

Wood Turtle (*Glyptemys insculpta*) Occurrences and Conservation Needs

Salisbury, Connecticut

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The wood turtle once ranged widely across Connecticut in habitats characterized by meandering streams and their surrounding floodplains, fields, and forests. Neither strictly aquatic nor terrestrial -- it lives both on land and in water -- the wood turtle is vulnerable to loss of both types of habitats. In addition to habitat loss and fragmentation, wood turtles face threats from agricultural machinery, invasive plants in nesting habitat, road-crossing mortality, degraded water quality, disease, and illegal collection for the black market pet trade. (See Klemens et al. 2021 *Conservation of Amphibians and Reptiles in Connecticut*)

Facing substantial declines over the last century, wood turtles have been petitioned for listing under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service will review the species status by 2023 to make a listing determination. The wood turtle is designated as a Species of Greatest Conservation Need (SGCN) in the State Wildlife Action Plans of all 17 states in which they occur and is considered endangered by the International Union for Conservation of Nature. The wood turtle is listed as a Species of Special Concern in the State of Connecticut.

In Salisbury, the wood turtle is known from the Salmon Kill, and its tributary streams, Factory Brook, Spruce Swamp Creek, and Moore Brook. These streams have the appropriate depth and in-stream morphology to support wood turtles. Moore Brook has its headwaters at Fisher Pond and flows under Beaverdam Road southward, joining Spruce Swamp Creek at Rte. 44, and flowing southward. Factory Brook flows north-eastward under Salmon Kill Road. Factory Brook and Spruce Swamp Creek have a confluence in the wooded swamp that is part of the Pope Property and these combined flows are the headwaters of the Salmon Kill, which joins the Housatonic River at White Hollow Farm, opposite the Regional High School.

The first **documented** occurrence of the wood turtle in Salisbury was a shell which I collected in 1982 and deposited at the American Museum of Natural History in New York (AMNH 125015). This was the only wood turtle reported from Salisbury in Klemens, 1993:171. *Amphibians and Reptiles of Connecticut and Adjacent Regions*). This wood turtle was from an unnamed tributary to the Salmon Kill 1.25 SW of Lime Rock. Subsequently wood turtles were **documented** in the Salmon Kill valley (2010-AMNH 175028), Factory Brook/Pope Property (2021, 2024), Spruce Swamp Creek at the SWSA ski jump (2017), and Moore Brook northwest of Rte. 44 (multiple reports, most recently **documented** in 2020). There is also a single wood

turtle found in 2021 from the NY/CT state line in Kelsey Brook, which is part of the Ten-Mile River drainage basin which flows southward in New York State, and then loops back into Connecticut joining the Housatonic River near Gaylordsville. **Documented** occurrences are those animals where a specimen exists and/or a Natural Diversity Data Base (NDDB) Special Animal Report Form is filed with the DEEP ideally accompanied by a photograph, and/or mapped in Klemens et al., 2021:125. As individual wood turtles can live for decades, these records are considered extant and representative of the known distribution of this species in Salisbury.

I have received verbal reports of additional wood turtles observed within the Salmon Kill drainage basin, but unless a report is filed in some manner, these are considered to be **undocumented**. As the wood turtle is now of great conservation concern, including a potential listing under ESA, it is vitally important that new records are appropriately documented and submitted through the Town's Land Use Office to the DEEP. Wood turtle remains (shells/dead animals including road kills) should be collected and deposited in a museum collection and reported to the DEEP. Possession of wood turtle remains is technically a violation of State law, and if the wood turtle is listed under ESA, will be a violation of Federal law. I am able to help individuals with the documentation, submission, and verification process. Photographing wood turtles found is another way occurrences can be documented. It is strongly recommended that the turtles not be handled or disturbed in any way. Accurate locality information using GPS or in-depth description is essential as is the date, time of day, and weather conditions. The more information we have on this species, the better the Town and its land use agencies, the Inland Wetlands and Watercourses Commission (IWWC) and the Planning and Zoning Commission (PZC) can secure their future in Salisbury.

When analyzing land use applications within 1,000 feet of the Salmon Kill and its major tributaries (Moore Brook, Spruce Swamp Creek, and Factory Brook) the IWWC and PZC should consider the following. Conservation of wood turtles is focused on three zones. Zone 1 is the in-stream habitat, Zone 2 is a 300-foot buffer including floodplain on each side of the stream, and Zone 3 is an additional 700 feet on each side of the stream for a total buffer around a high quality wood turtle stream of ideally 1,000 feet on each side of the stream. The DEEP, NRCS, and Jones et al. 2015 recommend a conservation buffer area of 1,000 feet on each side of the Salmon Kill and its major tributaries. That determination is in part recognition of the importance of this system for wood turtles due to its high quality and lack of habitat fragmentation.

Zone 1 is the in-stream habitat where no impacts should occur. Zone 2 is the vitally important buffer to protect the terrestrial habitat to support wood turtles and where impacts should be kept to a minimum, and Zone 3 allows connectivity between population nodes within a riparian

system. In Salisbury, the Zone 3 area is often composed of working landscapes, such as agricultural fields. Management of Zone 3 employs wood turtle friendly mechanized mowing regimens (See Klemens et al., 2021: 198, 234-235). These Best Management Practices (BMPs) call for specialized mowing blades, prescribed mowing heights, and delaying the first cut of the fields until the end of June to avoid mortality and disturbance of nesting wood turtles. The early June 2024 mowing of the fields at the Pope Property contravened Zone 3 BMPs. Other techniques for managing wood turtles in Zone 3 may call for wildlife exclusion fencing to deter wood turtles from venturing into developed areas. This fencing was used at the recently approved (2024) Dresser Woods affordable housing development to prevent movement from the vernal pools and floodplain into the development. While focused primarily on the protection of vernal pool amphibians, a collateral benefit of this fencing at Dresser Woods would be to exclude wood turtles moving into the development from the Spruce Swamp Creek floodplain.

Literature Cited:

Jones, M.T., L.L. Willey, P. R. Sievert, and T.S.B. Akre. 2015. **Status and Conservation of the Wood Turtle in the Northeastern United States.**

Klemens, M. W. 1993. **Amphibians and Reptiles of Connecticut and Adjacent Regions.**

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