

Evaluating Vulnerability to Angling and Hooking Mortality in WI Lake Sturgeon Fisheries

The goal of this project is to quantify hooking mortality rates of lake sturgeon in order to better inform Fisheries Management biologists and the public on best angling practices and to ensure sustainability of Wisconsin's hook-and-line lake sturgeon fisheries.

TIMELINE

Launch: July 2018
Completion: June 2021

FUNDING

Federal Aid in Sportfish
Restoration

DNR PARTNER BUREAU

Fisheries Management

Wisconsin has some of the largest self-sustaining populations of lake sturgeon in the world, and our waters support valuable recreational and tribal lake sturgeon fisheries. Lake sturgeon fisheries in the state are carefully regulated and monitored to prevent over-exploitation. However, little is known about hooking mortality rates for lake sturgeon.

A short-term mortality study will be conducted on lake sturgeon in hook-and-line fishing waters in 2019. We plan to identify areas of lake sturgeon concentration and quantify the probability of mortality for lake sturgeon after an angling event. We will evaluate sturgeons' post-angling stress response by measuring circulating levels of glucose and lactate in the blood and by quantifying reflex action mortality parameters. All sturgeon will be held and monitored over the short term (24-48 hours) until recovery or mortality is determined. A subset of fish will be monitored with externally mounted acoustic tags to track physiological activity after an angling event.



Key Points

- » The waters in the state of Wisconsin have some of the largest self-sustaining populations of lake sturgeon in the world, and these waters support valuable recreational and tribal lake sturgeon fisheries.
- » The goal of this project is to quantify hooking mortality rates of lake sturgeon to better inform Fisheries Management biologists and the public on best angling practices and to ensure sustainability of Wisconsin's hook-and-line fisheries.
- » We plan to identify areas of lake sturgeon concentration and quantify the probability of mortality for lake sturgeon after an angling event under different conditions (e.g., gear types and angling seasons).
- » We will use a combination of reflex action mortality parameters, blood stress indicators and post-angling activity monitoring to quantify the physiological impact of angling stress on sturgeon.

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