

# Johnson Reservoir 2013 Fall Survey Summary



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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](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.net/Fishing/programs/lakemapping/pdfs/Johnson.pdf>.

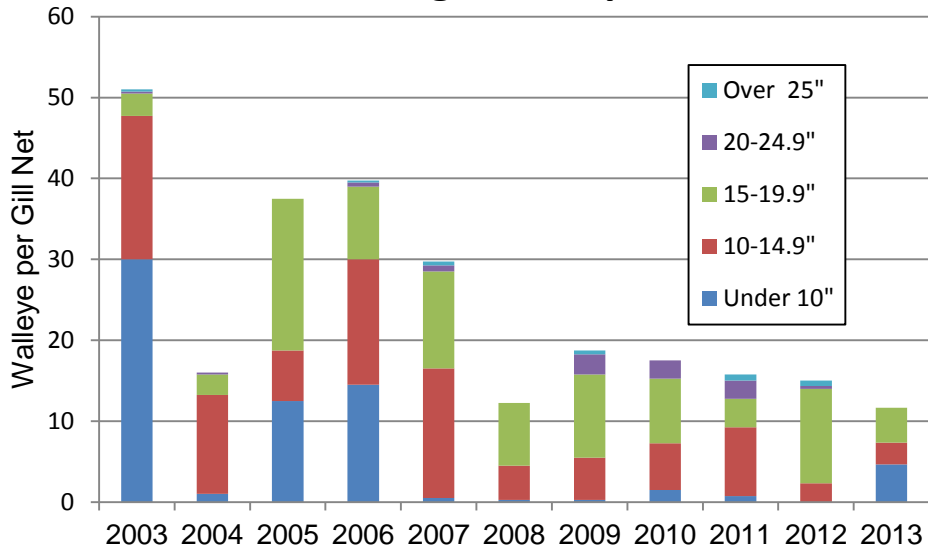
Every fall the fishery of Johnson Reservoir is sampled using experimental gill nets, a method commonly used to sample species found primarily in open water. These nets are made of clear monofilament mesh strung between a weighted line and a floating line. This mesh ranges in size from  $\frac{3}{4}$  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  $\frac{5}{8}$ " braided mesh.



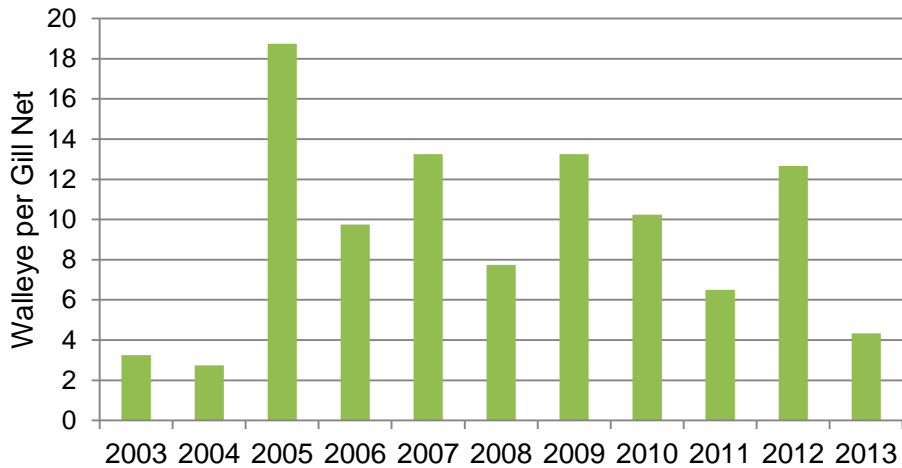
The following text and graphs are the result of the 2013 gill netting survey at Johnson Reservoir. Graphs represent number of each species captured per gill net by length group. For comparative purposes it also shows results from previous years.

# Walleye

## All Length Groups

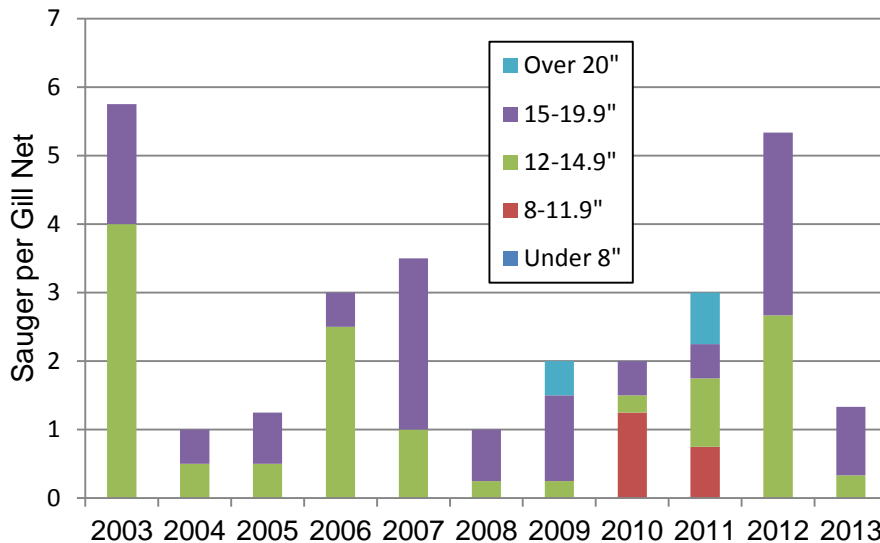


## >15"



Walleye abundance has remained stable the past three years, with a catch of approximately 12 per gill net in 2013 but the predominant length class has changed. Three size categories were represented by the 2013 survey including those under 10". This may indicate good recruitment of the 2013 year class. The overall mean length was 13". The largest sampled was 19". Approximately 37% of the sample was larger than the 15" minimum length limit. In 2013, 239,082 walleye fingerlings (1.2") were stocked and a similar stocking is requested for 2014. 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".

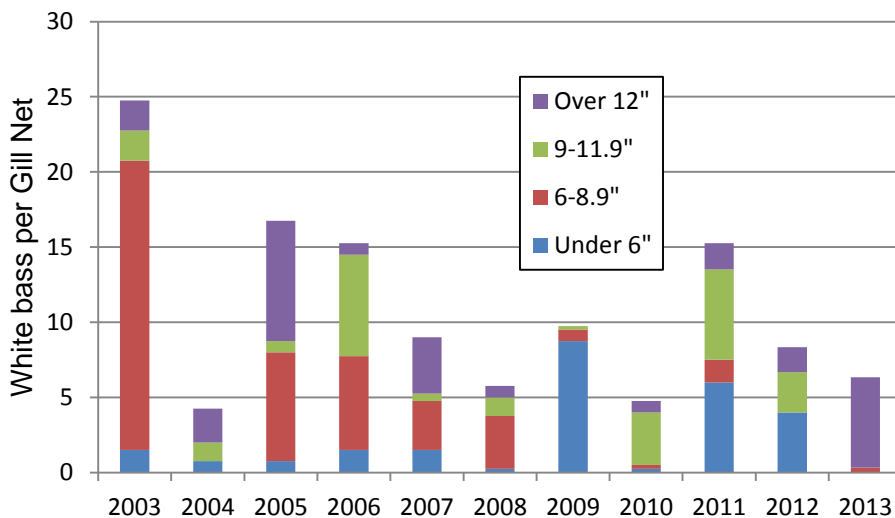
# Sauger



The 2013 survey data doesn't indicate the abundance that was observed in 2012. The largest sampled was 17". 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 2014.

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>.

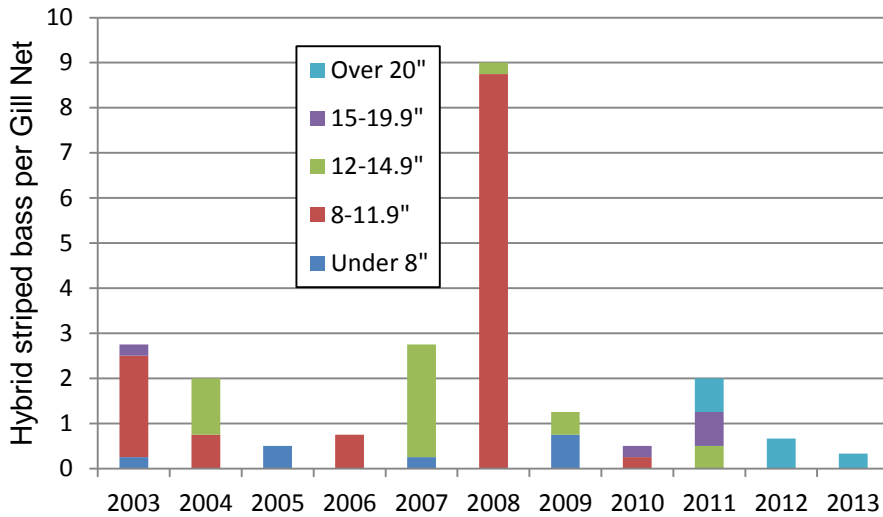
# White bass



The 2013 white bass survey data indicates a less abundant population but one that comprises mostly large individuals. Although 2013's survey data was low, abundant young-of-year white bass were sampled in 2011 and 2012. This may bode well for white bass angling at Johnson in the next couple years. Approximately six white bass were sampled per gill net in 2013 with 95% of them being over 12".

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 one was sampled in 2013. It was 23". The schooling behavior of hybrid striped bass often results in inconsistent survey results. A stocking of 10,963 fingerlings (1.2") was made during 2013. A similar stocking is requested for 2014. 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>.

**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.

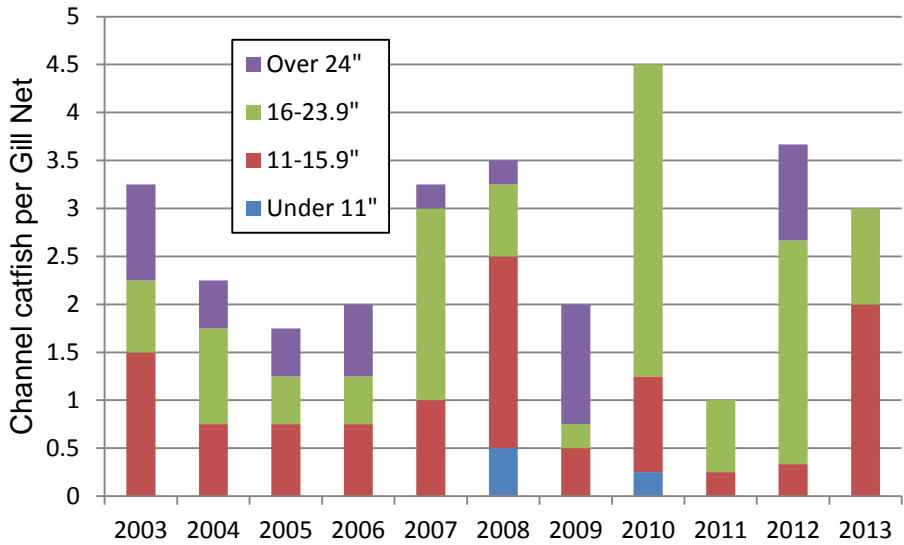


Hybrid striped bass



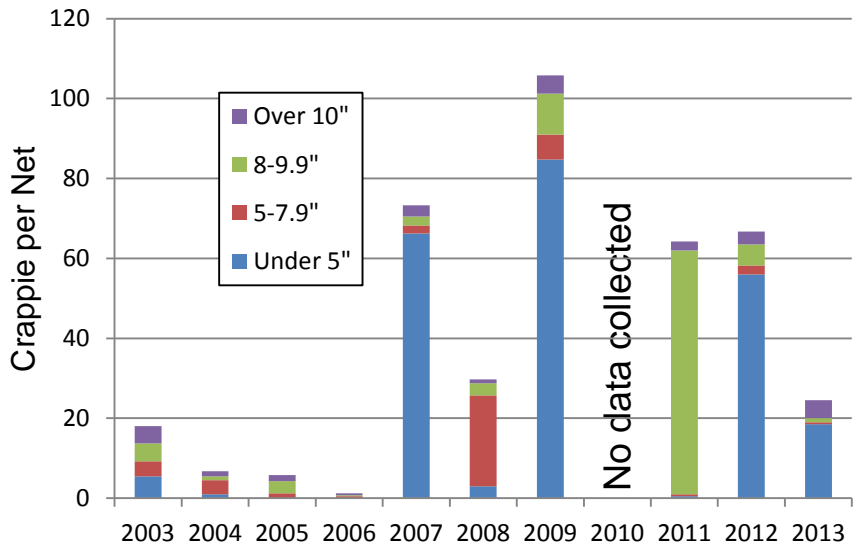
White bass

# Channel Catfish



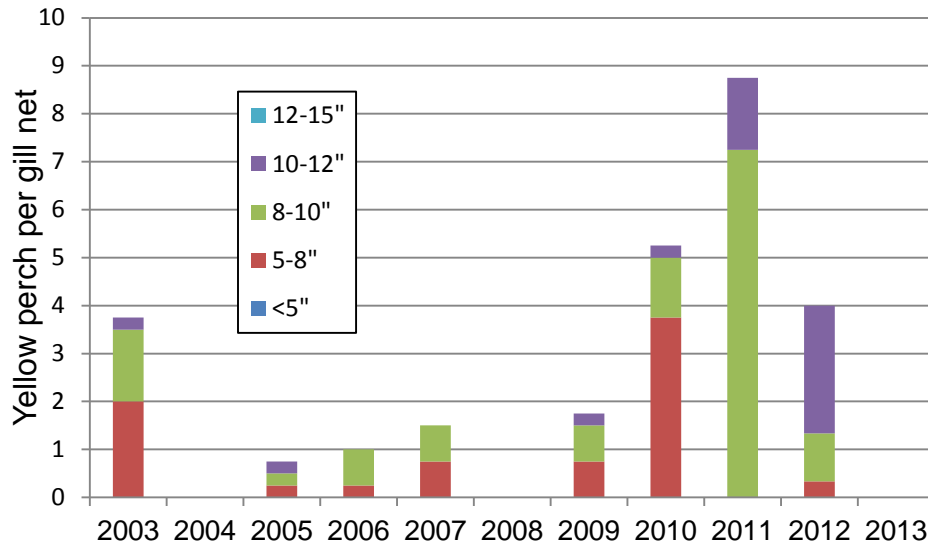
Abundance of channel catfish is fairly consistent in Johnson (note vertical axis). In 2013, three were sampled per gill net. The opportunity to catch large channel catfish (>24") likely still exists. The channel catfish regulation at Johnson includes a daily bag limit of five with no length limit.

# Crappie



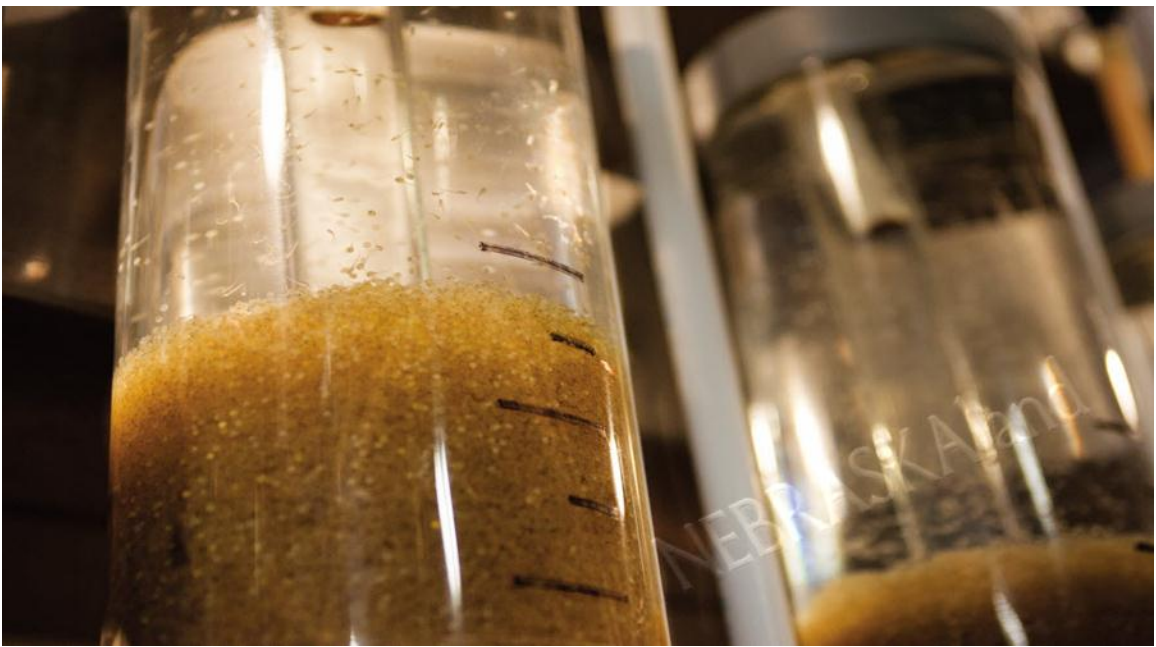
The 2013 survey included fewer crappie than is typical for the past five years. Four length classes were represented which indicates good recruitment. Black crappie represented 60% of the sample with white crappie making up the rest. Recruitment of the present day small crappie into larger length groups will be required to maintain the fishery. In 2010, low water level 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.

# Yellow perch



The 2013 survey was much different than the previous four year's. Zero yellow perch were sampled in 2013 but anglers will still most likely catch some during 2014. Stockings of yellow perch began in 2007 and a resurgence has been observed. The yellow perch regulation at Johnson includes a daily bag limit of 15 (in conjunction with all panfish) with no length limit.





Johnson Reservoir receives stockings from NGPC's Hatchery System every year. Many factors are at play when stocking selections are made. Below you will find Johnson's stocking history for the past eleven years. For more stocking details access <http://outdoornebraska.ne.gov/fishing/guides/fishguide/FGstocking.asp>.

<u>Year</u>	<u>Walleye</u>	<u>Hybrid Striped Bass</u>	<u>Yellow Perch</u>	<u>Channel catfish</u>
2003	140,146-1.3"	14,168-1.45"		
2004	145,125-1.4"	14,000-1"		
2005		14,000-1"		
2006	140,000-1.25"	28,000-1.25"		
2007	140,000-1.25"	40,475-1.75"	65,973-4"	
2008	100,000-1.1-1.25"	43,780-1.25"		
2009	219,525-1.4"	14,763-2"	66,610-3"	
2010	219,000-1.5"			
2011	219,473-1.25"		66,674-3"	6,070-7"
2012	219,375-1.3-1.4:"			37,470-5"
2013	239,082-1.2"	10,963-1.2"	60,048-3"	

## Angler Access Project

In 2009, the Nebraska Unicameral passed legislation that expanded the Aquatic Habitat Rehabilitation Program so that 30% of the funds would be dedicated to improving angler access at public waters not necessarily involved in aquatic habitat rehabilitation. Projects have been evaluated within each NGPC District with the primary purpose of improving access for bank anglers.

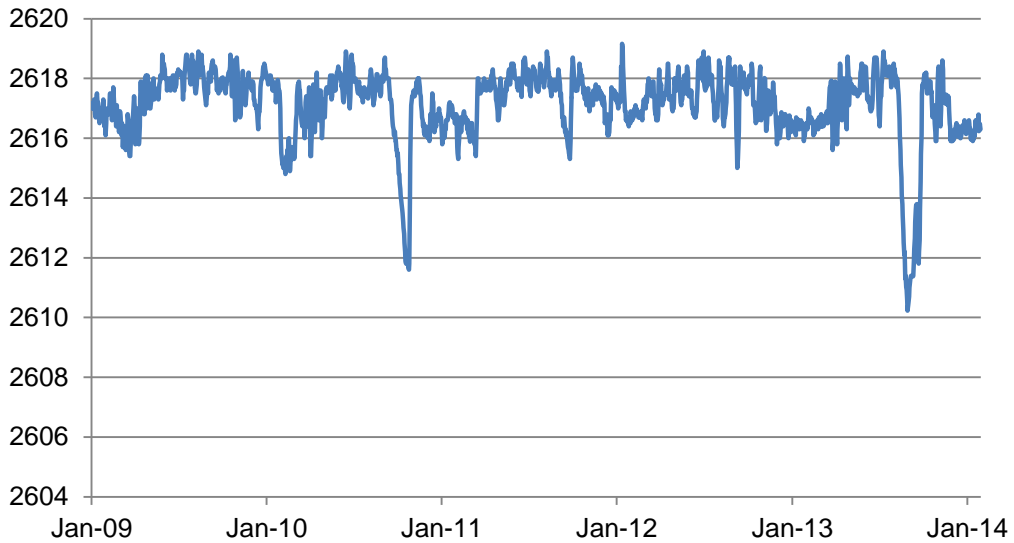
The inlet of Johnson Reservoir is a popular area for bank fisherman but unstable rip rap and steep inclines make fishing difficult. During 2013, plans were made for access improvements at this site. Reconstruction of fishing piers and water level pavement projects are being designed to provide level and undeterred access for bank anglers. Construction of this project is planned to begin during 2014.



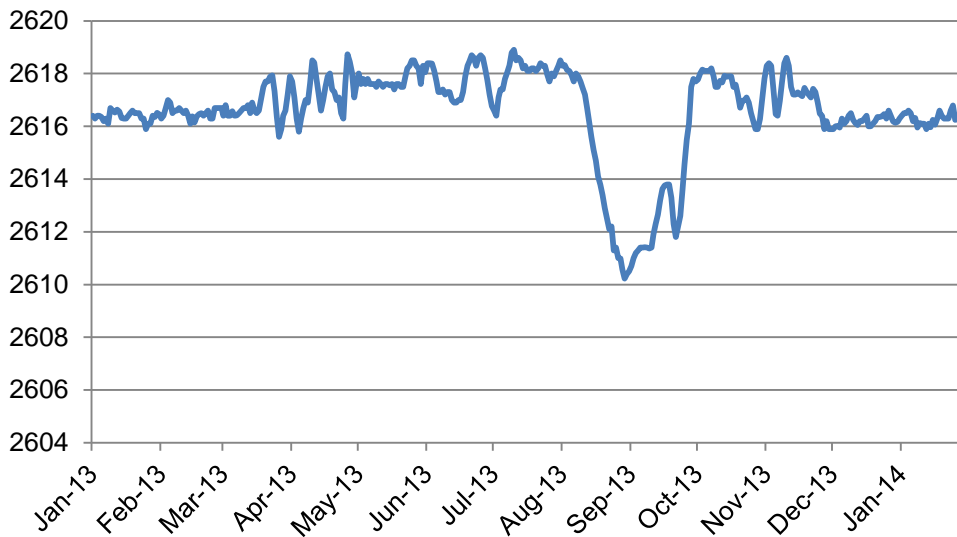
For additional information about the fishery of Elwood Reservoir please contact  
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## Johnson Water Level 2009 - January 2014



## Johnson Water Level January 2013 - January 2014



Johnson Lake's water level changes frequently. Follow water level fluctuations at [http://www.cnppid.com/Elevation\\_Flows2.htm](http://www.cnppid.com/Elevation_Flows2.htm).



## **STOP AQUATIC HITCHHIKERS!™**

According to Nebraska State Law, **it is illegal for watercraft to enter a Nebraska waterbody or leave a launch area while containing water.** This includes all containers, compartments, and equipment that are permanently attached to the watercraft.

**AND**

**All aquatic vegetation must be removed from watercraft and trailers before leaving a launch area.**

Protect Your Waters—Remember to **CLEAN, DRAIN, and DRY!**

# Zebra and Quagga Mussels

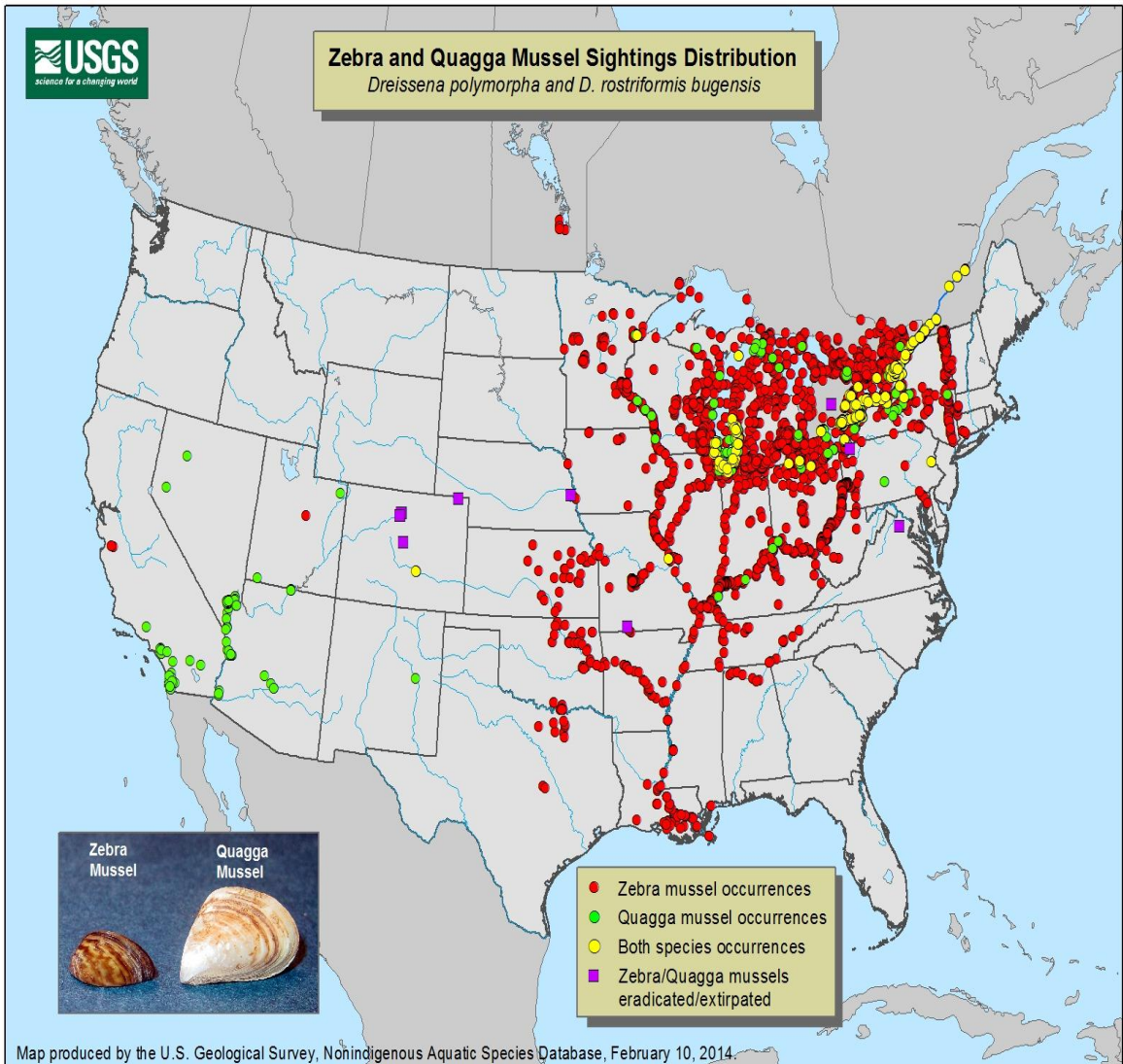
Anglers and boaters need to be aware of zebra and quagga mussels while using Nebraska Lakes and continue to **Clean, Drain and Dry** their equipment and boats prior to launching at a new waterbody. While no mussels have been identified at any of the I-80 Lakes, zebra mussels have been found at Zorinsky Lake in Omaha and are present in several reservoirs in neighboring states. Monitoring was completed at several Nebraska reservoirs including Johnson during 2011, 2012 and 2013. No evidence of zebra or quagga mussels was found. For more information concerning invasive species or to report a finding of invasive mussels access <http://neinvasives.com/report-a-sighting/>.

Anglers and boaters using Nebraska waters this season need to be aware of **new regulations** dealing with aquatic invasive species. Signs similar to that on the previous page are posted at many boat ramps including Johnson. 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.



Distribution of zebra and quagga mussels is getting closer and closer to SW Nebraska. The most recent finding was at Lake Waconda near Glen Elder Kansas during the summer of 2013. This map is updated often and can be accessed at [http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/maps/current\\_zm\\_quag\\_map.jpg](http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/maps/current_zm_quag_map.jpg).



If you have questions or concerns about Johnson Reservoir's fishery please contact

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