



IOWA DEPARTMENT OF NATURAL RESOURCES

Sport Fish Restoration Research Findings

Evaluation of the status, distribution, and
habitats of Northern Pike in the Upper
Mississippi River



Project Duration: 2010-2017

Locations: Upper Mississippi River (Jackson County)

Large Rivers

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Evaluation of the status, distribution, and habitats of Northern Pike in the Upper Mississippi River

Northern Pike provide an important recreational fishery for Upper Mississippi River (UMR) anglers. Despite their popularity with anglers, there was little recent (<30 years) information on Northern Pike populations in the UMR before this study. This study was started in 2010 to provide information needed to inform Northern Pike management on the UMR in Iowa.

Goals

- To evaluate methods used to sample Northern Pike.
- Assess Northern Pike populations across several UMR pools.
- Evaluate seasonal movements and habitat selection.
- Evaluate the Northern Pike fishery and angler opinions.



Results

- Spring standard fyke netting yielded the highest catch rates of gears evaluated and was the most efficient method for sampling Northern Pike populations.
- Catch rates were much lower in the lower pools compared to upper pools.
- Catch rates of Northern Pike were correlated to total acres of backwater habitat and aquatic vegetation within the pool sampled.
- Maximum observed age for female Northern Pike was 10 years compared to 8 years for males. Female Northern Pike grew faster and achieved a greater size than males.

- Northern Pike occupied backwater habitat extensively throughout the year and used overwintering backwater habitat with warmer water temperatures and minimal velocity.
- Northern pike abundance and angler success decreased as they moved to downstream pools. Angler success was 43% for Pools 9-11, 25% for Pools 12-14, and 3% from Pools 16-19. This pattern mirrors changes in river habitat and trends in Northern Pike populations.

Conclusions

- Standard fyke nets should be used in the spring months to monitor Northern Pike populations in the Upper Mississippi River.
- Increases in vegetation resulted in higher catch rates of Northern Pike.
- Northern Pike were extremely skittish under the ice and would swim away from noise. Anglers should minimize noise and place tip-ups away from other anglers when targeting Northern Pike when ice fishing.
- Providing deep backwater habitat and promoting aquatic vegetation in future habitat projects will benefit Northern Pike populations.

