

MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE



Forest Management Recommendations for Brook Trout

Background

Brook trout (*Salvelinus fontinalis*), commonly referred to as squaretail, brookie, and speckled trout, are native to Maine. This colorful fish is the most preferred sport fish sought by Maine anglers. Size may vary, depending on water temperature, productivity, and food sources, but 3 year-old brook trout in Maine lakes may range from 7.5 to 17.5 inches long. Stream populations are typically slower growing where lengths of 6 to 10 inches are more common place, although some populations mature and reproduce at lengths smaller than 6 inches.

Maine is the last stronghold for brook trout in the eastern United States. There are more than twice as many watersheds supporting brook trout in Maine than all of the other 16 states within the eastern brook trout range combined. Maine is also the only state with extensive intact lake and pond dwelling populations of wild brook trout.

Brook trout require clean, cool, well oxygenated water and are very sensitive to changes in habitat and water quality. Rivers and streams typically provide spawning and nursery habitat. Adults are commonly resident in streams, but migrate throughout and between drainages to meet seasonal life history requirements.

Stream habitat suitability is maintained by the presence of intact, stable, mature wooded riparian corridors that: conserve forest soils, provide shade to reduce stream warming, protect stream water quality, provide cover for fish, provide a source of woody debris and leaf litter from mature trees that maintain critical in-stream habitat for fish and the aquatic insects they feed upon (leaves provide the energy source that drives productivity in streams). Floodplain and fringe wetlands associated with streams are a significant source of springs and groundwater discharge that maintain stream flows and cool temperatures during warm low flow summer periods. Protection of these important riparian and wetland functions insures that the overall health of the stream habitat and watershed is maintained.

Maine brook trout fisheries are unique and highly valuable, but vulnerable to habitat alteration that may be caused by poorly planned and implemented land management activities, including road and trail construction, as well as timber harvesting. However, well planned

forestry operations can protect habitat and help ensure that forests remain as forest, which is the most beneficial land use for brook trout and many other fish and wildlife.

Management Recommendations

Brook trout are not afforded any special state or federal regulatory protection, and as such provided management recommendations are advisory.

The MDIFW recommends following Best Management Practices (BMPs) during all road and trail building activities, as well as timber harvesting. BMPs are detailed in the booklet entitled “[Best Management Practices for Forestry](#)”, which offers guidance on managing and protecting water quality, installing road-stream crossings, and providing fish passage. This information is available at:

www.maine.gov/dacf/mfs/publications/handbooks_guides/bmp_manual.html or contact the Maine Forest Service at 1-800-367-0223).

Potential harmful impacts to fish and wildlife may be further minimized by designating “low impact riparian protection areas” adjacent to streams and stream-associated fringe and floodplain wetlands in forest management and harvest plans. Smaller streams may be greatly influenced by land management practices; these systems benefit the most from well-managed and intact riparian corridors.

The MDIFW also recommends limiting the harvest of trees and alteration of other vegetation within 100 feet of streams and their associated fringe and floodplain wetlands to maintain an intact and stable mature stand of trees, characterized by heavy crown closure and resistant to wind-throw. In some situations wider buffers should be considered where severe site conditions (i.e., steep slope, vulnerable soils, poor drainage, snow pack, etc) increase risk to soil and stand instability. Any harvest within the riparian buffer zone should be selective and less valuable trees may remain uncut to enhance stand integrity and maturity.