

MAINE DEPARTMENT OF
INLAND FISHERIES AND WILDLIFE



Forest Management Recommendations for the Wood Turtle (*Glyptemys insculpta*)



Photos: Derek Yorks MDIFW

Background

The wood turtle (*Glyptemys insculpta*) is one of the state's rarest turtles, listed as Special Concern. It is a medium sized turtle (5 – 8 inches) with a distinct sculpted shell and orange coloration on the neck and legs. They are a handsome and long-lived species that is known to live to at least 58 years of age.

No other Maine turtle species makes such extensive use of both aquatic and terrestrial habitats. For much of the year, wood turtles are found in slow-moving clear-water streams with a predominantly sand or gravel substrate. During late spring and summer they utilize the surrounding upland areas including forests, floodplains, meadows, and hayfields. From late fall to early spring, wood turtles hibernate underwater in sheltered areas of rivers, including pool bottoms, under riverbanks, or under woody debris.

In a given year, wood turtles can cover a lot of ground. Radio-telemetry work in Maine and elsewhere confirms that individual wood turtles move long distances up and down stream (median = 2.3 mi; 95th percentile = 4.0 mi; n=32) during their active period from early spring through fall. During this time, wood turtles also move substantial distances away from streams into the surrounding uplands (straight-line average = 623 ft; Max =3041 ft; n = 53). Females typically travel farthest from streams during the early summer when they seek out nesting sites. If suitable nesting conditions are not found close to the stream they will travel considerable distances to nest in sunny places with bare soil, sand, or gravel such as gravel pits, agricultural fields, and forest clearings.

Wood turtles have experienced declines throughout their range in eastern North America. The principal threats are direct mortality by vehicles on roads, encounters with motorized equipment in agricultural,

forestry, and haying operations, as well as collection as pets. These problems are exacerbated when combined with widespread fragmentation, and loss of their upland habitat associated with development. Like many turtle species, wood turtles are long-lived and slow to mature, making them particularly vulnerable to adult mortality. It can take years to replace adult turtles when they are killed and even a small number of annual deaths can be devastating to a population. To thrive, wood turtles require an intact matrix of riverine and upland habitat that is free of intensive human activity.

Forest management can be a compatible land use for wood turtles if precautions are made. Timing considerations are critical. Their activity period begins in early spring and continues into the fall so a late fall or winter harvest is preferable.

Management Recommendations

A high diversity of Maine's wildlife species require or make use of intact riparian forest habitat. The following practices, adapted from "Threatened and Endangered Species in Forests of Maine: A guide to Assist with Forestry Activities" (1999), are recommended for the wood turtle to protect the riparian and upland habitats this species requires.

Extent: Maintain a forested riparian management zone within 300 ft of the banks of streams and rivers hosting documented wood turtle occurrences, and for 2.0 miles upstream and 2.0 miles downstream.

Activity within the Riparian Management Zone (0 to 300 ft):

- Refrain from active cutting operations and motorized vehicle access between April 15th and October 15th
- Avoid any motorized harvest activity within 50 ft of the high water shoreline
- Manage with single-tree or small group-selection cuts that maintain 60-70% canopy cover within 100 ft and a forested condition within 300 ft of the stream bank
- Harvest only during dry or frozen ground conditions
- Avoid or minimize the construction of permanent roads or openings.
- Build temporary bridges across all perennial streams prior to any motorized equipment crossing