# Johnson Reservoir 2018 Fall Survey Summary



1

#### Jared Lorensen, Fisheries Biologist

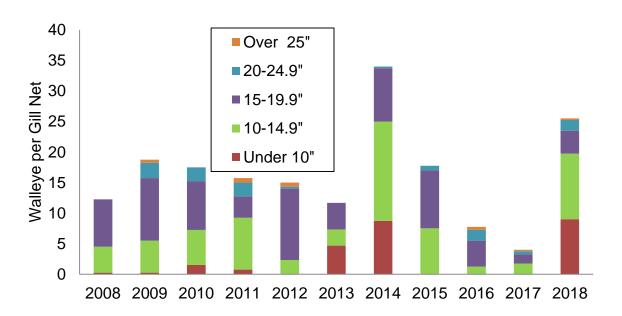
Johnson Reservoir is a major reservoir on Central Nebraska Public Power & Irrigation District's (CNPPID) Supply Canal System downstream of Plum Creek Reservoir. Notice its fluvial behavior at <a href="Maintenancemons">CNPPID's Reservoir/River Data</a> page. CNPPID manages Johnson Reservoir for hydroelectric power generation and irrigation purposes. There are unique fishing opportunities as a result of this functionality. Notice these aspects on NGPC's Lake Map.

Information collected from standard surveys allows biologists to evaluate the population density, size structure, and growth rates for several species. This data provides valuable information to guide decision making scenarios that include fish species stocked, stocking rates and fishing regulations. This information also assists Game and Parks staff in guiding anglers to waterbodies that have the desired populations for fishing. For more explanation of what constitutes a fisheries survey read the <u>Survey Says</u> article.

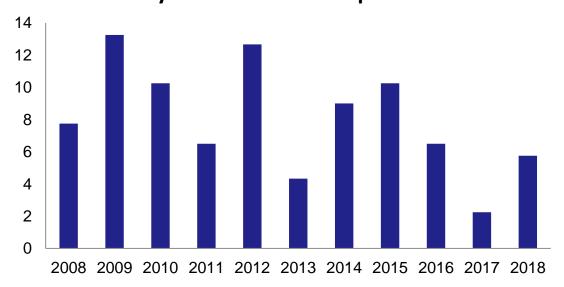


Every fall the fishery of Johnson Reservoir is surveyed with standard sampling methods. The following text and graphs are the result of the 2018 gill net survey. Graphs represent the number of each species captured per gill net by length group. For comparative purposes it shows results from previous years.

## Walleye

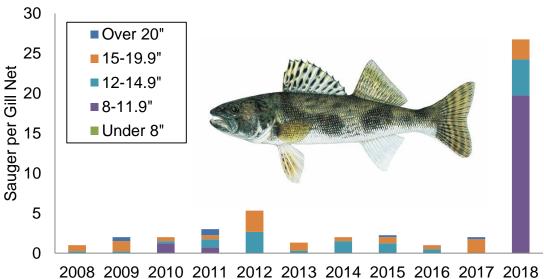


### Walleye Greater than 15" per Gill Net



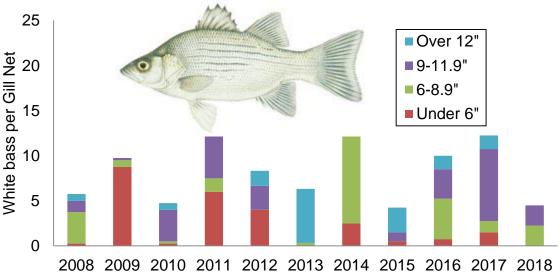
The 2018 survey indicated a favorable movement in the walleye population with 25.5 walleye sampled per gill net. Of these, 35% were <10", 42% 10-14.9", 15% 15-19.9", 7% 20-24.9" and 1% >25". The overall average length was 12.4". Walleye reach 15" in length after approximately two and a half years of growth in Johnson Reservoir. The abundance of young-of-year walleye in 2018's survey is promising for future angling opportunities.

## Sauger

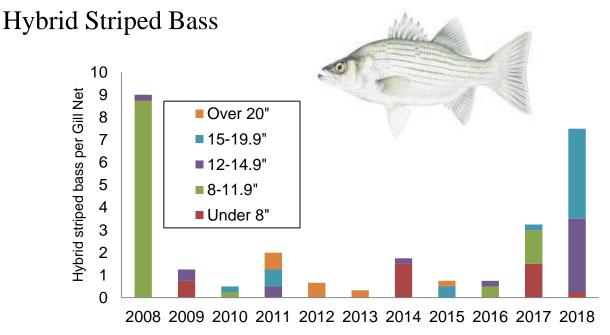


The 2018 data revealed an abundance of young-of-year and age one sauger. If these stay in Johnson, the future of sauger angling is bright. Average length was 10.7". Sauger in Johnson are reaching 15" after approximately three years of age. They are not stocked in Johnson, but are stocked annually upstream in Midway, Gallagher and Plum Creek reservoirs. Sauger are quite similar in appearance to walleye and harvest is regulated in conjunction for these two species. Access <a href="MGPC's Fish Identification Tool">MGPC's Fish Identification Tool</a> and the <a href="2019">2019</a> Fishing Guide for details.





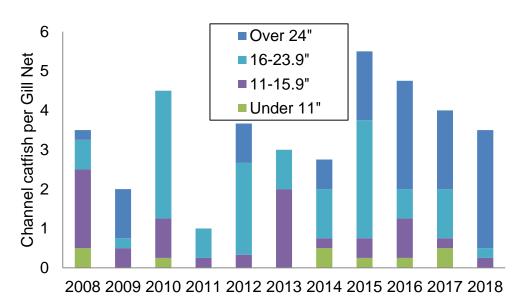
White bass reproduction and recruitment is sporadic. The 2018 survey revealed 4.5 white bass per gill net. The average length captured was 10" and the longest was 14". These largest specimens were age three. Due to their schooling behavior, this survey data likely indicates a smaller population than actually exists.



The 2018 hybrid striped bass survey data indicates the largest population in history with 7.5 per net. These fish averaged 15" in length with approximately half below 15" and half 15-20". The longest was 18". Like other predatory species in Johnson, wipers are taking advantage of abundant gizzard shad.

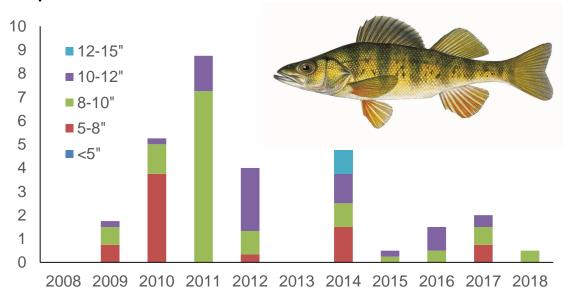
Access NGPC's Fish Identification tool for hybrid striped bass and white bass differentiation.

#### Channel catfish

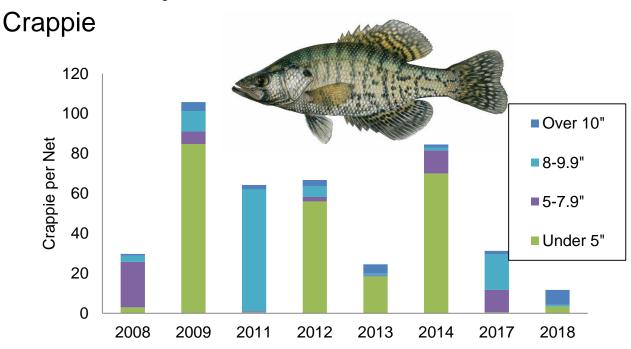


A declining trend in abundance was observed with 2018's data but it still indicates a larger population than many previous years. During 2018, 3.5 were sampled per gill net with 86% greater than 24" in length. The largest channel catfish sampled was 31".

# Yellow perch



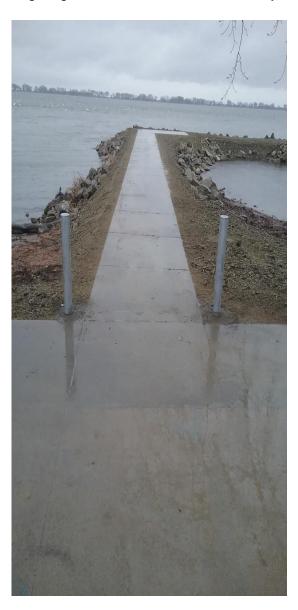
The 2018 survey collected 0.5 yellow perch per gill net. Those sampled had an average length of 9". Stockings of yellow perch began in 2007 and a resurgence has been observed and limited angling success has been reported. Yellow perch are requested to be stocked during 2019.



During 2018, 11.75 crappie were sampled per trap net. This value is lower than some years but size structure looks favorable for angling with 64% being longer than 10". White and black crappie were equally abundant in the sample.

### Access

A Memorial for ex NGPC Commissioner Lynn Bergrenn was constructed during 2018. This project includes access improvements to the existing breakwater near the inlet boat ramp (pictured below). These improvements make access along the breakwater easier and provide more surface for an angling platform. This project provides additional lighting and created American Disability Act (ADA) approved structures.





# **Stockings**



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 <a href="MGPC's Fish">MGPC's Fish</a> <a href="MGPC's Fish">Stocking Reports</a>.

<u>Year</u>	<u>Walleye</u>	<b>Hybrid Striped Bass</b>	Yellow Perch	Channel catfish
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"	
2014	168,295-1.5"	21,890-1.3"		
2015	219,317-1.5"	10,945-1.3"	85,078-2.6-2.8"	
2016	218,872-1.5"			
2017	219,143-2"		73,489-3"	
2018	218,820-1.5"			

### Water Elevation





Johnson Lake's water level changes frequently and plays a vital role in the fishery. Follow water level fluctuations at CNPPID's Reservoir Data page.

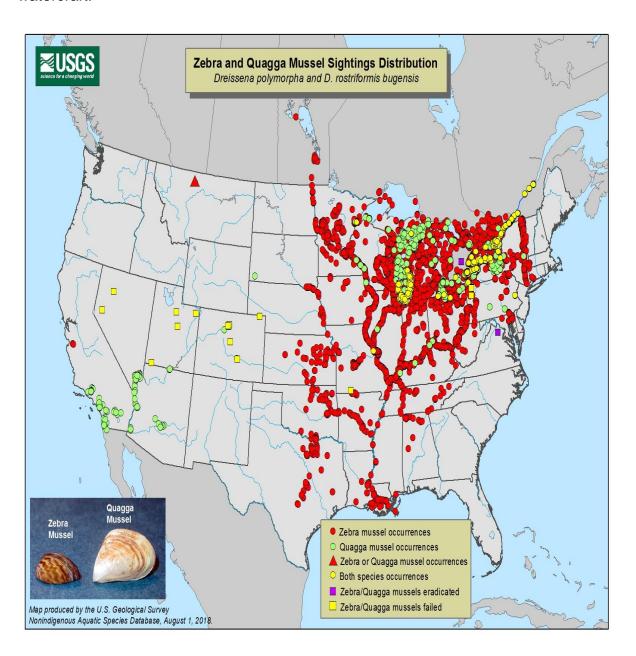
If you have questions or concerns about Johnson's fishery please contact Jared Lorensen, Biologist 308-535-8025, <u>jared.lorensen@nebraska.gov</u>
OR

Brad Newcomb, District Mgr. 308-865-5330, <a href="mailto:brad.newcomb@nebraska.gov">brad.newcomb@nebraska.gov</a>

# Aquatic Invasive Species (AIS)

Distribution of zebra and quagga mussels is getting closer and closer to SW Nebraska. The most recent finding in Nebraska was Glen Cunningham Lake in Omaha during 2018. This <a href="map">map</a> portrays the spread of these invasive mussels and is updated often.

In 2016, Nebraska boaters became required to possess a <u>Aquatic Invasive Species</u> (<u>AIS) Stamp</u>. Residents acquire the stamp when registering their watercraft. Nonresidents have to purchase a physical sticker that must be displayed on their watercraft.



Aquatic Invasive Species (AIS)



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 <u>CLEAN</u>, <u>DRAIN</u>, and <u>DRY!</u>

