

**Northwestern Pond Turtle Surveys
William L. Finley National Wildlife Refuge**

Progress Report

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Submitted to:

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Project Summary

The primary goal is to initiate a study that can be expanded to allow a better understanding of the distribution, abundance, and factors affecting the status of the Northwestern pond turtle (NWPT) in William L. Finley National Wildlife Refuge and more generally in the Willamette River Basin. The objective of the current study is to estimate the distribution of Northwestern pond turtles within the William L. Finley National Wildlife Refuge using basking locations. Our second objective is to summarize earlier work on northwestern pond turtles as recorded in notebooks provided by staff of Finley NWR, and to map the earlier locations, if possible. We will then map both the earlier records and our observations, and compare the distribution of the observed turtles. Our third objective is to provide comments to the refuge regarding potential nest areas using our observations of both turtles and habitat.

In this progress report, we summarize our field work during April-June 2008, which includes the layout of survey areas, basking observations, and the construction and deployment of basking rafts.

Methods

Basking Observations

We selected 11 wetland areas for initial basking observations. After these initial observations, we identified 9 areas that we used in our survey efforts (Table 1). To facilitate identifying areas surveyed and locations of NWPT, we cellurized the study area such that we created a map with 500 x 500 ft cells as a GIS layer that we overlaid on 2005 digital orthophotos (Figures 1 and 2). We initiated surveys on April 11, and conducted subsequent surveys on April 31, May 15, May 16, and June 2.

Basking Rafts

Although many areas of Finley provide excellent wetland habitats, many of these areas lack basking structures, which limits the ability to detect NWPT in these areas. To provide basking structures that would facilitate our survey work and provide useful basking structures for the near future, we constructed six plywood-based rafts (Fig. 3). These were constructed of ½" marine plywood (4' x 4'), with a marine-based urethane finish. Three 4" diameter PVC pipes with the ends capped were strapped to eye-bolts that were attached to the plywood, providing floats for the raft. We offset the floats to allow one side to angle into the water, providing an easy entry onto the raft (Fig. 3). A 60 cm wood molding was attached to the top of the plywood and painted at 10 cm intervals to facilitate estimating size of NWPT basking on these structures. An additional two rafts, 22 X 36 in, constructed of 1 1/2 in round wood stock were constructed as part of a Boy Scout project and donated to OWI for the Finley basking survey.

Table 1. Wetland locations that were considered for inclusion in the northwestern pond survey, and those ultimately included in the survey.

Wetland Name	Survey
Cabell Marsh	X
Finger Pond	X
Field 16 Pond	X
Field 22 Ponds	
McFadden Marsh (raft only)	X
Cheadle Pond	X
Cheadle Barn Pond	X
Muddy Creek 1	X
Muddy Creek 2	X
Brown Swamp	
Turtle Flats	X

Figure 1. Location of wetland study sites, showing the 500 x 500 ft cells used to identify survey areas, NE portion of Finley NWR.

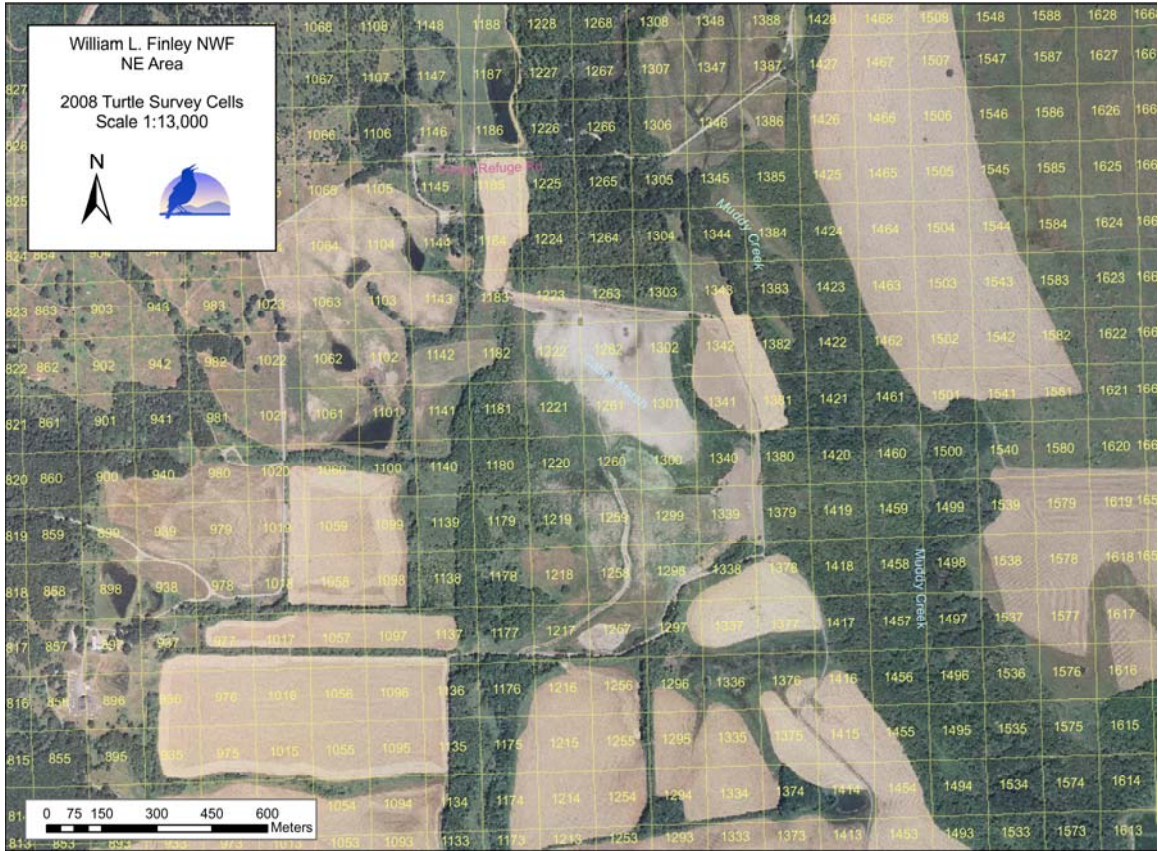


Figure 2. Location of wetland study sites, showing the 500 x 500 ft cells used to identify survey areas, SE portion of Finley NWR.

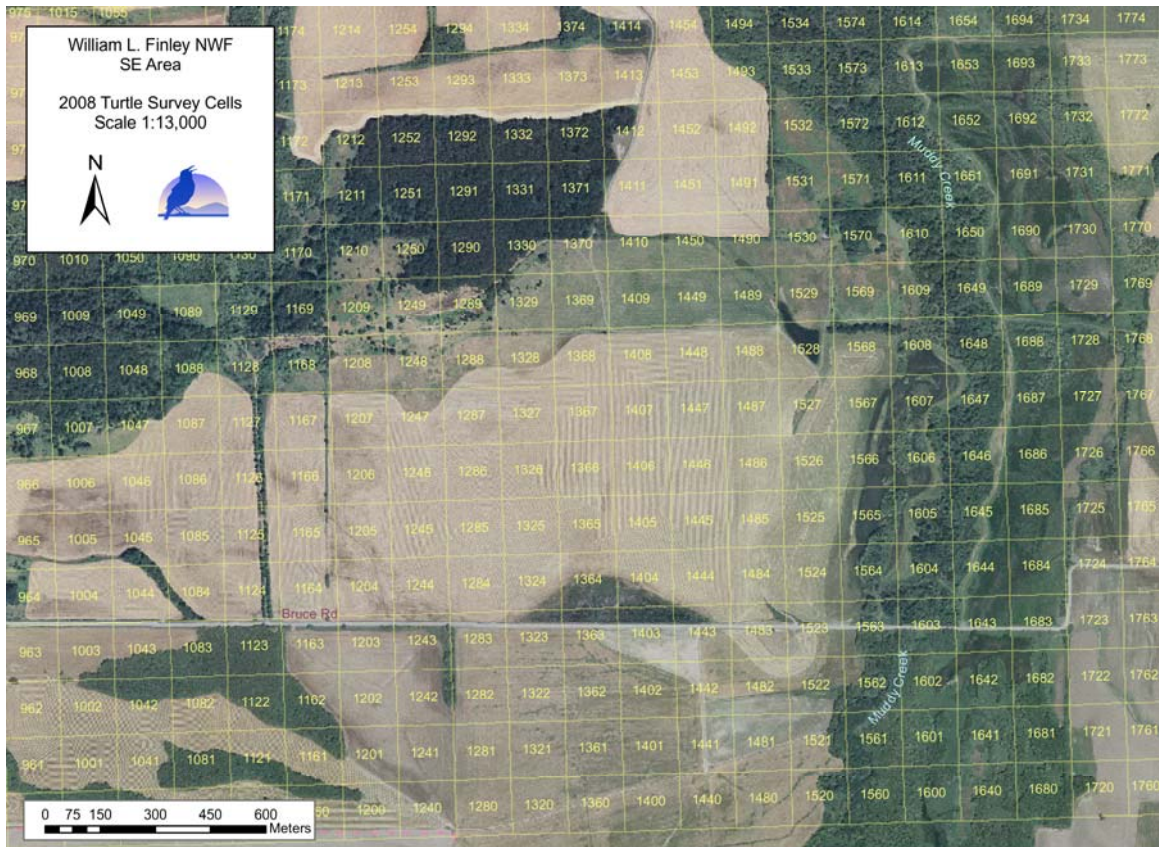




Figure 3. Basking rafts were constructed of plywood with PVC floats, allowing an edge to be angled into the water to provide easy access to northwestern pond turtles.

Results

The weather this spring was unusually cloudy, rainy, and cool, which limited the number of good opportunities for conducting basking surveys. There were only two locations that we observed NWPT—Turtle Flats and Cabell Marsh—and even at these sites, we observed basking NWPT only irregularly, and with only 1-3 individuals. After we failed to observe NWPT on May 15-16, we decided to post-pone further observations due to the weather conditions until 2009. We did conduct one other series of observations after this date, during the installation of the Boy Scouts' rafts. Again, results indicated basking behavior was infrequent and no turtles were observed on that day.

We installed basking rafts at 8 locations within the Refuge (Fig. 4). These areas were previously lacking basking structures.

Discussion

Our limited observations of basking NWPT at Finley NWR this spring is similar to few observations of turtles in the region during the same time period. Given the very unusually wet and cool conditions, this finding was neither surprising nor alarming. This spring did afford us to become familiar with the wetlands at Finley NWR and to better prepare for an efficient survey in 2009. The eight basking rafts that we installed should receive use by NWPT and we will monitor their use in spring 2009.

Work Proposed for Remainder of Study

This fall we will review the notebooks that have been archived at Finley NWR with records of NWPT observations, mostly dating from the 1990s. We will attempt to summarize the recorded distribution of NWPT in Finley during previously conducted field work. In spring 2009, we will conduct a final survey for this project using basking observations. For this effort, we will obtain the assistance of volunteers to simultaneously make observations at all of the sites that we have included in the surveys this year. We will also evaluate the use of the basking rafts. Finally, we will prepare a final report that details our survey effort, compares current and past distribution where possible, and provide comments regarding potential nest habitat at Finley NWR.

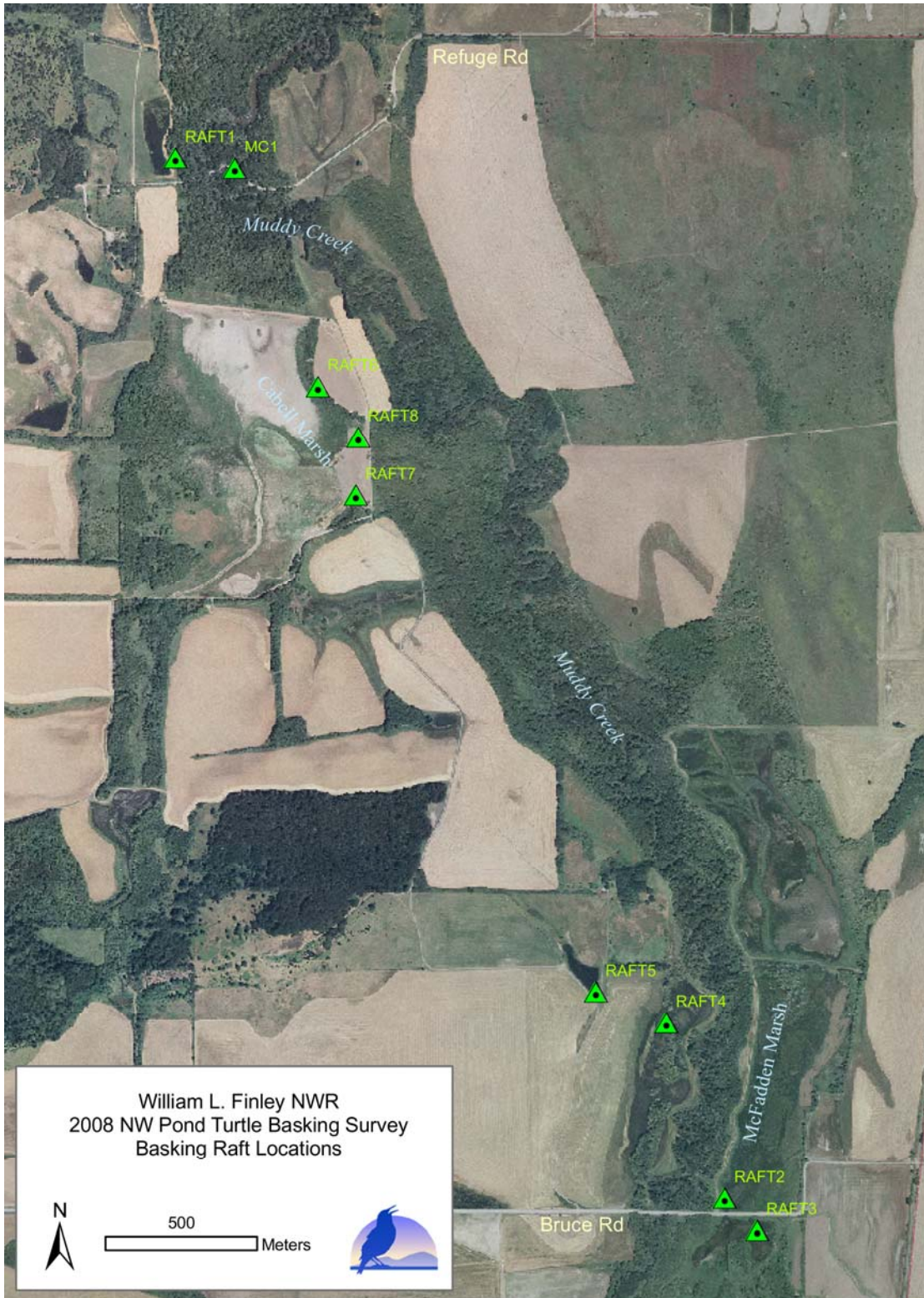


Figure 4. Location of plywood basking structures placed within William L. Finley NWR.