

## **ABSTRACT**

**THESIS:** Movements and Habitat Selection of Stocked Age-1 Muskellunge in Eagle Creek Reservoir

**STUDENT:** Nicholas W. Haunert

**DEGREE:** Master of Science

**COLLEGE:** Sciences and Humanities

**DATE:** May, 2015

**PAGES:** 53

Muskellunge have been stocked annually in Eagle Creek Reservoir since 2011 to provide a fishery unique to Central Indiana. However, some questions linger as to the efficacy of these stocked fish and their eventual fate. General lake surveys on the reservoir were unable to answer these questions as no Muskellunge were collected. Therefore, the objective of this study was to define movements, seasonal home ranges, and habitat selection of these fish to better manage the fishery. In March 2014, 40 age-1 Muskellunge provided by the Indiana Department of Natural Resources were implanted with radio transmitters and released. Most Muskellunge were found close to shoreline during tracking, as the fish showed small home ranges and displayed little movement. Some fish were tracked upstream of the reservoir in Eagle Creek and a nearby gravel pit. By November, 27 fish could not be located or were known dead. Muskellunge in the reservoir associated with timber and strongly avoided sand and muck. The amount of habitat where Muskellunge were found was limited to about 4.2 % of the surface area in Eagle Creek Reservoir. This limited amount of preferred habitat could be restricting development of this fishery, thus causing displacement of fish upstream or be lost through competitive interactions.