

Pennsylvania's WILD TROUT STREAMS

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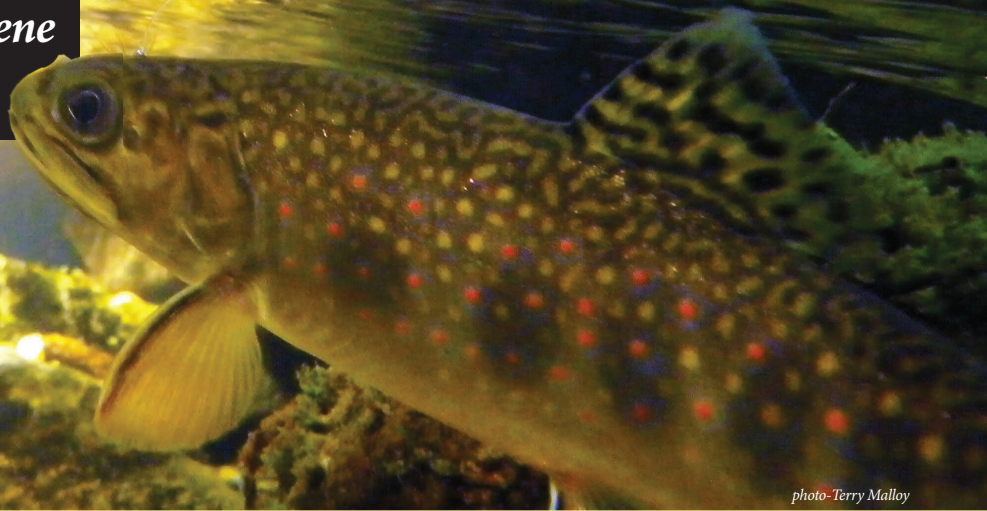


photo-Terry Malloy

Background

Pennsylvania is home to over 86,000 miles of flowing water. As of 2015, the Pennsylvania Fish & Boat Commission (PFBC) has surveyed 8,210 streams comprising 30,588 miles of stream. To date, 3,900 streams have been designated as wild trout streams as defined by PFBC policy (58 Pa. Code §57.11). Several factors are required to manage this important resource. These include identifying the presence of wild trout in streams, properly classifying the biomass of wild trout populations and providing adequate water quality protection.

Brook Trout are the only salmonid species native to Pennsylvania's streams and are the official state fish. Despite changes that have occurred to Pennsylvania's landscape over time, Brook Trout continue to be broadly distributed across Pennsylvania. Brown Trout were introduced to Pennsylvania during the 1880s and have established naturalized populations in many streams. Rainbow Trout were also introduced to Pennsylvania during 1880s. Although this species has been widely distributed, reproducing populations have been documented in only a small number of streams.

Wild trout designations and biomass classification

To be designated as a wild trout stream in Pennsylvania by PFBC, a stream must support young-of-the-year trout less than 150 millimeters (6 inches) or two or more age classes of wild trout. Tributaries to wild trout streams are also classified as wild trout streams due to their function as habitat, and in sustaining water quality for wild trout.

Based on information from PFBC stream surveys, biomass criteria have been developed for classifying wild trout streams (Table 1). It is the policy of PFBC to manage self-sustaining Class A wild trout

populations as a renewable natural resource, to conserve that resource and its angling. These waters represent the best of Pennsylvania's naturally reproducing trout populations and with rare exceptions, are managed for wild trout with no stocking. As of January 2016, PFBC had designated 646 stream sections comprising 1,830 miles as Class A Wild Trout Streams (Figure 1).

Wild trout management (without stocking) is applied to many stream sections with lower biomass classifications (Class B, C or D) as well. However, if a stream is simply designated as a wild trout stream, it does not preclude it from stocking. Numerous streams designated as wild trout streams are also stocked with trout.

Water quality and quantity protection significance of PFBC wild trout designations and biomass classes

All waters have a "designated use," that determines the level of water quality treatment required in discharges of treated industrial or municipal wastewater that are regulated by the Pennsylvania Department of Environmental Protection (PA DEP). For wild trout streams, this is critically important to adequately protect important water quality variables such as water temperature and levels of dissolved oxygen. Wild trout streams are protected at a minimum under the Cold Water Fishes (CWF) designation in Pennsylvania's Water Quality Standards. Some wild trout streams receive additional water quality protection by PA DEP, such as High Quality-Cold Water Fishes (HQ-CWF) or Exceptional Value (EV). Wetlands located in or along the floodplains of wild trout

streams are protected as EV Wetlands, Pennsylvania's highest level of protection relative to development activities that could impact these wetlands. Stream and wetland encroachment permits issued for development activities that could negatively impact wild trout streams include a seasonal restriction that prohibits work in these streams from October 1 to December 31 to minimize impacts during spawning.

Class A Wild Trout Waters receive special regulatory protection by PA DEP. Since these waters represent Pennsylvania's best wild trout waters, they are protected by PA DEP with a designation of HQ-CWF. This special protection is afforded by the anti-degradation provisions of the federal Clean Water Act. Therefore, anyone who proposes an activity that includes a discharge to a Class A stream must comply with more stringent standards than those applied to non-special protection waters.

The classification of stream sections as Class A, B, C or D has further significance in how streams are managed with respect to instream flow protection. For example, the Susquehanna River Basin Commission (SRBC) recognizes PFBC's biomass criteria in establishing varying levels of habitat loss criteria in their water withdrawal policy (SRBC Policy No. 2003-01, Table 2).

Summary

Wild trout are a special resource representative of Pennsylvania's heritage, as indicated by Brook Trout being designated as the official state fish. The presence of wild trout in a stream is an indicator of a clean, coldwater aquatic environment. Wild trout populations symbolize a quality angling experience typically associated with an aesthetically pleasing environment. It will be the priority of PFBC to continue to protect, conserve and enhance Pennsylvania's wild trout resource for the enjoyment of future generations. ☐



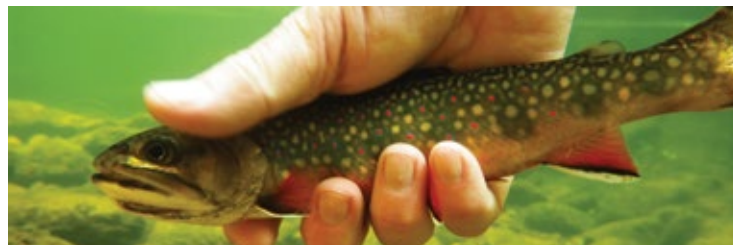
Figure 1. Distribution of Class A Wild Trout Streams

TABLE 1: BIOMASS CLASSIFICATION CRITERIA (A, B, C, D AND E)

Class	Criteria
A (Brook Trout)	a. Total wild Brook Trout biomass at least 30 kg/ha (26.7 lbs./acre) b. Total biomass of wild Brook Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) c. Wild Brook Trout biomass must comprise at least 75% of the total trout biomass
A (Brown Trout)	a. Total wild Brown Trout biomass at least 40 kg/ha (35.6 lbs. acre) b. Total biomass of wild Brown Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) c. Wild Brown Trout biomass must comprise at least 75% of the total trout biomass
A (Mixed Brook Trout and Brown Trout)	a. Combined wild Brook Trout and Brown Trout biomass at least 40 kg/ha (35.6 lbs. acre) b. Total biomass of wild Brook Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) c. Total biomass of wild Brown Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) d. Wild Brook Trout biomass comprises less than 75% of total trout biomass e. Wild Brown Trout biomass comprises less than 75% of total trout biomass
A (Mixed Brook Trout and Rainbow Trout)	a. Combined wild Brook Trout and wild Rainbow Trout biomass at least 40 kg/ha (35.6 lbs. acre) b. Total biomass of wild Brook Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) c. Total biomass of wild Rainbow Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) d. Wild Brook Trout biomass comprises less than 75% of total trout biomass e. Wild Rainbow Trout biomass comprises less than 75% of total trout biomass
A (Mixed Brown Trout and Rainbow Trout)	a. Combined wild Brown Trout and wild Rainbow Trout biomass at least 40 kg/ha (35.6 lbs. acre) b. Total biomass of wild Brown Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) c. Total biomass of wild Rainbow Trout less than 15 centimeters or 5.9 inches at least 0.1 kg/ha (0.089 lbs./acre) d. Wild Brown Trout biomass comprises less than 75% of total trout biomass e. Wild Rainbow Trout biomass comprises less than 75% of total trout biomass
A (Rainbow Trout)	Total biomass of wild Rainbow Trout less than 15 cm (5.9 inches) in total length at least 2.0 kg/ha (1.78 lbs./acre)
B	a. Total wild Brook Trout biomass at least 20 kg/ha (17.8 lbs./acre) and less than 30 kg/ha (26.7 lbs./ acre) b. Total wild Brown Trout, wild Brook Trout and wild Brown Trout, wild Brook Trout and wild Rainbow Trout or wild Brown Trout and wild Rainbow Trout biomass at least 20 kg/ha (17.8 lbs./ acre) and less than 40 kg/ha (35.6 lbs./acre)
C	Total wild trout biomass at least 10 kg/ha (8.9 lbs./ acre) and less than 20 kg/ha (17.8 lbs./acre)
D	Total wild trout biomass greater than 0 kg/ha and less than 10 kg/ha (8.9 lbs./ acre)
E	Total wild trout biomass of 0 kg/ha (no wild trout)

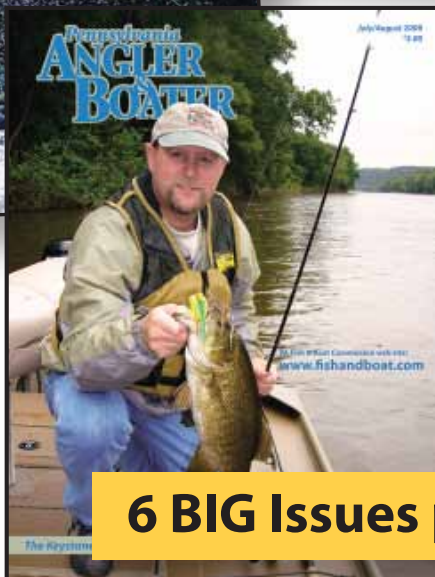
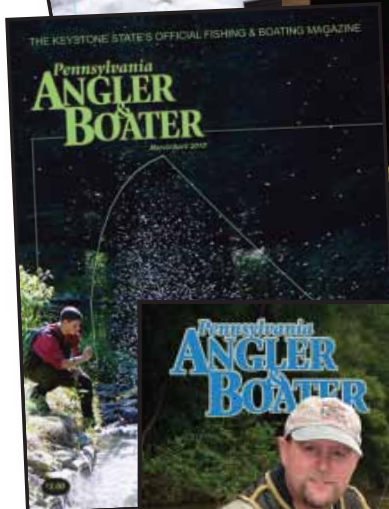
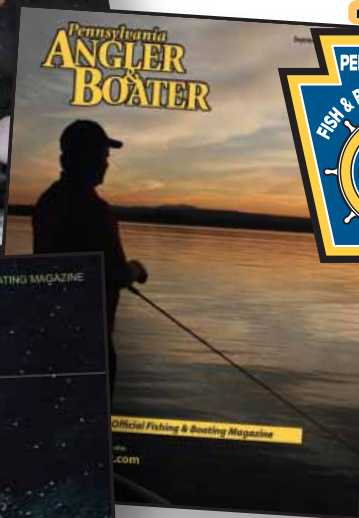
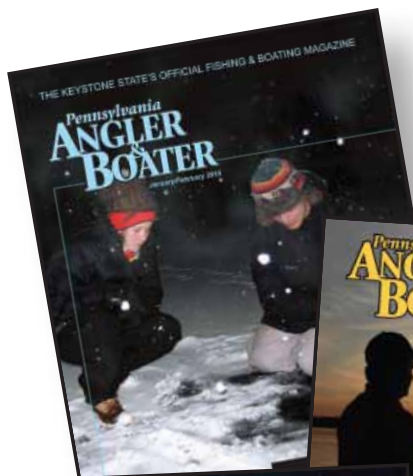
TABLE 2: EFFECT OF WILD TROUT BIOMASS CLASSIFICATIONS ON SUSQUEHANNA RIVER BASIN COMMISSION WATER WITHDRAWAL PERMITTING

PA DEP Water Quality or PFBC Wild Trout Designation	Habitat Loss Criteria
Exceptional Value	Less than 5%
High Quality-Cold Water Fishes or Class A	Less than 5% (7.5% with social and economic justification)
Cold Water Fishes; Class B	Less than 10%
Cold Water Fishes; Class C and D	Less than 15%



Brook Trout

Photo: Terry Malloy



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