

Grant Program, Number and Title: RCN, GSA 0042, Assessment of Spotted Turtle in New Jersey

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Assessment of Spotted Turtle in New Jersey Final Report

by Jason Tesauro

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In October 2018, Jason Tesauro Consulting, LLC (Tesauro Consulting) entered into General Services Agreement 0042 with the Wildlife Management Institute, Inc. (WMI) to conduct an assessment of the spotted turtle (*Clemmys gutatta*) in New Jersey during the 2019 field season. The assessment entailed conducting visual rapid assessment (VRA) and trapping rapid assessment (TRA) surveys at *six sites following the *Spotted Turtle Assessment Protocol* developed by the Spotted Turtle Working Group and collecting blood samples for DNA analysis from seven to ten turtles per site. A summary of the work completed under this agreement follows:

*The agreement was informally amended in April by Zarate/NJDFW, Spotted Turtle Working Group, and WMI to sample five sites so that resources could be reallocated towards collecting additional blood samples

Identification of Spotted Turtle Survey Sites

Between January and March 2019 (Quarter 1 of the grant period), six spotted turtle sampling sites were identified using data from the NJ Division of Fish and Wildlife, land managers, and local biologists. The sites (abbreviated for data sensitivity reasons) included: **WR** (Sussex County), **BC** (Warren County), **DR** (Somerset County), **AC** (Monmouth County), **CW** (Burlington County), and **BN** (Ocean County). Permission to conduct spotted turtle surveys was sought and obtained for all the sites. Reconnaissance surveys were conducted to identify key habitat areas and delineate/map 400 m diameter sampling plots as per the regional sampling protocols.

Spotted Turtle Surveys

Spotted turtle surveys were completed at five sites during Quarter 2 of the grant period: **BC** (VRA), **DR** (VRA), **AC** (VRA), **CW** (TRA), and **BT** (TRA). A single VRA survey was conducted at **WR** on 7 April. In light of newly revised DNA sample requirements (10-20 samples per site), Brian Zarate of the NJ Division of Fish and Wildlife and the Spotted Turtle Working Group, requested Tesauro Consulting to discontinue surveys at Wallkill River and reallocate the time towards collecting additional blood samples at **CW** and **BN**. Survey results are presented in Table 1.

| SITE NAME | NEW JERSEY COUNTY | SURVEY METHOD (VRA or TRA) | # INDIVIDUALS CAPTURED DURING VRA/TRA | # INDIVIDUALS CAPTURED INCIDENTALLY OR THROUGH SUPPLEMENTAL TRAPPING | # CARCASSES FOUND | TOTAL # BLOOD SAMPLES |
|----------------|-------------------|----------------------------|---------------------------------------|----------------------------------------------------------------------|-------------------|-----------------------|
| AC | Monmouth | VRA | 1 | 19 | 2 | 13 |
| BN | Ocean | TRA | 2 | 10 | | 11 |
| BC | Warren | VRA | 9 | 8 | | 11 |
| CW | Burlington | TRA | 17 | 20 | | 14 |
| DR | Somerset | VRA | 18 | 11 | 1 | 22 |
| WR | Sussex | VRA | 2 | 1 | | 3 |
| TOTALS: | | | 49 | 69 | 3 | 74 |

Table 1. Spotted Turtle Survey Results

VRA and TRA surveys yielded 49 spotted turtles. Incidental observations (outside TRA/VRA time windows) and supplemental trapping to procure additional blood samples yielded 69 individuals. The total number of blood samples (~2.0 mL taken from turtles \geq 110g) was 74. Blood samples were shipped and arrived safely at Dr. Rodney Dyer’s lab on 3 September 2019. All VRA/TRA and turtle capture datasheets and other pertinent information has been sent to Brian Zarate.

Final invoices were paid in July. Match documentation, which included in-kind hourly rate contribution from Tesauro and donated field time to procure additional blood samples, has been provided to WMI in Q1 and Q2 progress reports.

Acknowledgements

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