



GPS Tracking, Nest Protection, and Headstarting in Minnesota Wood Turtles

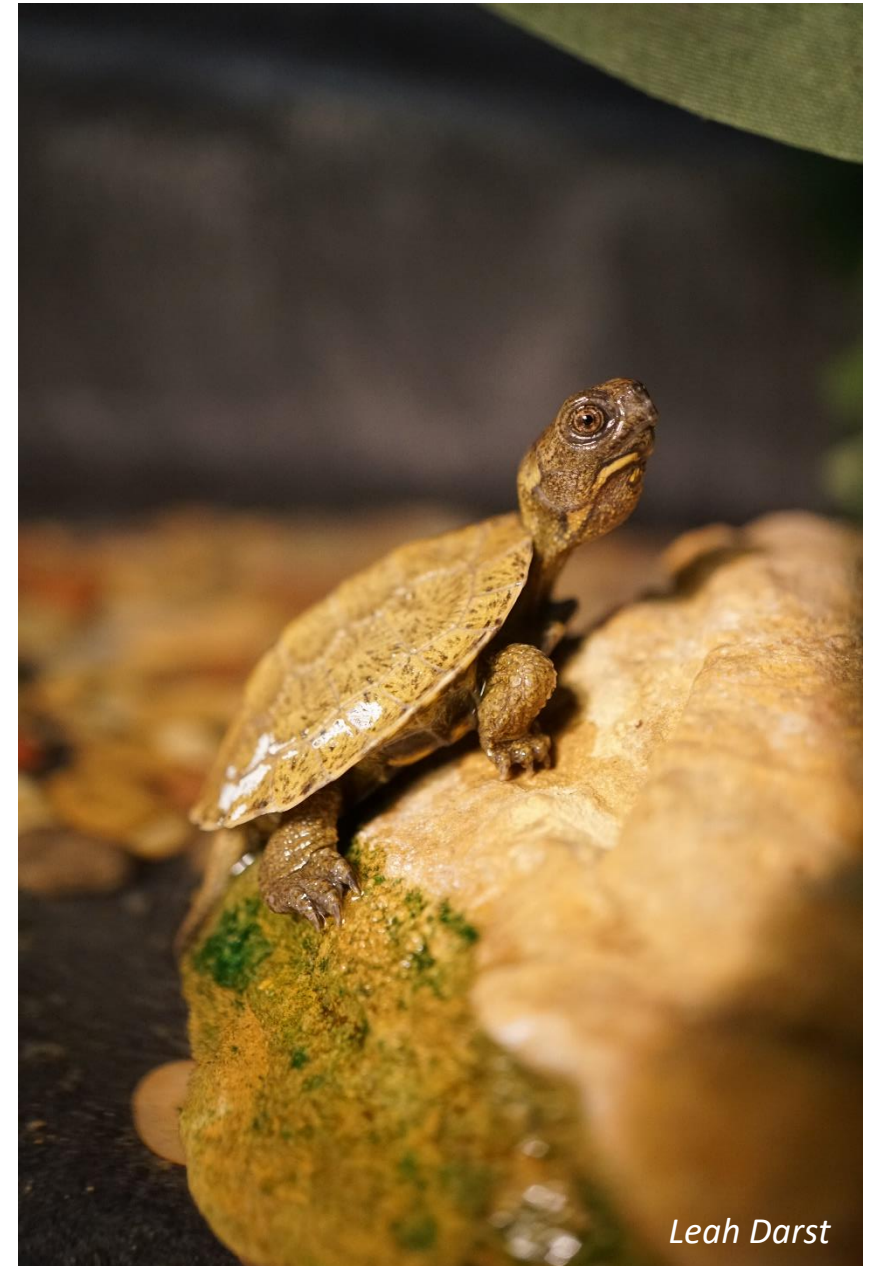
Tricia Markle*, MN Zoo & Krista Larson, MN DNR

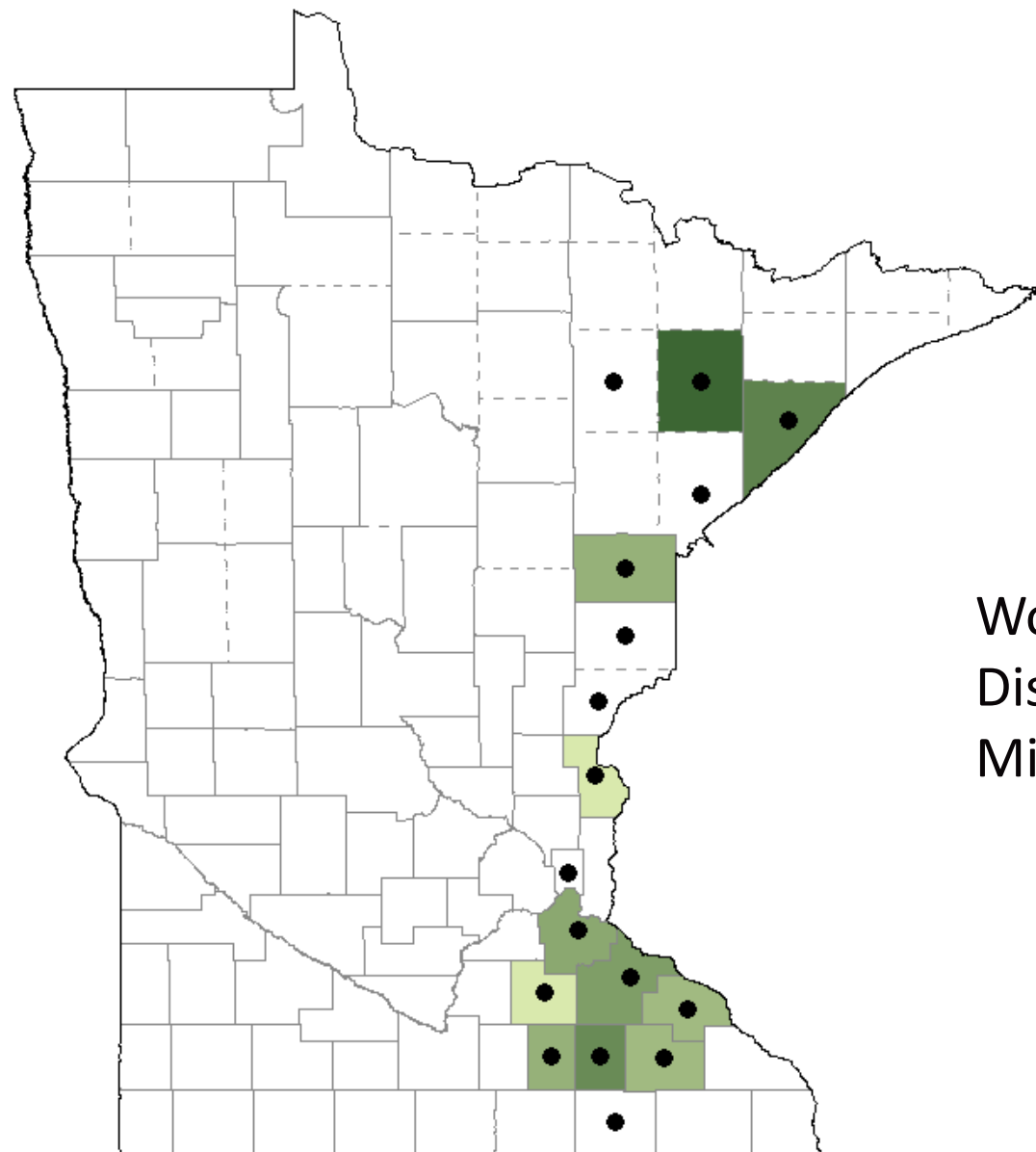


MINNESOTA ZOO

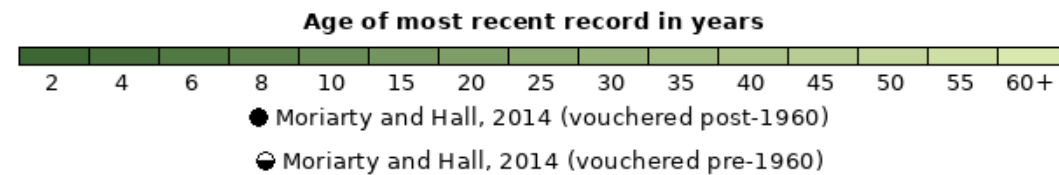
Objectives:

- Use VHF and GPS tracking to determine home range size, habitat use, and nesting sites of wood turtles.
- Evaluate methods to improve egg/hatchling survival of wood turtles.





Wood Turtle Distribution in Minnesota



1. Wood Turtle Tracking



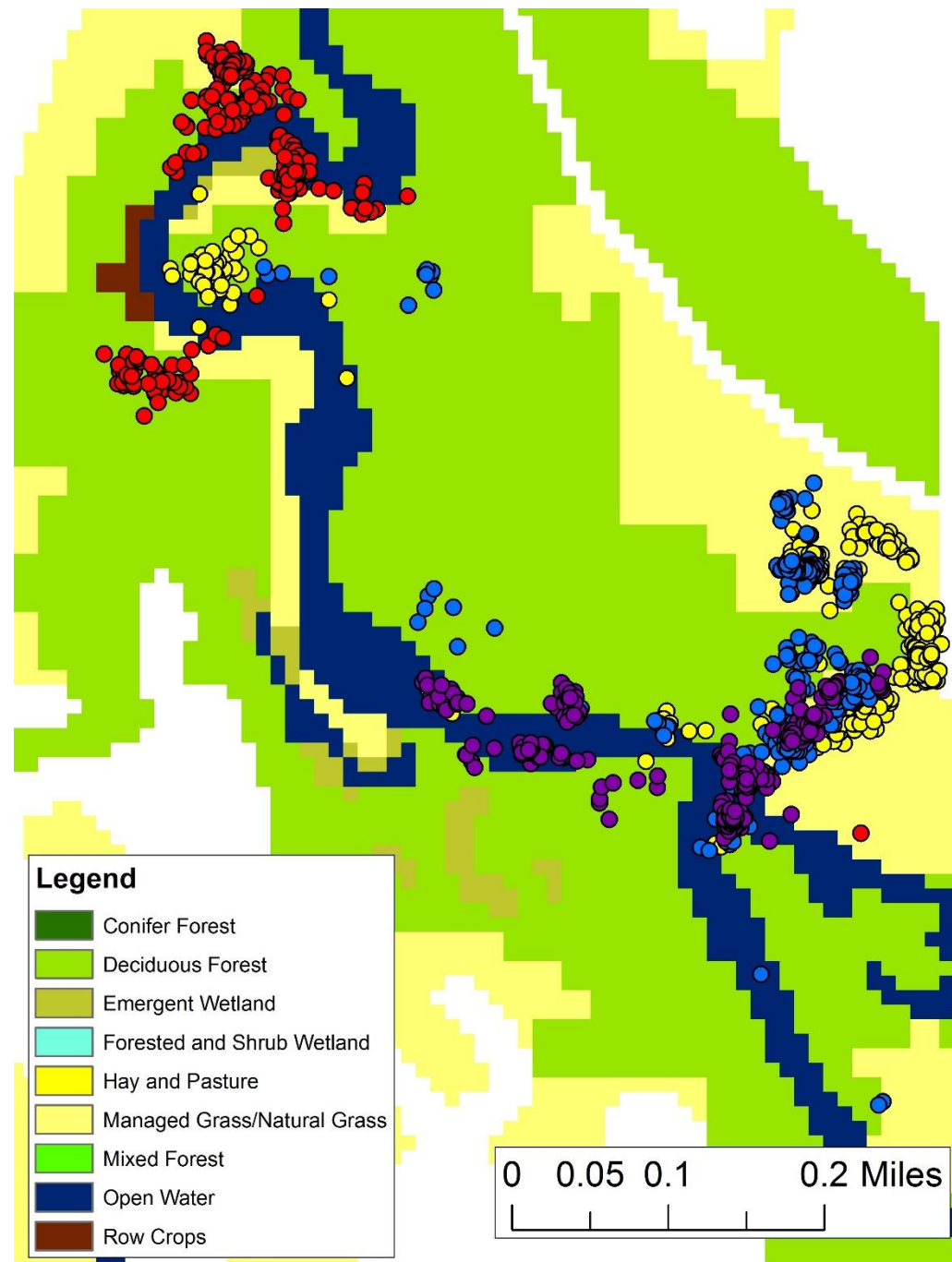
- 2019: 10 GPS, 9 VHF
- 2018: 8 GPS, 6 VHF
- 2017: 6 GPS



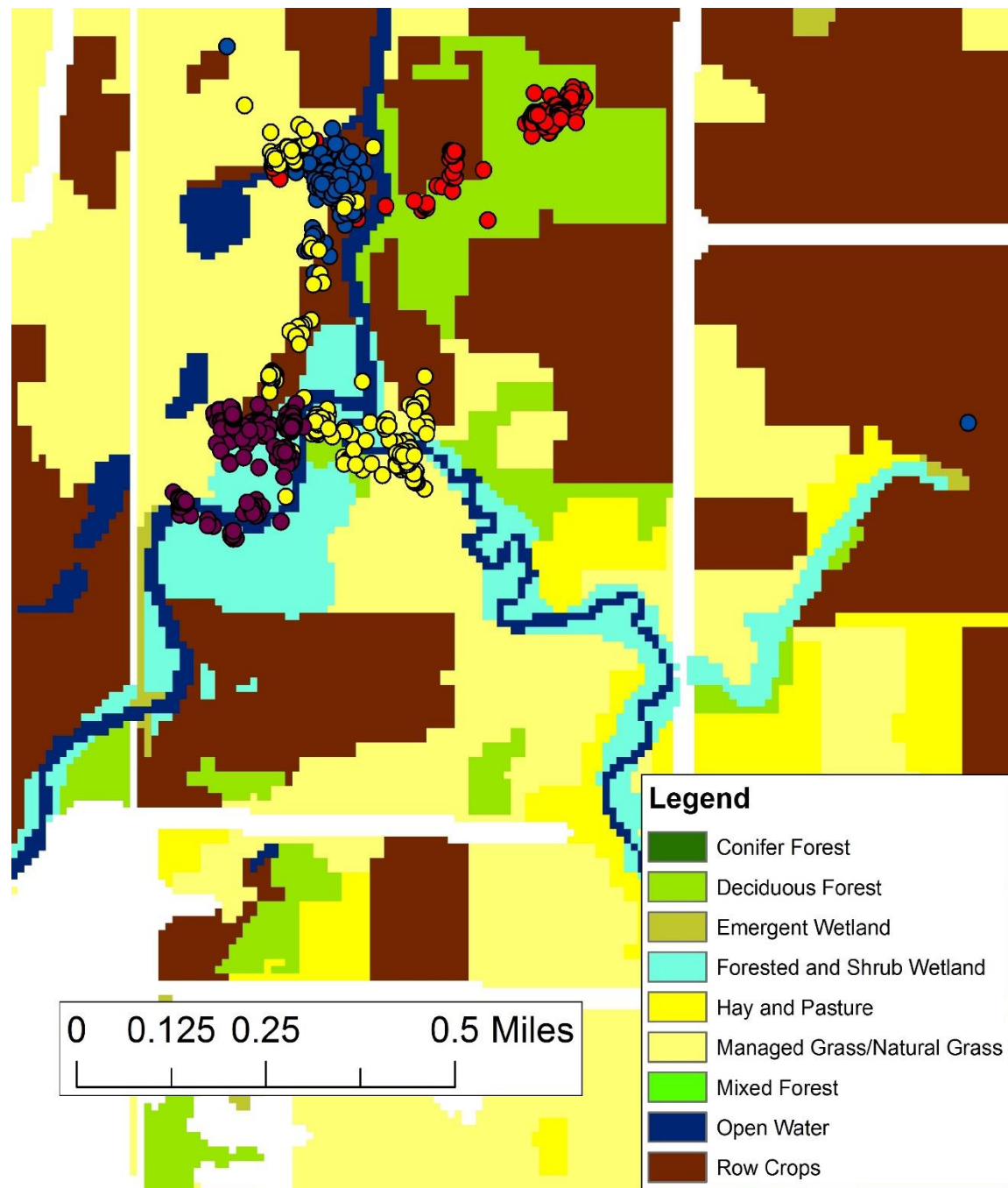


- GPS tracking device includes VHF
- Transmitter weight 50g (~ 5% weight of adult wood turtle)
- Battery lasts ~ 3 months (deploy late May to late Aug.)
- Cost through ATS \$1,200 each
- Includes water sensor switch
 - 2019 average amount of time in water:
Females = 22.3%
Males = 49.1%

Site 1.



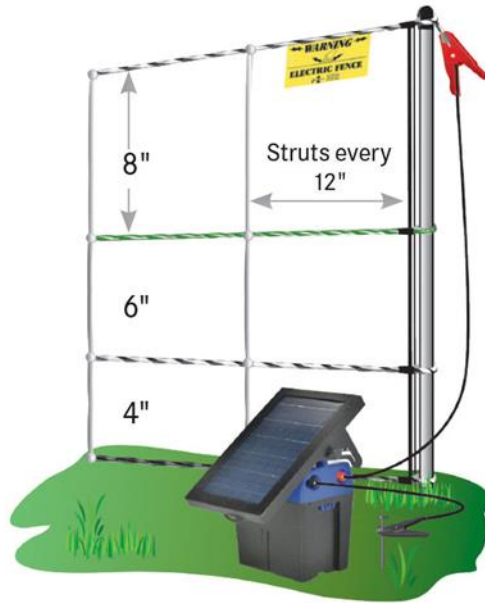
Site 2.



Tracking Juvenile Turtles



2. Improving Survival - Nest Protection



- Predator exclusion electric net fencing
- Dummy wire set at 4 inches, hotwire at 8 inches
- 100 ft. perimeter



Nest Protection cont.



Additional protective measures



Future design options?



Carly Lapin, WI DNR

2. Improving Survival - Headstart Program



- 3 nests on site identified as low probability of success
- 13 successfully hatched headstart turtles



Headstart Program cont.





Thank You!

Seth Stapleton, MN Zoo

**Carol Hall & Barb Perry, MN
DNR**

**Nancy Braker, Carleton
College**

**Field Volunteers: Jake Cook,
Emily Evangelist, Julia Meyer,
Crystal Carpenter, David Lee,
Brittany Smith, & Alaini
Cossette**

