Johnson Reservoir

2019 Fall Survey Summary – GAME (PARKS –

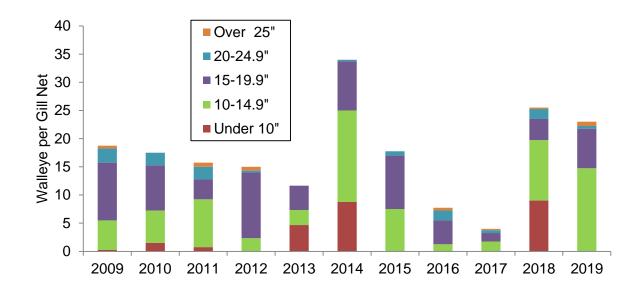
Jared Lorensen, Fisheries Biologist

Johnson Reservoir is a major reservoir on Central Nebraska Public Power & Irrigation District's (CNPPID) Supply Canal System downstream of the Canyon Reservoirs. Notice its fluvial behavior at CNPPID's Reservoir/River Data 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 characteristics utilizing NGPC's Lake Map Page. 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 Survey Says article.

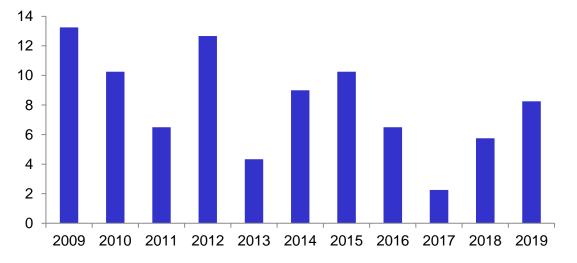


Every fall the fishery of Johnson Reservoir is surveyed with standard sampling methods. The following text and graphs are the result of the 2019 gill net survey. Graphs represent the number of each species captured per gill net by length group. For comparative purposes it shows results from previous years.

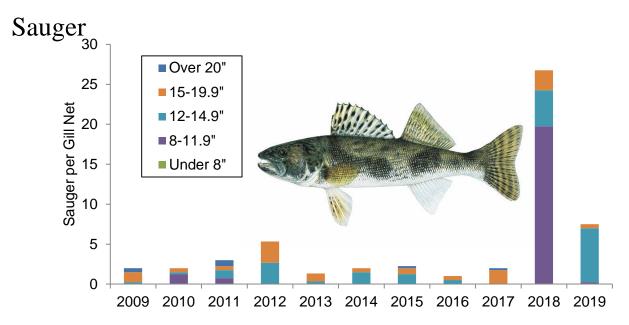
Walleye



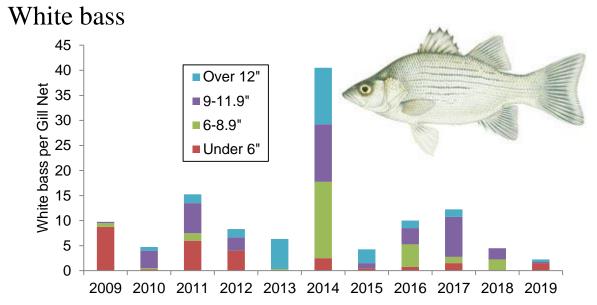
Walleye Greater than 15"



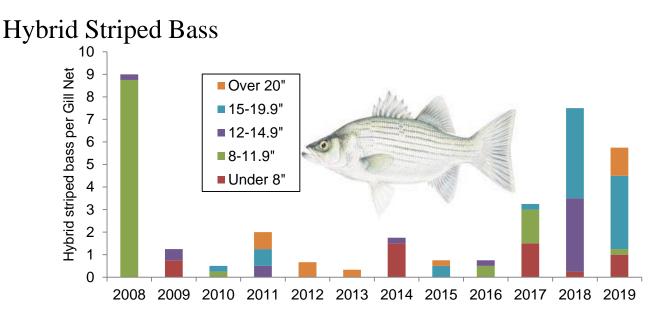
The 2019 survey was favorable with 23 walleye sampled per gill net (only 2.5 less than in 2018). Of these, 0% were <10", 64% 10-14.9", 30% 15-19.9", 2% 20-24.9" and 3% >25". The overall average length was 15.2". Walleye reach 15" in length after approximately two and a half years of growth in Johnson Reservoir. This most recent survey indicates good recruitment of the 2018 year class into the next larger length group.



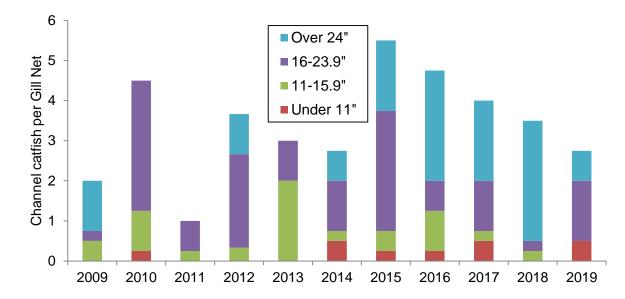
The 2019 sauger survey was dominated by age one specimens indicating that the large 2018 year class has recruited into a larger length group. Although 2019's (7.5) catch was much smaller than 2018's average length of these fish was approximately 3" longer. Average length was 13.4". Current data suggests that sauger in Johnson have the potential to reach 15" after approximately two and a half years of age. This species is not stocked in Johnson, but are stocked annually upstream in upstream reservoirs. Sauger are quite similar in appearance to walleye and harvest is regulated in conjunction for these two species. Access NGPC's Fish Identification Tool and the 2020 Fishing Guide for details.



White bass reproduction and recruitment is sporadic and due to their schooling behavior can be difficult to survey. The 2019 survey revealed even less white bass per gill net than 2018's. These few consisted of young-of-year which may indicate a brighter future for white bass angling.



The 2019 hybrid striped bass survey data indicates favorable recruitment and a large population. These fish averaged 16.5" in length with 17% under 8", 4% 8-11.9", 0% 12-14.9", 57% 15-19.9" and 22% over 20". The longest was 22". Like other predatory species in Johnson, wipers are taking advantage of abundant gizzard shad. Access <u>NGPC's Fish</u> <u>Identification</u> tool for hybrid striped bass and white bass differentiation and the <u>2020 Fishing</u> <u>Guide</u> as only one white bass or wiper over 16" is allowed in daily creels.



Channel catfish

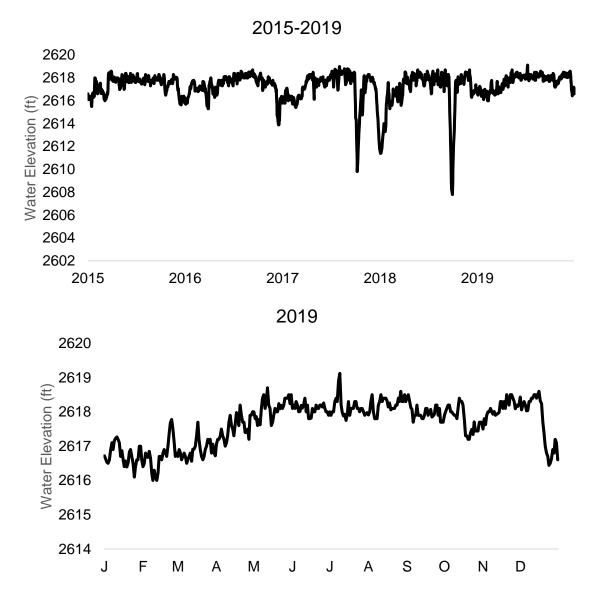
A declining trend in abundance was continued with 2019's data but the data still indicates a larger population than many previous years. The observed decrease in over 24" specimens and the increased abundance of 16-23.9" may indicate angler harvest. During 2019, 2.75 channel catfish were sampled per gill net and the largest channel catfish sampled was 34".

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 <u>NGPC's Fish</u> <u>Stocking Reports</u>.

<u>Year</u>	<u>Walleye</u>	Hybrid Striped Bass	Yellow Perch	<u>Channel catfish</u>
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"			
2019	237,497-1.75"		85,528-2.75"	



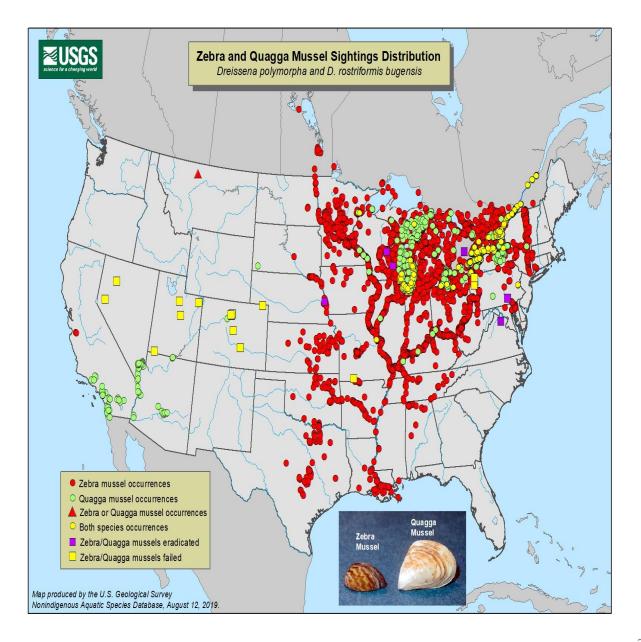
Johnson Lake's water level plays a vital role in the fishery. Follow water level fluctuations at <u>CNPPID's Reservoir Data</u> page.

If you have questions or concerns about Johnson's fishery please contact Jared Lorensen, Biologist 308-535-8025, jared.lorensen@nebraska.gov OR Brad Newcomb, District Mgr. 308-865-5330, brad.newcomb@nebraska.gov

Aquatic Invasive Species (AIS)

Distribution of zebra and quagga mussels is growing. The most recent finding in Nebraska was Glen Cunningham Lake in Omaha during 2018. The below map portrays the spread of these invasive mussels. Access <u>U.S. Geological Society's</u> <u>Site</u> for more information.

In 2016, Nebraska boaters became required to possess a <u>Aquatic Invasive Species</u> (<u>AIS</u>) <u>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 CLEAN, DRAIN, and DRY!

