

# The Common Mudpuppy

## *Necturus maculosus*

National Amphibian Conservation Center  
Detroit Zoological Society

### Introduction

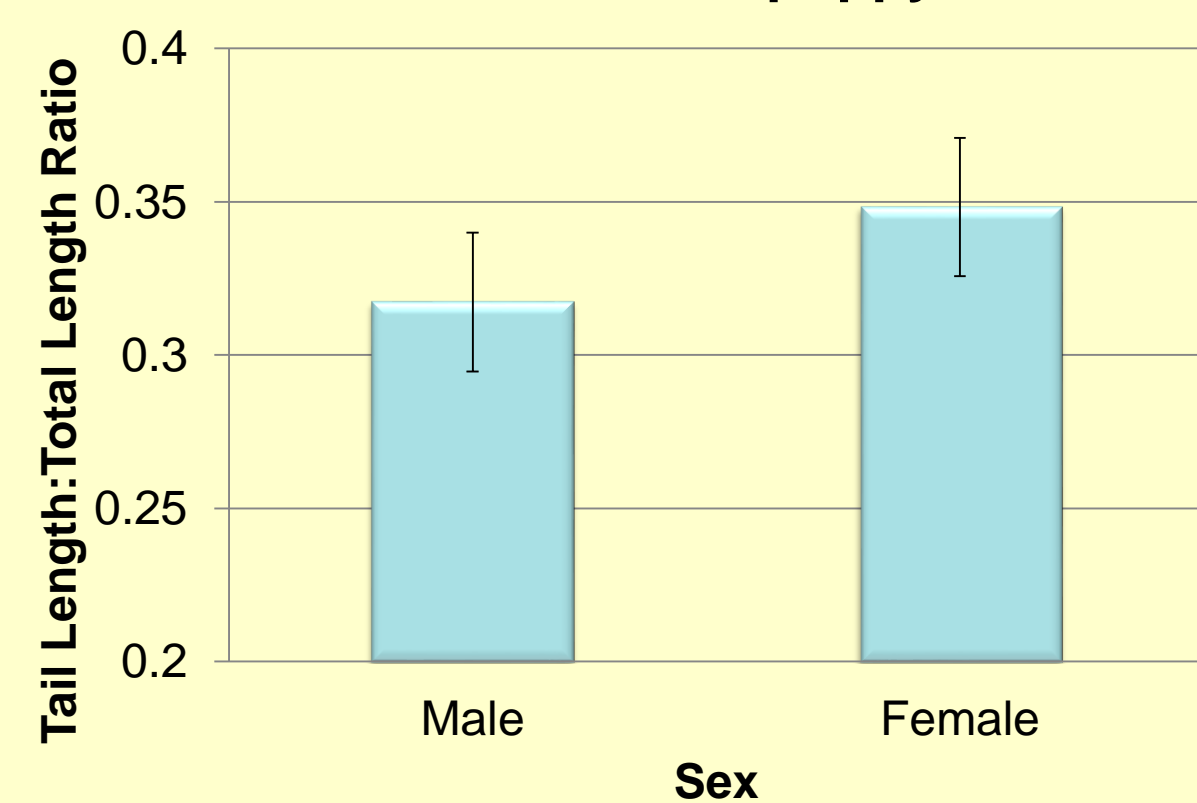
The mudpuppy is an important local amphibian that still lacks much demographic and population information. In 2010, the National Amphibian Conservation Center (NACC) set out to monitor the local mudpuppy populations and document other valuable information about the species.

Our data suggests the population is much larger than the NACC's previous estimates. Dozens of animals have been captured and tagged since 2010. In combination with previous surveys, yielding no recaptured animals, we suspect a robust local population.

### Belle Isle Mudpuppy Nursery

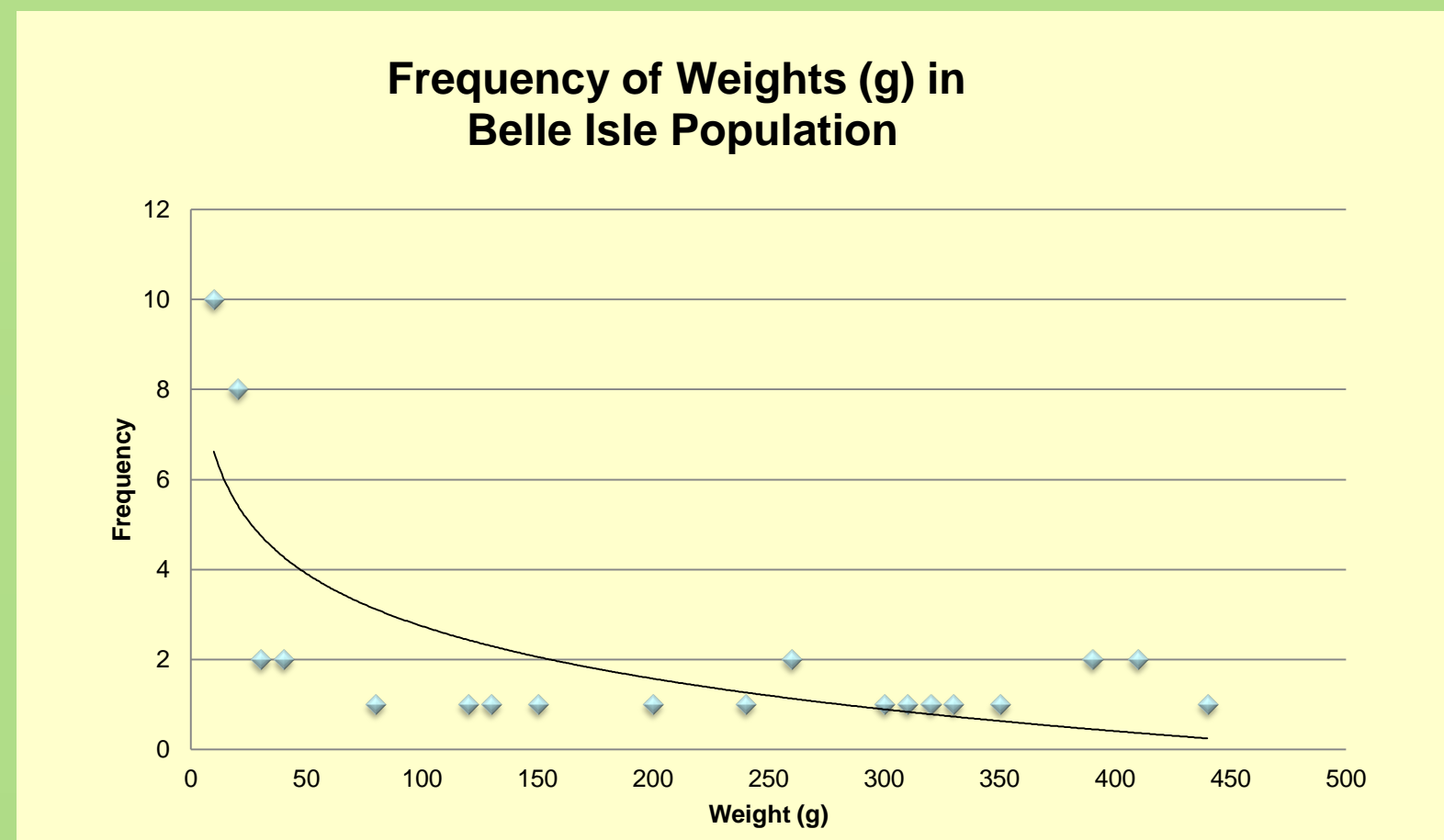
Evidence suggests that Belle Isle is a major mudpuppy nursery for surrounding populations. As shown in the figures, there is a large presence of juveniles and young of the year at several locations. Two sites in particular have a consistent pattern of juvenile mudpuppies along the rocky edge. The population data shows a proportionally larger amount of young mudpuppies than adult, but also a number of breeding size adults. In conjunction with a few visibly gravid females, we suspect Belle Isle to be an active mudpuppy nursery. Further investigation into nests and nesting behavior as well as continued study will help confirm Belle Isle as a nesting sight.

Tail Length: Total Length Ratio and Sex of Belle Isle Mudpuppy

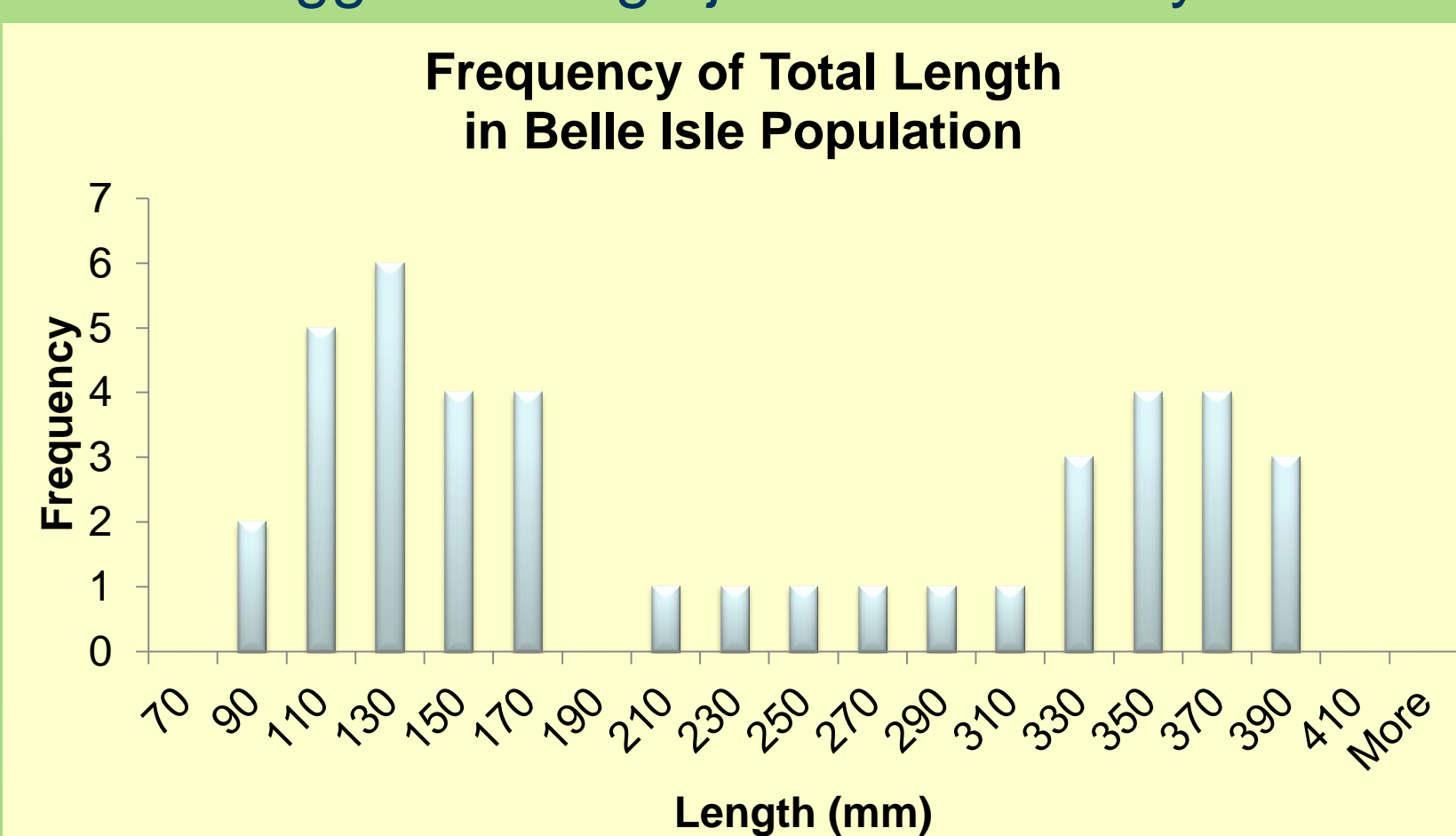


- Similar to *Desmognathan* and *Phaeognathus* salamanders, Mudpuppies appear to have sexual tail dimorphisms where females possess longer tails than males.

### Population Dynamics



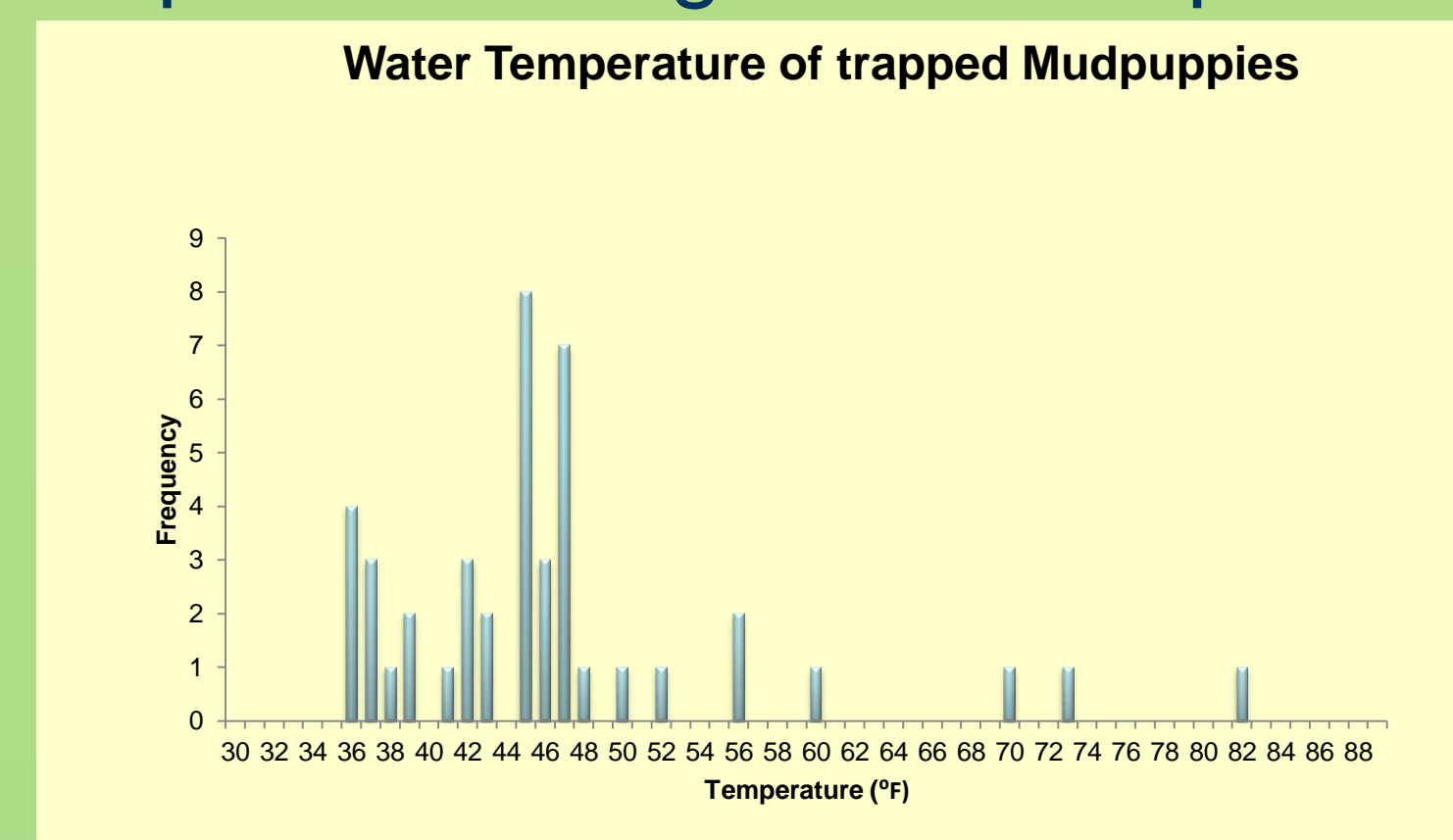
- Captured animals arranged by weight show mudpuppies matching type III survivorship curve. This suggests a high juvenile mortality rate.



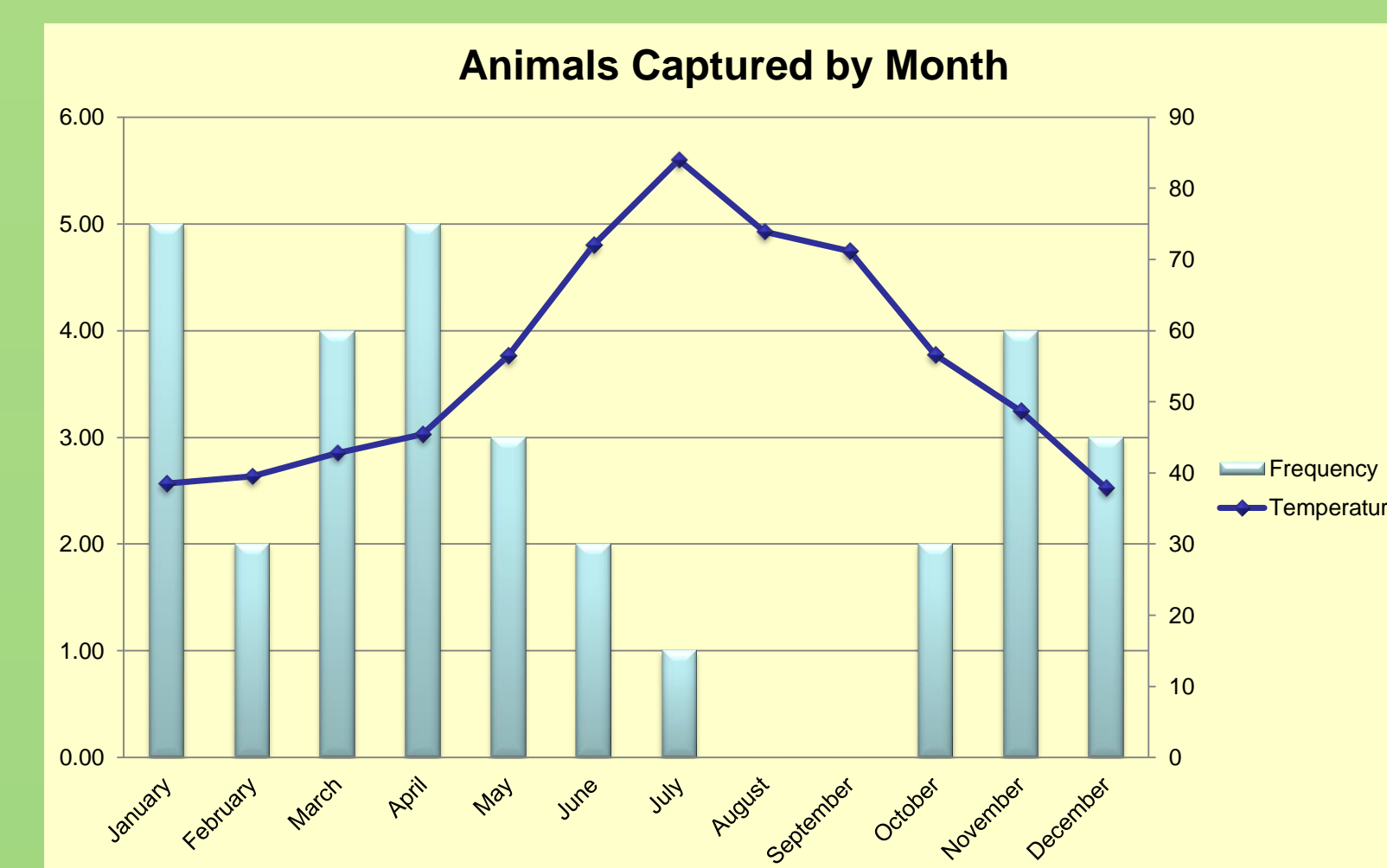
- Survey total length measurement confers with a type III species. Total length indicates two noticeable life stages present in the local population.

### Preferred Temperature

Mudpuppies found in the Belle Isle population match documented preferred temperature ranges for the species.

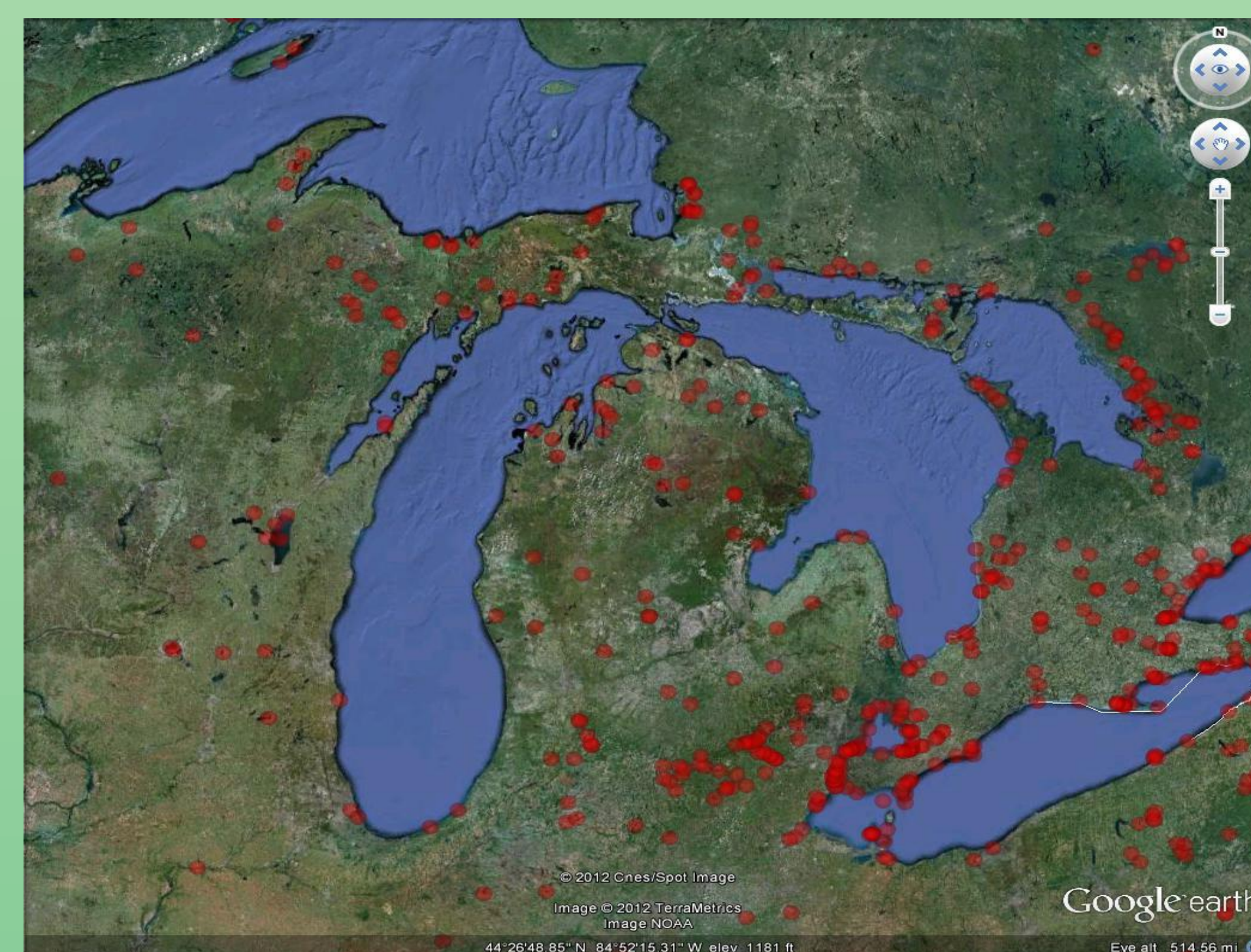


- The mean preferred temperature for the Belle Isle population is around 48°F.
- 80% of individuals surveyed were found between 37-51 °F.



- Surveys yielded less animals in months that possessed water temperatures higher than the preferred range of mudpuppies.

### Belle Isle Survey



- The data points in the map (above) indicate known mudpuppy sightings from NACC surveys, collaborating organizations, historical and public sightings.
- Concentrations within the Metro Detroit region are due to data deficiencies, lack of reporting and resource limitations throughout the Great Lakes region.