland brook trout by 2010.

Priority 2. Habitat Protection

Short Term Goals

2.1 Protect brook trout habitat on state owned land through cooperation with DNR Regional Team (multi-agency teams), and by implementing the Brook Trout Fisheries Management Plan recommendations.

Strategy: Work closely with state managers from other resource and related agencies to insure that strategies for land use and management decisions that affect water quality and habitat will not have negative impacts, by 2007 (*in progress*).

2.2 Protect brook trout habitat on privately owned land by participating on and assisting citizen alliances and watershed organizations in promoting land conservation and watershed conservation programs.

Strategy: Participate on and provide assistance to the Maryland Brook Trout Alliance organization (MBTA) and statewide citizen watershed advocacy and alliance groups (Youghiogheny River, Savage River, Gunpowder River, Monacacy and Antietam, etc.) to educate, encourage and assist private landowners with habitat conservation and restoration through Federal agency programs (CREP, WHIP, LIP, etc.), by 2007 (*in progress*).

Long Term Goals

2.3 Protect brook trout habitat by developing a list of priority habitat protection projects for populations at risk of imminent extirpation and for the only intact Maryland population.

Strategy: Develop a list of habitat protection needs for the most at risk and the only intact Maryland brook trout populations, and work with the appropriate state agencies or citizens groups to direct efforts towards protection.

Priority 3. Enhancement and Restoration

Short Term Goals

3.1 Develop a priority list of brook trout populations at-risk-of-imminent extirpation, ranked on GEP value, land ownership, angler access, connectivity to other brook trout populations, and recreational value.

Strategy: Develop the priority list by statewide regions and use it to direct private and public restoration efforts, by 2008.

3.2 Develop a list of acid impacted streams (acid deposition and/or acid mine drainage) where brook trout have been extirpated, and that are only limited by water quality issues, that could support brook trout populations again if water quality improved.

Strategy: Since populations lost to urbanization and agriculture face myriad habitat and political issues that in most cases are insurmountable, acid remediation (dosers, fines, leach beds, etc.) is the largest single opportunity for brook trout restoration in Maryland. Develop a list of acid impacted streams where water quality is the only major issue and physical habitat remains good or will recover naturally, by 2007.

3.3 Develop statewide guidelines for restoring extirpated populations.

Strategy: Develop guidelines to direct how restoration will be done, including GEP evaluation, genetics of brood, etc., by 2008.

3.4 Identify and develop a list of thermal pollution sources (ponds, beaver pools, stormwater, etc.) to existing brook trout populations.

Strategy: Work with county and state agencies to identify, review, and develop mitigation plans for thermal pollution sources on identified, impacted brook trout populations, by 2008.

Long Term Goals

3.5 Develop a list of brook trout streams where exotic trout co-occur (or are encroaching) and develop and evaluate a management strategy to address the situation, by individual stream.

Strategy: Through population survey work and GEP evaluations determine the impact of co-occurring (or encroaching) exotic trout on brook trout populations and develop individual plans to mitigate the impacts.

3.6 Determine the impact of catch and release, no bait angling regulations on heavily pressured brook trout streams to enhance the size structure and density of individual populations .

Strategy: Data indicate a severe truncation of larger brook trout and lower numbers of both adults and YOY trout in the Savage River watershed in concurrence with heavy angling pressure and distance from road crossings. The Savage River watershed is Maryland's only intact watershed and consists of over 125 miles of interconnected brook

trout streams, and will be regulated as of 1/1/07 under catch and release, no bait regulations. Monitor population density and size structure through 2012.

Priority 4. Outreach

Short Term Goals

4.1 Foster interaction with anglers, conservation/environmental NGO's, and the public in regards to brook trout.

Strategy: Prepare and present informational presentations on the status, history, management, value, future (BTFMP) of brook trout in Maryland, by 2007.

4.2 Convey impacts of human activities on brook trout populations to local and state government agencies and the general public.

Strategy: Develop a series of Powerpoint presentations that illustrate the life history needs of brook trout, and the adverse impacts that can occur from anthropogenic activities, by 2007.

Strategy: Meet with county and local government agencies and planners to present the information and establish a dialog on the issues relating to brook trout conservation, by 2007.

4.3 Complete, disseminate, and implement the comprehensive Maryland DNR Brook Trout Fisheries Management Plan (BTFMP).

Strategy: Complete the Maryland BTFMP by August 2006 and begin implementing the recommendations, by fall 2006.

Long Term Goals

4.4 Increase landowner participation in habitat improvement programs.

Strategy: Publicize (via the agency website, magazine, and other outlets) information regarding all current State and Federal grants and programs available to landowners for protecting and improving water quality and habitat in brook trout streams. Provide technical assistance as needed.

4.5 Develop relationships that foster brook trout conservation.

Strategy: Facilitate achievement of brook trout conservation by establishing relationships with NGO's, municipal and county governments, land trusts, watershed alliances and other organizations.

Priority 5. Recreational

Short Term Goals

5.1 Provide and enhance brook trout recreational angling opportunities.

Strategy: Maintain, publicize, and delineate brook trout angling areas on public lands.

Strategy: Pursue public angler access to brook trout streams on private property through cooperative agreements, easements, etc.

5.2 Utilize angling regulations to provide the maximal angling opportunity while ensuring the long term viability of the resource.

Strategy: Conduct angler creel surveys and brook trout population sampling to monitor angler pressure and harvest and impacts to the overall population, and to select appropriate regulations based on this information.

Long Term Goals

5.2 Determine angler preferences and opinions on brook trout management.

Strategy: Solicit angler input for brook trout management and regulatory decisions. This information is necessary to balance the interests of anglers and Maryland's brook trout populations.