



Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

*NDDB REPORT*

March 10, 2020

Thomas Ryder  
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Project: Repair and partial replacement of existing masonry seawall at 6 Manitou Court in Westport, Connecticut  
NDDB Determination No.: 202003576

Dear Mr. Ryder,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the proposed repair and partial replacement of an existing seawall at 6 Manitou Court in Westport, Connecticut. According to our information there are extant populations of State Special Concern *Malaclemys t. terrapin* (northern diamondback terrapin) in the area where this work will occur.

**Diamondback Terrapin:** The northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water). Diamondback terrapins are most abundant in tidal estuaries west of the Connecticut River. They are tolerant of some pollution and are known to congregate at warm water discharge outputs of power stations along the Connecticut shoreline. Habitat destruction, degradation or alteration and fragmentation of saltmarsh and sandy coastal shores all threaten diamondback terrapin populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to saltmarshes and sandy borders of coastal marshes and dunes are all potentially detrimental activities for the diamondback terrapin. The greatest concern during projects occurring in diamondback terrapin habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency of habitat altering machinery would be beneficial in minimizing direct mortality of adults.

**Recommended Protection Strategies:**

I recommend that extra care is taken to ensure that no turtles are injured during the construction and maintenance portion of this project. The ideal time to do this work is when the turtles are less active in the months of November through March. If that is not possible then the work area should be searched each day before work begins to ensure there are no terrapins in the immediate work area. I have attached a fact sheet for your files and so that you may educate project workers. This letter is valid for two years. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by March 10, 2022.

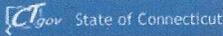
Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3378, or [karen.zyko@ct.gov](mailto:karen.zyko@ct.gov) .  
Thank you for consulting the Natural Diversity Data Base.

Sincerely,



Karen Zyko  
Environmental Analyst





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**NORTHERN DIAMONDBACK TERRAPIN**  
*Malaclemys t. terrapin*



**Background:** The Northern diamondback terrapin is the only species of turtle in North America, including Connecticut, that spends its life in brackish water (water that is less salty than sea water). Diamondback terrapins are most abundant in tidal estuaries west of the Connecticut River. They are tolerant of some pollution and are known to congregate at warm water discharge outputs of power stations along the Connecticut shoreline.

In the early 1900s, diamondbacks were a popular gourmet food. Their numbers declined due to unregulated harvesting and habitat loss through coastal development. Motorboat propellers have been responsible for inflicting serious wounds to terrapins, usually causing death. Terrapins also become trapped and then drown in submerged crab and lobster pots. During the nesting season, many females are killed as they attempt to cross coastal roads in search of nesting areas.

The diamondback terrapin is currently protected by Connecticut Regulation 26-66-14a which states that there is no open season for taking terrapins in any development stage. Therefore, diamondback terrapins can no longer be collected or possessed in Connecticut.

**Range:** The northern subspecies of the diamondback terrapin occurs along the Atlantic coast from Cape Cod, Massachusetts, to Cape Hatteras, North Carolina. Other subspecies are found from Cape Hatteras south to the Florida Keys and west along the Gulf Coast and the Texas coastline.

**Description:** Diamondback terrapins have a gray, light brown, or black top shell (carapace) that is broad and patterned with concentric rings or ridges. The carapace is also wedge-shaped, and when viewed from above, the widest part is in the rear. The under shell (plastron) can range from yellowish to greenish gray, with or without bold, dark markings. The large feet are webbed, and the head and limbs may be spotted. Male terrapins are smaller than the female, weighing an average of 0.5 pounds and measuring 4-5.5 inches in length. Females weigh an average of 1.5 pounds and measure 6-9 inches long.

**Habitat and Diet:** Diamondback terrapins live in the brackish water of salt marshes, estuaries, and tidal creeks. They feed on fish, marine snails, crabs, marine and tidal mollusks, carrion, clams, and worms.

**Life History:** Adult terrapins nest on sandy borders of coastal salt marshes or in dunes from June to July. Maximum egg-laying activity usually occurs at high tide, ensuring that the eggs will be laid above the high water level. The females dig cavities 4 to 8 inches deep, depositing 4 to 18 pinkish white eggs (average 9), which are about 1.5 inches long, leather-like, and thin-shelled, with a blunt end. The eggs hatch in 9 to 15 weeks. The 1 to 1.25-inch hatchlings are patterned similar to the adults, but brighter. Occasionally after hatching, the young may remain in the nest for the first winter, emerging in April and May to head for brackish waters. Multiple nestings during one season have not been documented in Connecticut; however, studies in New York indicate that females lay at least two clutches per nesting season. Females reach sexual maturity in about 7 years; males mature earlier.

**Interesting Facts:** The diamondback terrapin is the only marine species of turtle that regularly occurs in Connecticut. The turtles hibernate during winter submerged in the mud of tidal creeks.

During the early 1930s, when terrapin numbers decreased, the popularity of this turtle as a food item faded. Terrapin populations have since rebounded with the lack of harvesting pressure.

Adult terrapins are often seen basking on mud flats.

The excess salt that terrapins consume in their diet is excreted through special glands at the eye.



Research indicates that diamondback terrapins have temperature-dependent sex determination. Artificial incubation of eggs at low temperatures has produced all male hatchlings, while incubation at higher temperatures has produced all females.

Diamondback terrapin nests are depredated by skunks, raccoons, and foxes. Upon emerging from the nest, young hatchlings are often eaten by gulls, crows, and black-crowned night-herons. Although the hatchlings are less vulnerable to predation when in water, they can still be preyed on by herons and predatory fish.

Terrapins have a long lifespan of about 25 to 40 years.

**How You Can Help:** You can help conserve Connecticut's diamondback terrapin population by supporting the protection, conservation, and restoration of Connecticut's salt marsh habitats.

If you are a boater, navigate carefully in tidal creeks and estuaries where large numbers of terrapins may gather in late spring to mate at the water's surface. Boaters are also reminded that it is a violation of the Federal Pollution Control Act to pump or discharge any kind of oil into navigable waters. Oil spills have the potential to devastate many coastal wildlife populations, including terrapins.

All turtles should stay in the wild. Not only is collecting a diamondback terrapin illegal in Connecticut, but it can hurt the population. A terrapin taken from the wild often becomes sick and dies. When a captive turtle is released, it is often killed by predators or run over by vehicles as it tries to return to its original home from unfamiliar surroundings.

While driving on coastal roads in June and July, be aware of any turtles that may be crossing the road to nest. If you see a turtle crossing the road, move it to the side that it is headed, if it is safe for you to do so. Do not take the turtle to a "safer" place. Remember, turtles have a home area that they are familiar with and they will try to return there.

(rev. 9/2008)

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