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**EFFECTIVENESS OF NEST SITE RESTORATION FOR THE ENDANGERED
NORTHERN MAP TURTLE**

**REPORT NO. 1: NEST SITE SELECTION AND NEST SUCCESS FROM 2013-
2014 AND ESTABLISHMENT OF ENVIRONMENTAL CENTER**

Problem

The Northern Map Turtle, *Graptemys geographica*, is a Maryland state Endangered Species, found only in the lower Susquehanna River in Maryland. The only area where nests of this species are not heavily impacted by predators occurs in the town of Port Deposit. However, turtles in Port Deposit must often cross a gravel parking lot with constant vehicular traffic to reach the nesting sites, and turtles may become disoriented by human disturbance and move away from the river, towards the main roadway through the town, Maryland Route 222. In addition, the soil in which the turtles are nesting is heavily compacted and turtles often abandon nest sites after unsuccessful nesting attempts.

Objective

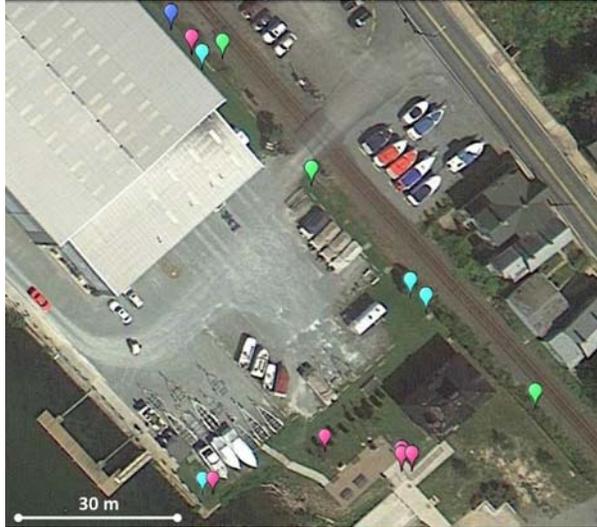
The objectives of this project are to (a) to rehabilitate the existing nesting areas in Port Deposit to enhance nesting success, (b) find ways to avoid disturbance by humans during nesting, (c) work with town officials in establishing an environmental education center about the Susquehanna River and the Northern Map Turtle.

Description

The intent of this project was to assess the current nesting site placement and success of Map Turtles nesting at Port Deposit in terms of (a) timing of nesting, (b) spatial distribution of nests, (c) timing of emergence of hatchlings, and (d) success of nests. Those data will be compared with data collected following nest site rehabilitation, which will occur in 2015. Figure 1 below shows the location of the primary nesting sites in Port Deposit with placement of nests from one year of the study.

TU staff worked with Port Deposit to design an environmental education center that will focus on the Susquehanna River and the Northern Map Turtle. Specifically, the goal was to help design the displays that visitors to the education center will encounter both along the "Greenway" that borders the river and in the education center itself.

Fig. 1: Site photo showing Tome Gas House, the adjacent marina, and nesting sites of Northern Map Turtles (in pink, green, and blue).



Results

Data from 2013-2014 showed that nesting in Port Deposit occurred from late May to late July. Number of nests varied from 7-8 per year and no nests were attacked by predators. Most nests were found adjacent to the Tomes Landing Marina, but a few were found upstream near condominiums. Distance from water ranged from 1-60 meters and no differences were found between years. Hatching overwintered in the nest, with emergence in April and May of the following year.

TU staff worked with officials from SHA and Port Deposit to design the interpretive signs for the education center and the text of these signs is largely complete. Installation will occur in 2015 as part of Phase II of this project. Rehabilitation of the nesting areas has also been designed and installation will occur in 2015 as part of Phase II of this project.

Report Information

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Link to Phase I Final Report:

http://www.roads.maryland.gov/OPR_Research/MD-15-SHA-TU-1-1_Effectiveness-of-Nest-Site-Restoration-for-EndangeredNMP_Report.pdf