

## SAUGER AGGREGATION AND HARVEST IN THE LOWER YELLOWSTONE RIVER<sup>AFS</sup>

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Sauger (*Stizostedion canadense*) movement and exploitation rates were assessed and compared to determine susceptibility to overharvest in the lower Yellowstone River, Montana. Overharvest, especially at times when sauger were thought to be aggregated, had been identified as a possible factor contributing to low abundances. We investigated seasonal movement and aggregation by telemeterizing and tracking 30 fish in 2001 and 31 fish in 2002. Exploitation rates were assessed by tagging 1033 sauger with reward tags. Tag-shedding rate was estimated by double-tagging and nonreporting rate was estimated using postcards as tag surrogates. Sauger aggregated near spawning areas in spring and subsequently dispersed 5 to 300 km upstream where they remained for the rest of the year. Exploitation occurred primarily in early spring and late autumn. Exploitation rates were low overall (10-15%) and were lower in spring when sauger were aggregated than in autumn when they were dispersed. Tag-shedding rate of both tags was low (2%) and nonreporting rate was high (69%). Annual survival was high (70%). Entrainment in irrigation diversions may have accounted for as much as one third of natural mortality.