

F. A. HESKETH & ASSOCIATES, INC.

3 Creamery Brook
East Granby, CT 06026
(860) 653-8000 (860) 844-8600(Fax)
email: ghesketh@fahesketh.com

MEMORANDUM

To: Maureen Corley **Date:** March 23, 2022
From: Guy Hesketh, P.E.
Subject: Woodland Springs – CT DEEP Review Comments
Our File: 96159

Maureen, in response to your inquiry to address CT DEEP comments, I offer the following:

Comments from 8/2/2021 memo form Linda Brunza.

Wildlife Division

The proposed design incorporates measures to protect the wood turtle. Permanent measures include the use of cap-cod style curbing for proposed roadways and parking areas to allow the turtles to traverse curbing on what we anticipate will be low-volume roadways. Units are proposed in clusters to reduce overall development footprint and units are proposed far away from the waterway and its associated habitat area as practicable. During construction, the eastern boundary of the proposed development area will be bordered by sediment fence erosion control (SFEC), which will provide an effective barrier to the east, where wood turtles, if present on the site, would be anticipated to habitate.

Regarding the buffer between the proposed site work and the adjacent waterway, we offer the following. The area between the eastern limits of the project and the Middle River is primarily wooded and will be left undisturbed. This buffer is approximately 150-foot wide and thus exceeds the 100-foot recommended buffer around waterways.

MEMORANDUM

Inland Wetlands and Watercourses

The Middle River is located to the east of the project, on the opposite side of an existing railroad grade. Wetlands associated with the river are located along the eastern and northeastern limits of the development parcel. These wetlands were field delineated by the Project Soil Scientist and were survey located. The limits of the wetlands and the Middle River are clearly delineated on the Project Plans. The possible future wetlands crossing depicted on the Master Plan (MA-1), is for planning purposes only and is NOT proposed as part of the development of Phase 2 of Woodland Springs. If and when, in the future, development of this emergency access drive is pursued, the Applicant understands that additional permits will be required by the CT DEEP and the ACOE.

Water Diversion

There are no water diversions proposed as part of the project.

Air Management

It is anticipated that the site contractor will use newer off-road construction equipment for the site construction and newer over-the-road vehicles for the site construction. The Contractor will be instructed to limit idling of mobile sources to 3 minutes. The Contractor will be advised, in writing, to enforce the idling restriction.

Comments from 6/8/2021 NDDB Determination Letter from Emily Perko.

Wood Turtle

Site design includes measures for protection of wood turtles include:

Permanent Design Measures:

1. Elimination of culvert crossings.
2. The use of cape-cod stye curbing on the low volume drives to allow turtles to cross unimpeded.
3. Clustering mutli-family units to reduce development footprint.
4. Not using road surfaces and side slopes that mimic sandy nesting areas.

MEMORANDUM

Construction Protection Measures:

5. Land disturbance and excavation confined to the upland at distances of greater than 10 meters from the Middle River. The proposed disturbance is approximately 150 feet from Middle River.

The work is anticipated to start between April 1 and October 31 of 2022. The following procedures are incorporated into the design and/or will be implemented:

6. Installation of exclusionary measures at the eastern limits of construction where sediment fence erosion control is specified. This fencing is over 20 inches tall and will be keyed into the ground. It will be routinely monitored during construction to make sure it is keyed into the ground and no gaps develop.
7. The following plan will be implemented for turtle management:
 - a. Prior to the start of construction, the construction area will be monitored and wood turtles removed outside of the fenced area to suitable habitat areas outside of the fence. This will be done by a qualified herpetologist.
 - b. A representative of the General Contractor will search the work area each morning prior to any work being done for the day.
 - c. All construction personnel will be apprised of the possible presence of turtles and instructed that if they find a turtle in the work area, to gently pick it up and move it to outside the fenced area along the eastern end of the work area.
 - d. The site supervisor will have all fencing removed after areas
8. A copy of the CT DEEP Turtle Bulletin (Attached) will be added to the Site Specific Stormwater Pollution Control Plan required for the CT DEEP General Stormwater Permit. A copy of the Turtle Bulletin will also be posted on the bulletin board in the Site Construction Trailer Office and provided to foreman and crew of all trades. A copy of the Turtle Bulletin is attached.
9. No heavy machinery will be parked within 250 feet of Middle River.
10. No direct impacts to wetlands will occur.

Freshwater Mussels and Brook Floater

Site design includes measures for protection of freshwater mussels and brook floater include:

MEMORANDUM

Permanent Design Measures:

1. Use of water quality basins that capture and treat the Ct DEEP's minimum-recommended water quality volume. This adherence to water quality standards will protect the adjacent waterway from adverse impacts from pollutants and thermal loading from stormwater runoff.
2. A vegetative buffer greater than the 100-foot to waterways is provided between the Middle River and areas of proposed site disturbance. A buffer of over 400 feet is provided from impervious areas of the proposed development to the Middle River.
3. No instream construction is proposed nor is there any proposal to disconnect waterways with culvert crossings.

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Wood Turtle

Glyptemys insculpta

Background

Wood turtles may be found throughout Connecticut, but they have become increasingly rare due to their complex habitat needs. Wood turtles also have become more scarce in Fairfield County due to the fragmentation of suitable habitat by urban development.

Range

Wood turtles can be found across the northeastern United States into parts of Canada. They range from Nova Scotia through New England, south into northern Virginia, and west through the Great Lakes region into Minnesota.



© PAUL J. FUSCO

Description

The scientific name of the wood turtle, *Glyptemys insculpta*, refers to the deeply sculptured or chiseled pattern found on the carapace (top shell). This part of the shell is dark brown or black and may have an array of faint yellow lines radiating from the center of each chiseled, pyramid-like segment due to tannins and minerals accumulating between ridges. These segments of the carapace, as well as those of the plastron (bottom shell), are called scutes. The carapace also is keeled, with a noticeable ridge running from front to back. The plastron is yellow with large dark blotches in the outer corners of each scute. The black or dark brown head and upper limbs are contrasted by brighter pigments ranging from red and orange to a pale yellow on the throat and limb undersides. Orange hues are most typical for New England's wood turtles. The hind feet are only slightly webbed, and the tail is long and thick at the base. Adults weigh approximately 1.5 to 2.5 pounds and reach a length of 5 to 9 inches.

Habitat and Diet

Wood turtles use aquatic and terrestrial habitats at different times of the year. Their habitats include rivers and large streams, riparian forests (adjacent to rivers), wetlands, hayfields, and other early successional habitats. Terrestrial habitat that is usually within 1,000 feet of a suitable stream or river is most likely used. Preferred stream conditions include moderate flow, sandy or gravelly bottoms, and muddy banks.

Wood turtles are omnivorous and opportunistic. They are not picky eaters and will readily consume slugs, worms, tadpoles, insects, algae, wild fruits, leaves, grass, moss, and carrion.

Life History

From late spring to early fall, wood turtles can be found roaming their aquatic or terrestrial habitats. However, once temperatures drop in autumn, the turtles retreat to rivers and large streams for hibernation. The winter

is spent underwater, often tucked away below undercut riverbanks within exposed tree roots. Dissolved oxygen is extracted from the water, allowing the turtle to remain submerged entirely until the arrival of spring. Once warmer weather sets in, the turtles will become increasingly more active, eventually leaving the water to begin foraging for food and searching for mates. Travel up or down stream is most likely, as turtles seldom stray very far from their riparian habitats.

Females nest in spring to early summer, depositing anywhere from 4 to 12 eggs into a nest dug out of soft soil, typically in sandy deposits along stream banks or other areas of loose soil. The eggs hatch in late summer or fall and the young turtles may either emerge or remain in the nest for winter hibernation. As soon as the young turtles hatch, they are on their own and receive no care from the adults.

Turtle eggs and hatchlings are heavily preyed upon by a wide variety of predators, ranging from raccoons to birds and snakes. High rates of nest predation and hatchling mortality, paired with the lengthy amount of time it takes for wood turtles to reach sexual maturity, present a challenge to maintaining sustainable populations. Wood turtles live upwards of 40 to 60 years, possibly more.

Conservation Concerns

Loss and fragmentation of habitat are the greatest threats to wood turtles. Many remaining populations in Connecticut are low in numbers and isolated from one another by human-dominated landscapes. Turtles forced to venture farther and farther from appropriate habitat

to find mates and nesting sites are more likely to be run over by cars, attacked by predators, or collected by people as pets.

Other sources of mortality include entanglements in litter and debris left behind by people, as well as strikes from mowing equipment used to maintain hayfields and other early successional habitats.

The wood turtle is imperiled throughout a large portion of its range and was placed under international trade regulatory protection through the Convention on International Trade in Endangered Species (CITES) in 1992. Wood turtles also have been included on the International Union for Conservation of Nature's (IUCN) Red List as a vulnerable species since 1996. They are listed as a species of special concern in Connecticut and protected by the Connecticut Endangered Species Act.

How You Can Help

- *Conserve riparian habitat. Maintaining a buffer strip of natural vegetation (minimum of 100 feet) along the banks of streams and rivers will protect wood turtle habitat and also help improve the water quality of the stream system. Stream banks that are manicured (cleared of natural shrubby and herbaceous vegetation) or armored by rip rap or stone walls will not be used by wood turtles or most other wildlife species.*
- *Do not litter. Wood turtles and other wildlife may accidentally ingest or become entangled in garbage and die.*
- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females. They should **not** be collected but can be helped on their way. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side in the direction they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns, and educate others.*
- *If you see a wood turtle, leave it in the wild, take a photograph, record the location where it was seen, and contact the Connecticut Department of Environmental Protection (DEP) Wildlife Division at dep.wildlife@ct.gov, or call 860-424-3011 to report your observation.*

