

Red Willow Reservoir 2021 Survey Summary



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Fish populations are sampled each fall at Red Willow Reservoir using gill nets, a method commonly used to sample fish such as walleye, white bass, channel catfish and wipers. Gill nets are set on approximately the same dates and locations each year to reduce variability.

Repair work on the Hugh Butler Dam was completed in 2013 and water levels have taken time to return to where they were prior. As water levels return, expect to see improvement in fish catch rates and size structure. Red Willow will receive an upgraded fish cleaning station in Spring 2022.

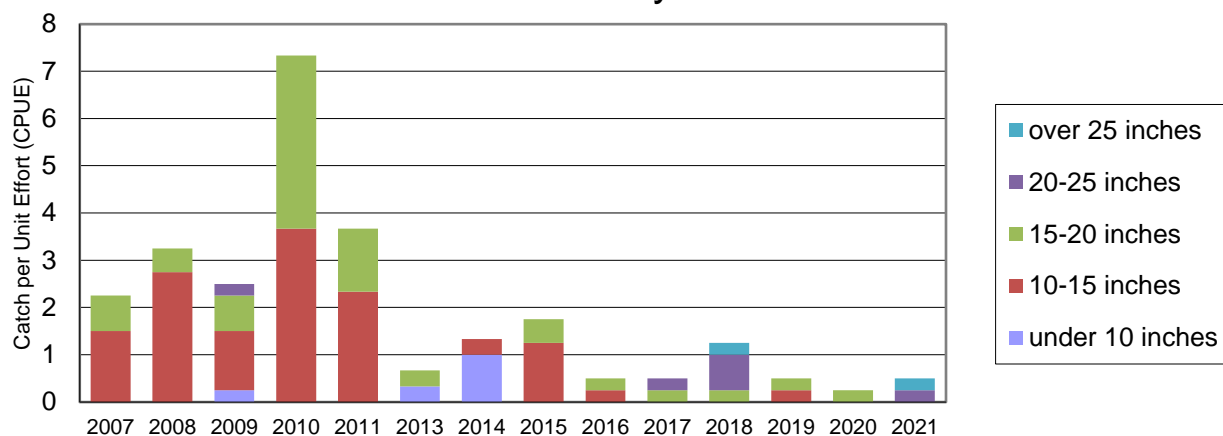
In response to walleye populations struggling to recover after dam repairs were completed, saugeye were introduced to Red Willow in 2017. Initially stocked alongside walleye, evaluations identified saugeye as the more successful option. Due to the overall success of saugeye stockings, the decision was made to eliminate walleye stockings for the time being. The result has been very positive looking at survey data over the past three years. After sampling 2.5 saugeye per net in 2019 and 4.5 per net in 2020, biologists recorded 5.8 per net in 2021. The 5.8 per net in 2021 would be the 4th highest walleye catch since 1994, further validating the success of the saugeye stocking program. Age distribution data found contribution from all five stockings in our 2021 survey. Consistent recruitment like this is encouraging for the future of this population. There are 1,000,000 saugeye fry and 100,000 saugeye fingerlings requested for spring 2022.

After two consecutive years observing increases in white bass catch rates, numbers dipped to 1.5 per net in 2021. There is no concern with overall population due to the variability that can be observed in white bass catch rates. The 2020 survey showed a good balance of young fish that should still be available for anglers to catch in 2022. Wiper survey numbers have still not recovered since dam repairs were completed. In response, we began stocking them as fry in 2019 with the hope of seeing similar results observed with wiper populations at Harlan and Swanson. There are 100,000 wiper fry requested for spring 2022.

In 2020, the decision was made to introduce tiger muskellunge into Red Willow. They were stocked at 5.25 inches in 2020 and 15 inches in 2021. These fish will be stocked at a very low rate and should provide the potential for anglers to catch a trophy fish. The next tiger muskellunge stocking request will not occur until 2024 which will provide biologists the opportunity to evaluate growth of the initial stockings and the overall impact on the existing fishery.

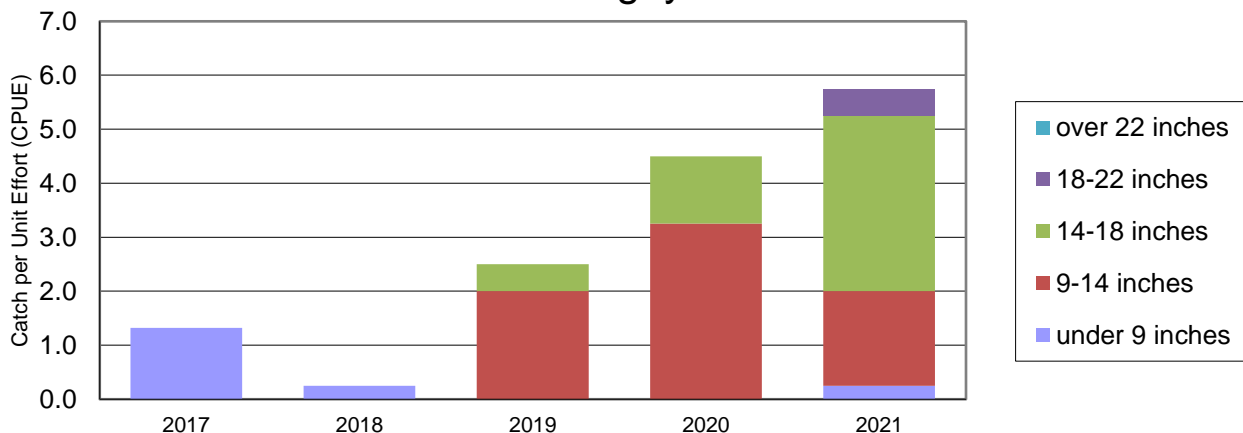
The following graphs show the average number of fish caught per net and the relative abundance of fish within several length categories. The text provides a brief explanation of the information shown in the graphs.

Walleye



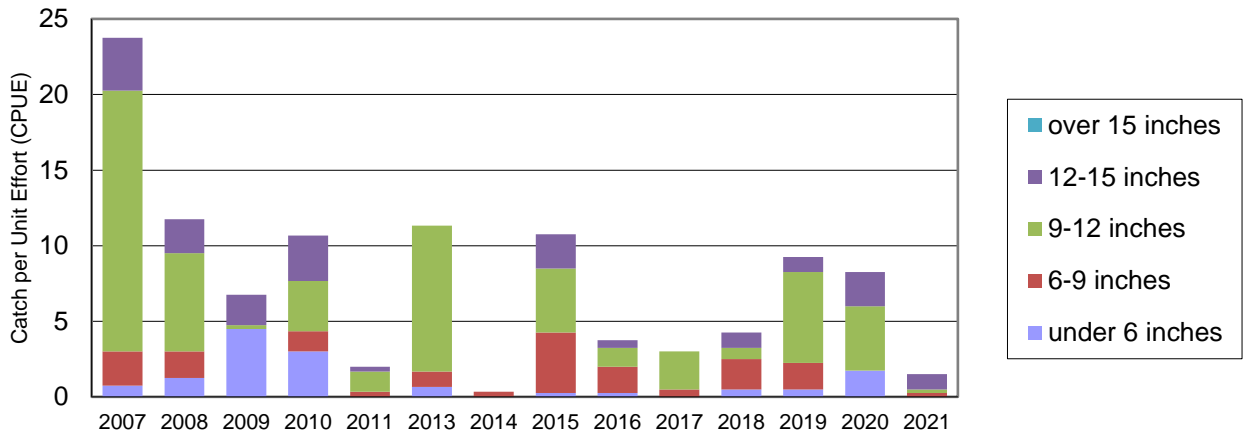
In 2021, less than 1 walleye per net was sampled. Walleye populations have been down in Red Willow since draining for dam repairs. To improve angling opportunities for walleye anglers, biologists introduced saugeye to Red Willow in 2017. Both walleye and saugeye were stocked in 2017 and 2018. Due to saugeye outperforming them, walleye were removed from stocking plans in 2019 to allow focus on building saugeye populations. Strategies will continue to be evaluated and will be adjusted if deemed necessary. No walleye are requested for 2022.

Saugeye



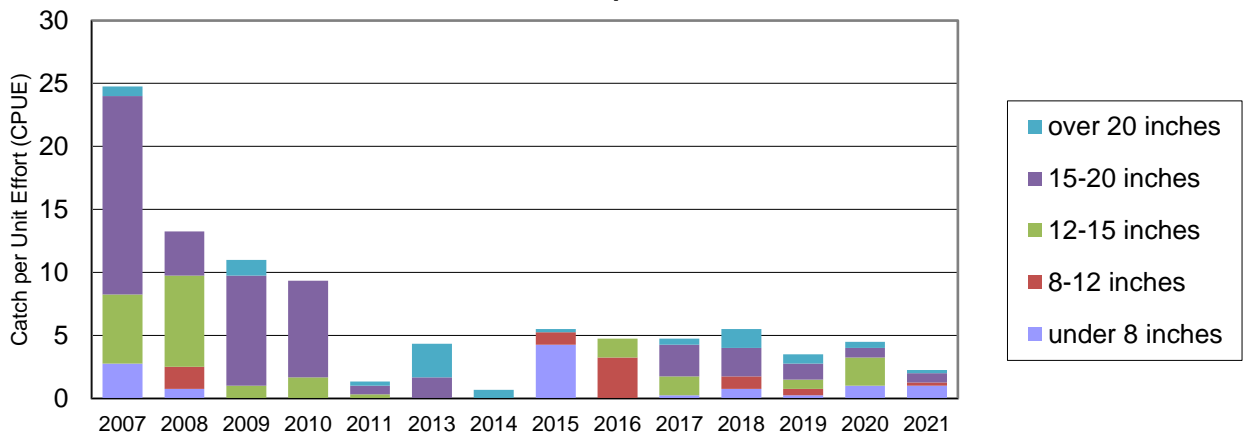
After being introduced in 2017, saugeye have appeared to thrive in Red Willow. In 2019, biologists sampled 2.5 saugeye per net which would have been the best walleye catch since 2011. In 2020, surveys jumped to 4.5 saugeye per net. In 2021, surveys jumped again to 5.8 saugeye per net! That would be the 4th highest walleye catch since 1994. Age data shows a contribution to the population from all five stockings. There are two saugeye stockings requested for 2022. In early spring, 1,000,000 saugeye fry are requested followed by a request for 100,000 saugeye fingerlings in late spring.

White Bass



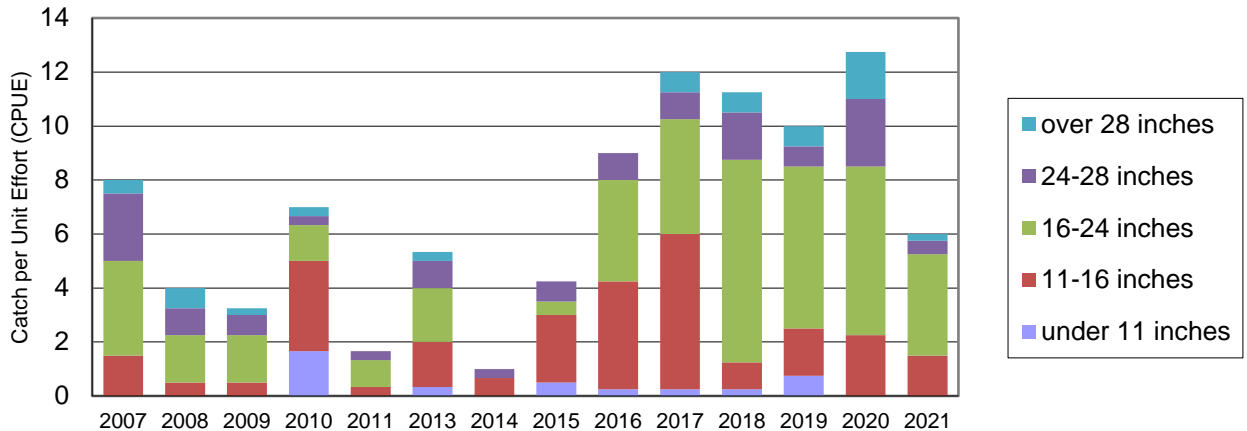
White bass catch dipped to 1.5 fish per net in 2021. Due to the highly variable nature of white bass surveys, there is no concern for the health of the population currently. The 2020 survey showed a good number of young fish that should still be in the system and will provide anglers with ample opportunity in 2022.

Wiper



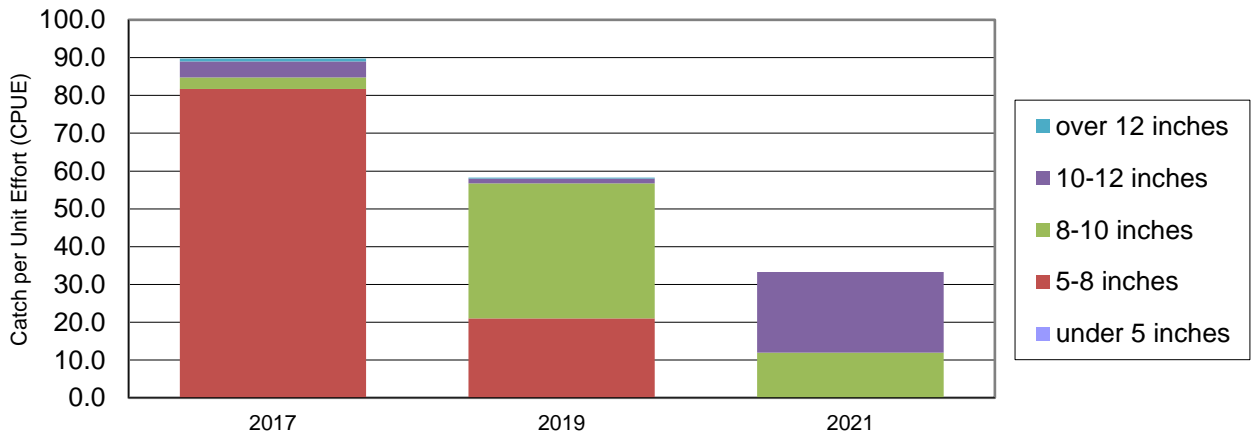
In 2021, overall wiper catch remained low at just over 2 per net. While total catch is below our management goal, we have seen improvement the last two years in age-0 fish. It appears fry stockings could be helping to improve the inconsistency we were observing with recruitment. We will continue to evaluate the stocking success moving forward. There are 100,000 wiper fry requested for spring 2022.

Channel Catfish



Red Willow continues to produce excellent channel catfish. In 2021, biologists surveyed 6 per net. Channel catfish populations are stable and show good length distribution for sustained success. Anglers will find fish over 28 inches and plenty of smaller fish for the frying pan as well. Channel catfish are stocked semiannually to supplement low natural recruitment. There are no channel catfish requested in 2022.

Crappie



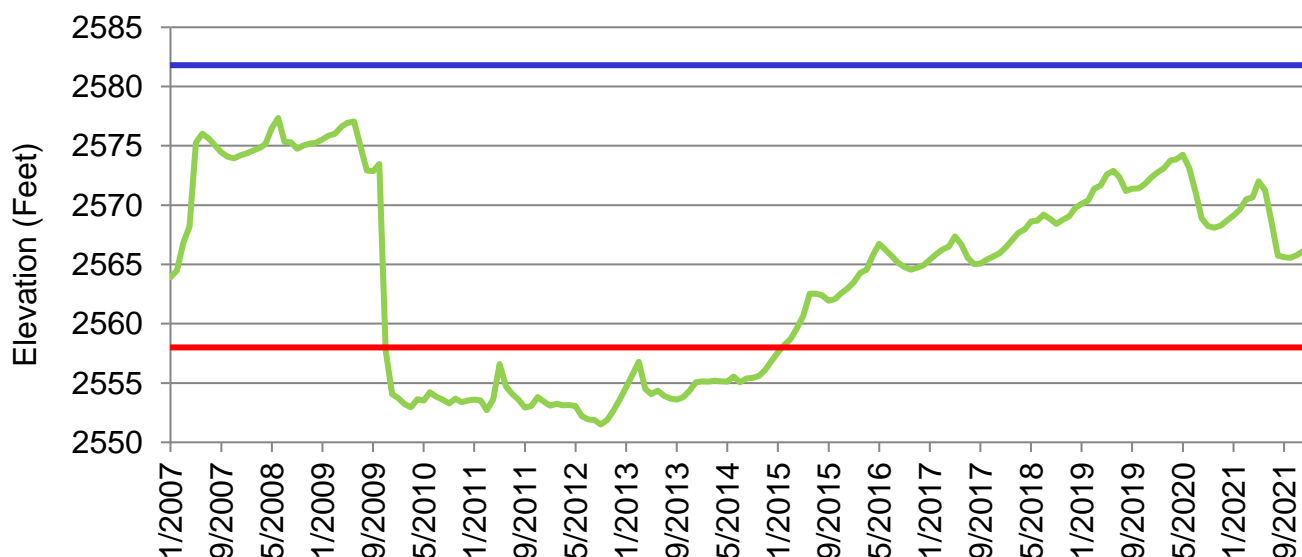
To get a better handle on crappie populations in Red Willow, biologists began setting spring trap nets semiannually in 2017. In 2021, spring trap nets caught just over 33 crappie per net. Numbers dipped a little in 2021, but overall size structure was very good with several fish pushing 12 inches sampled. Crappie populations often are dominated by a large year class and will follow an oscillating pattern as that year class grows. Our surveys show that Red Willow has a healthy crappie population following that pattern. We will expect those older fish to produce a strong year class that should show up in the next survey. Spring trap nets are next scheduled for 2023.

Red Willow Reservoir Fish Stocking Summary

Year	Walleye	Channel Catfish	Saugeye	Wiper	Yellow Perch	Tiger Muskellunge
2021		5,001 (4.25")	1,681,281 (1" & fry)	175,000 (fry)		774 (15")
2020			308,874 (1" & fry)	175,000 (fry)		3,622 (5.25")
2019		7,808 (5")	191,020 (1.25")	175,000 (fry)		
2018	54,926 (1.25")		350,000 (fry)	5,578 (1.25")		
2017	49,998 (1.5")	5,000 (5")	67,200 (1.25")	6,369 (1")	37,944 (1.5")	

Above is a partial table of fish stockings over the last 5 years at Red Willow Reservoir. The species stocked, number stocked, and fish size are presented in the table. Multiple species are stocked annually at Red Willow and a comprehensive database of fish stockings can be found at the Nebraska Game and Parks website or by following this link: [Fish Stocking Database](#)

End of Month Elevation, Red Willow Reservoir 2007-2021



Water levels were extremely low at Red Willow due to structural repairs of the dam that began in 2009. Construction was finished in 2013 and lake elevations have started the road to recovery. The green line indicates end of month elevation, the blue line indicates the top of the conservation pool elevation, and the red line indicates the top of the inactive pool elevation. Current elevation data can be found by following this hyperlink:

[Current Elevation](#)



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Aquatic invasive species (AIS) have reached Nebraska! Zebra mussels are currently established in Lewis and Clark Reservoir, Offutt AFB pond, and the Missouri River. Anglers and boaters should be on the look out for personnel performing boat inspections and decontaminations statewide. Please email: ngpc.ais@nebraska.gov or call 402-471-7602 to report any possible AIS sightings or for more information about AIS in Nebraska.

Preventative Steps and Regulations

- It is unlawful for a boat to arrive at or leave any body of water in Nebraska with water other than from a domestic source except for fire-fighting purposes. Drain water before leaving an area
- It is unlawful for a boat or trailer to arrive or leave a launch area with any aquatic vegetation from that waterbody still attached. Boat blinds cannot use plants listed as invasive species or noxious weeds
- Wash mud off waders. Felt-sole waders are not allowed

Nonresident Aquatic Invasive Species Stamp

Motorized watercraft registered outside Nebraska are required to purchase and display the Aquatic Invasive Species Stamp before launching from any Nebraska boat ramp. Stamps must be affixed on the starboard side toward the rear of the boat above the waterline. The fee for each stamp is \$18 dollars and includes the \$3 issuing fee. Stamps can be purchased online or at Nebraska Game and Parks Commission Offices.



Left: Zebra Mussel
Right: Quagga Mussel