

Johnson Reservoir

2012 Fall Survey Summary



Jared Lorensen, Fisheries Biologist

Johnson Reservoir is a major reservoir on Central Nebraska Public Power & Irrigation District's (CNPPID) Supply Canal System downstream of Plum Creek Reservoir. Notice its fluvial location at http://www.cnppid.com/Assets/Supply_Canal.pdf. CNPPID manages Johnson Reservoir for hydroelectric power generation and irrigation purposes. There are unique fishing opportunities as a result of this functionality. Notice these aspects at <http://outdoornebraska.ne.gov/Fishing/programs/lakemapping/pdfs/Johnson.pdf> and track water fluctuations at http://www.cnppid.com/Elevation_Flows2.htm.

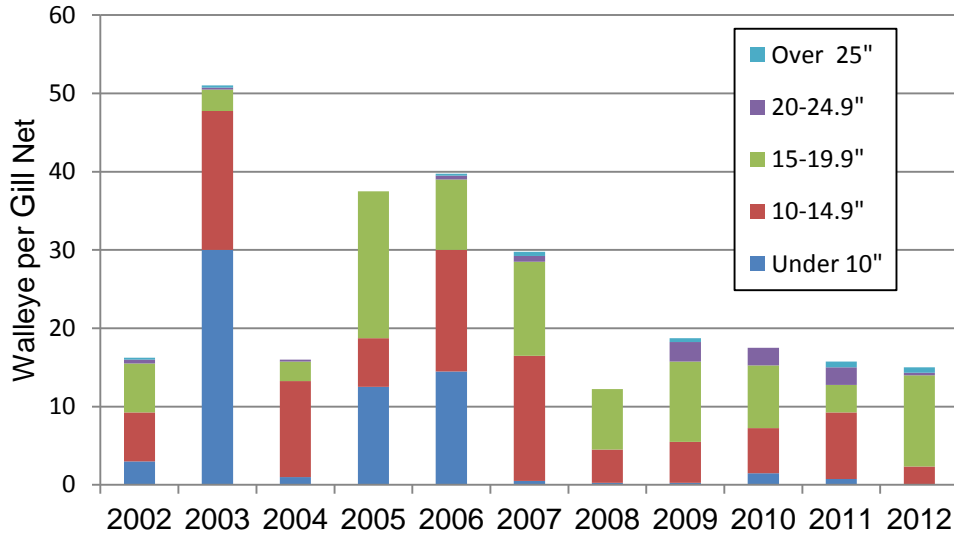
During 2012, an angler survey was conducted at Johnson Reservoir in cooperation with the Nebraska Cooperative Fish and Wildlife Research Unit housed at the University of Nebraska – Lincoln. Similar surveys have been conducted since 1996. They provide valuable data concerning angling pressure, catch and harvest rates and species sought. This data is used when management decisions are made.

Every fall the fishery of Johnson Reservoir is sampled using experimental gill nets, a method commonly used to sample species found primarily in open water. These nets are made of clear monofilament mesh strung between a weighted line and a floating line. This mesh ranges in size from $\frac{3}{4}$ of an inch to 3 inches and the nets are typically set perpendicular to the shoreline in 10 to 20 feet of depth during late afternoon with an orange floating buoy on the ends to deter boats from being entangled and for ease of retrieval. Gill nets create an invisible wall in the water column that fish cannot sense so they are entangled by their gills as they attempt to move through this mesh. Nets are set so that they are suspended through one evening, night and morning period before being pulled. In addition to gill nets, trap nets are used to sample shoreline oriented species such as crappie. These nets are set perpendicular to the shoreline and entrap fish by funneling them through a narrowing frame covered in 5/8" braided mesh. Biologists tend these nets similarly to gill nets.

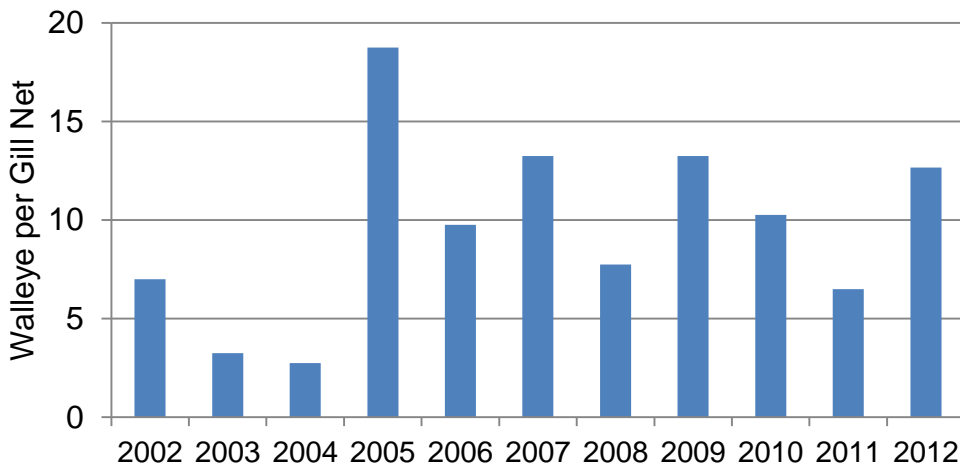
A change has been made concerning the statewide striped, hybrid & white bass one-over length bag limit regulation. As of January 1, 2013 only one may be kept over 16 inches. This regulation change was made to decrease harvest of hybrid striped bass greater than 16 inches. Access the 2013-2014 fishing guide at <http://outdoornebraska.ne.gov/Fishing/guides/fishguide/pdf/FishGuide.pdf> or pick up a print copy at your local vendor or NGPC office. This information also assists Game and Parks staff in guiding anglers to waterbodies that have their desired species and populations.

Walleye

All Length Groups



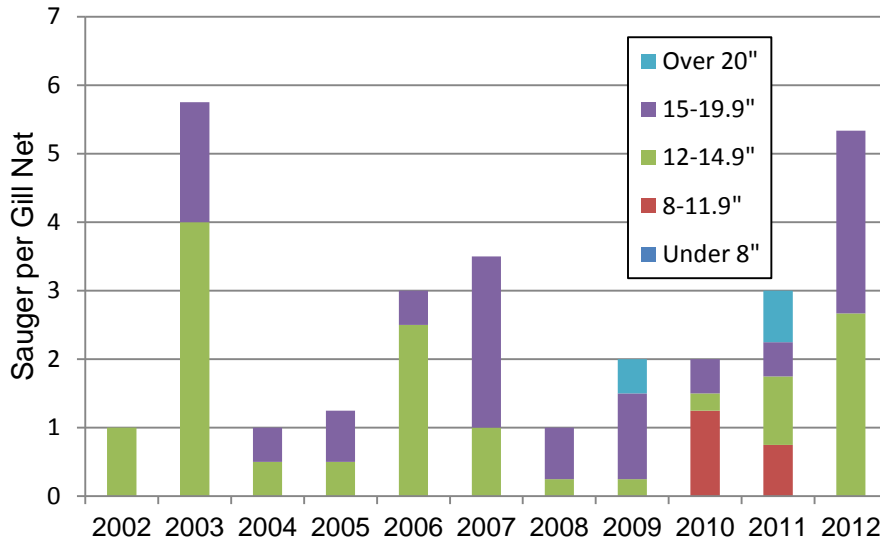
>15"



Walleye abundance has remained stable the past three years, with a catch of approximately 15 per gill net in 2012. All size categories were represented by the 2012 survey including those over 25". Individuals 15-19.9" were most prevalent in the sample with an overall mean length of 17". The largest sampled was 27.5". Approximately 83% of the sample was larger than the 15" minimum length limit. In 2012, 219,375 walleye fingerlings (1.25") were stocked and a stocking of 218,900 is requested for 2013.

The walleye regulation at Johnson (in conjunction with sauger) includes a daily bag limit that may include four walleye greater than 15" with only one over 22".

Sauger



The 2012 survey data doesn't indicate the diverse size structure that was observed in 2011 but it does indicate strong numbers of 12-14.5" and 15-19.9" sauger. The largest sampled was 17.75". Sauger in Johnson are reaching 15" after approximately three years of age. They are not stocked in Johnson, but are stocked annually upstream in Jeffrey, Midway, Gallagher and Plum Creek reservoirs when possible. Fingerling and fry stockings in these upstream reservoirs are scheduled in 2013.

The sauger regulation at Johnson (in conjunction with walleye) includes a daily bag limit that may include four sauger/walleye greater than 15" with only one over 22". Access this online Fish Identification Tool for sauger identification help <http://outdoornebraska.ne.gov/Fishing/guides/identification/default.asp>.

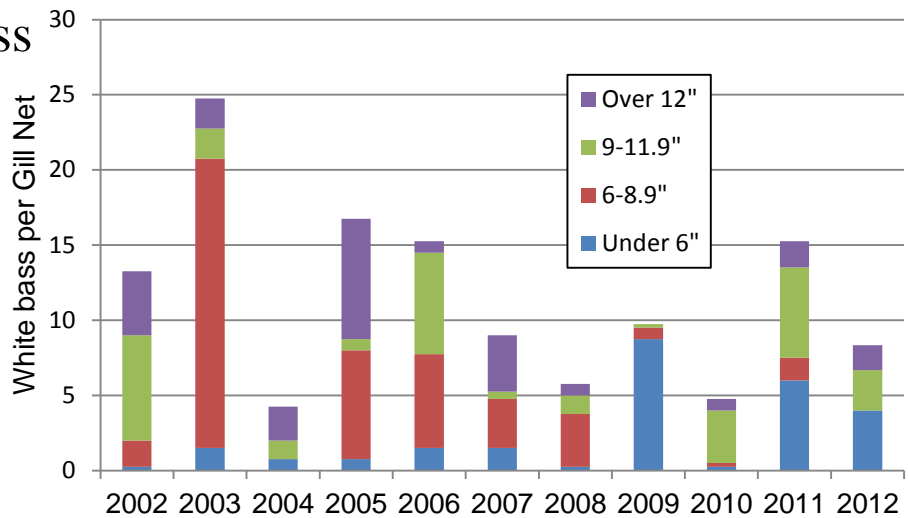


Walleye



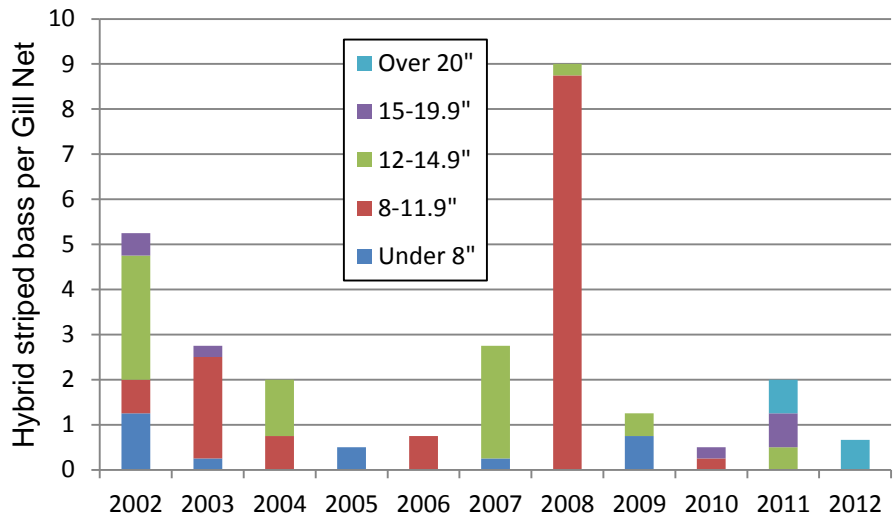
Sauger

White bass



The 2012 white bass survey data continues to indicate a reverse in the six year declining pattern observed from 2005 through 2010. This observed population increase is likely a result of the strong 2009 year class. Abundant young-of-year white bass were sampled in 2011 and 2012. This may bode well for future white bass angling at Johnson. Approximately eight white bass were sampled per gill net in 2012 with 50% of them being over 9". The white bass regulations at Johnson (in conjunction with hybrid striped bass) includes a daily bag limit of 15 with no more than one greater than 16".

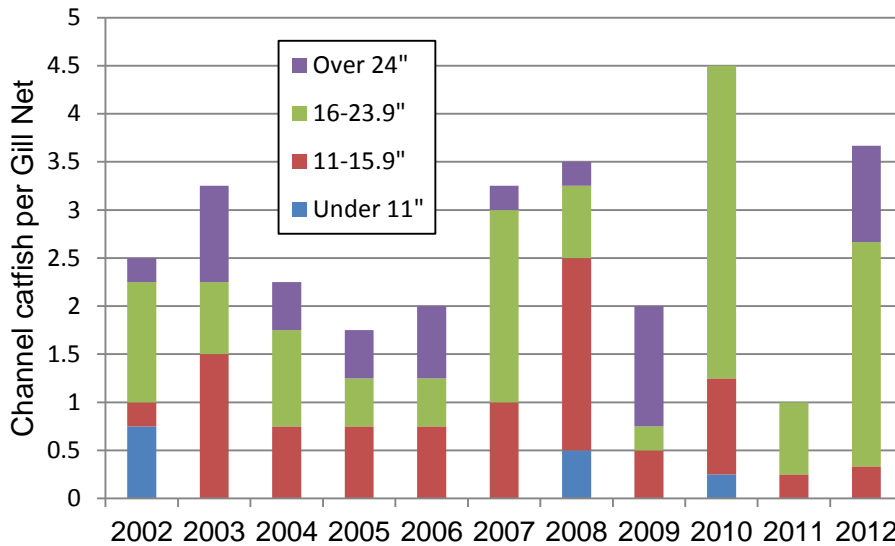
Hybrid Striped Bass



The hybrid striped bass population remains at a low level. Overall, only two were sampled in 2012 but they were 21 and 25". The schooling behavior of hybrid striped bass often results in inconsistent survey results. A stocking is requested for 2013 at a rate of 5 fingerlings per acre totaling 10,945. The hybrid striped bass population is managed to provide trophy fish (greater than 20").

The hybrid striped bass regulations at Johnson (in conjunction with white bass) includes a daily bag limit of 15 with no more than one greater than 16". Access this online Fish Identification Tool for hybrid striped bass identification help <http://outdoornebraska.ne.gov/Fishing/guides/identification/default.asp>.

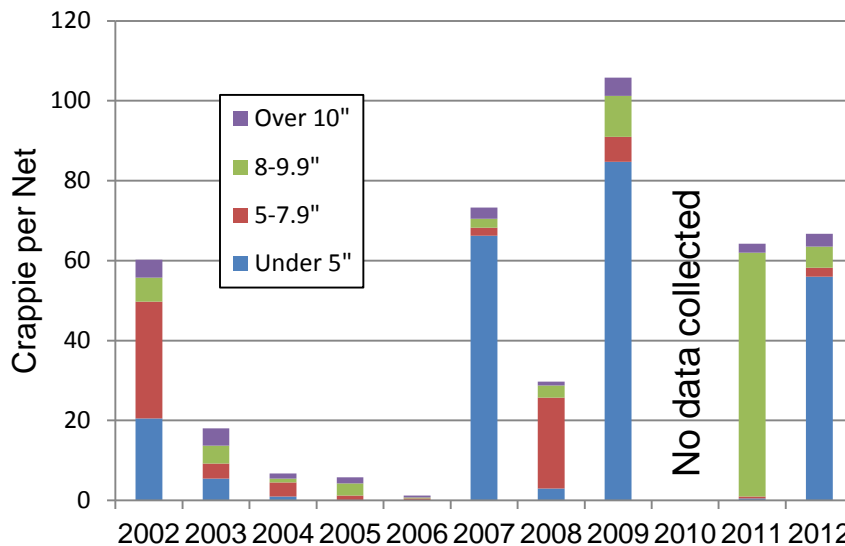
Channel Catfish



The observed abundance of 16-23.9" channel catfish in the 2010 survey has recruited into the 24"+ category as indicated by the 2012 survey. Average length of those sampled was 20" and the largest was 25.5".

The channel catfish regulation at Johnson includes a daily bag limit of five with no length limit.

Crappie



The 2012 survey was much different than 2011's. Instead of 8"+ crappies we sampled <5" crappies. Crappie species in the sample was split evenly between white and black crappie. Recruitment of the present day small crappie into larger length groups will be required to maintain the fishery. In 2010, low water levels prevented crappie data from being collected.

The crappie regulation at Johnson includes a daily bag limit of 15 (in conjunction with all panfish) with no length limit.

For additional information about the fishery of Johnson Reservoir please contact
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Zebra and Quagga Mussels

Anglers and boaters need to be aware of zebra and quagga mussels while using Nebraska Lakes and continue to **Clean, Drain and Dry** their equipment and boats prior to launching at a new waterbody. While no mussels have been identified at Johnson Reservoir, zebra mussels have been found at Zorinsky Lake in Omaha and are present in several reservoirs in neighboring states. Monitoring was completed at several Nebraska reservoirs during 2011 and 2012. No evidence of zebra or quagga mussels was found.

Anglers and boaters using Nebraska waters this season need to be aware of **new regulations** dealing with aquatic invasive species. Starting January 1, 2013 the following regulations went into effect to help prevent the spread of unwanted species.

- Any watercraft that has been on a Nebraska waterbody must drain the lake water from their compartments, equipment or containers before leaving the launch area. It is illegal to dump baitfish into a Nebraska waterbody.
- Livewells need to be drained prior to leaving a launch area: plan ahead and bring a cooler for harvested fish.
- All aquatic vegetation from that waterbody attached to the watercraft and/or trailer must be removed before leaving the launch area.

For more information regarding these new regulations consult the 2013-2014 Fishing Guide at <http://outdoornebraska.ne.gov/Fishing/guides/fishguide/pdf/FishGuide.pdf>.

Find more information concerning zebra and quagga mussels at <http://snr.unl.edu/invasives/> and <http://100thmeridian.org/zebras.asp>.

