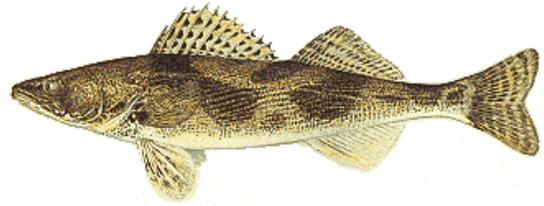


# Current Projects - Rivers and Streams

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## Walleye and Sauger on the Upper Mississippi River

Walleye and sauger support popular and important fisheries on the Upper Mississippi River bordering Iowa. Small size and high annual mortality rates of sauger and highly variable recruitment in walleye led to the implementation of experimental regulations to improve these fisheries.



Concerns with deep water post-release hooking mortality of sauger led to a study completed in 2012. Sauger were angled from the tailwaters of Guttenberg and Bellevue and held in a deepwater net pen to assess 72-hour mortality rates. Overall, hooking mortality was 18 percent, but rates increased with depth. Mortality rates were 7 percent for fish caught from depths of 20-29 feet, 17 percent from 30-39 ft, 25 percent from 40-49 ft, and 41 percent from depths of 50 ft or greater. Sauger length was also found to be inversely proportional to depth. That is larger sauger were caught on average at shallower depths than small sauger. Tailwater anglers can use this information to determine where they should fish. Fishing in deep water yields small sauger and a large proportion of those fish release will likely perish. Fishing in shallower water yields larger fish and a greater proportion of released fish survive.

Evaluation of a 15 inch minimum with a 20-27 inch release slot for walleye has shown an increase of walleye in the 20-27 inch range in pools where the regulation is in effect (Pool 13) versus pools without the regulation (Pool 10). Seventy percent of the eggs produced by walleye come from fish in the 20-27 inch range. Protecting this size class to increase the number of eggs in the system may improve recruitment in the future. While PSD (% fish > 10" that are > 15") was similar between Pools 10 and 13 (95 and 94 respectively), RSD-P (% > 20") was only 21 in Pool 10 compared to 54 in Pool 13. Recommendations include continuing with the slot limit and evaluation of the walleye population as this size class increases.



Fall population surveys of walleye at Bellevue (Pool 13) and Guttenberg (Pool 11) resulted in the third consecutive year of below average catches. Poor catches may be the result of an early warm up and subsequent stable cool conditions. Walleye year class strength has been shown to correlate with water warming post spawning. Sauger catches were below average at Bellevue, but the second highest recorded since 1992 at Guttenberg.