Sutherland Reservoir

2021 Fall Survey Summary

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Overview

Sutherland Reservoir is located in Southwestern Nebraska and is the first canal reservoir downstream of Lakes McConaughy and Ogallala. Sutherland is 3,000-acres in size and is utilized as cooling waters for the Nebraska Public Power District's (NPPD) Gerald Gentleman Station. Due to the water being utilized as cooling for the Gerald Gentleman Station the reservoir offers unique fishing opportunities for anglers such as warmer water temperatures in the early spring carrying later into the fall. Refer to the <u>2022 Fishing Guide</u> for current fishing regulations regarding Sutherland's fishery.



For questions or concerns regarding Sutherland Reservoir's fishery please contact: Jared Lorensen | Biologist | 308-535-8025 | <u>jared.lorensen@nebraska.gov</u> Brad Eifert | District Manager | 308-865-5331 | <u>brad.eifert@nebraska.gov</u>



The graphs above show Sutherland Reservoir's water levels monthly for 2021 and for the last 5 years, respectively. Water levels fluctuate regularly in Sutherland Reservoir and the fishery is impacted as a result. Access <u>NPPD's Water Data</u> to track water level fluctuations.

Survey Results

Data collected from conducting standard fisheries surveys are needed to evaluate the population density, size structure, and growth rates for multiple sport fishes. Compiled and analyzed data provides information needed to guide decisions regarding fish species being stocked, stocking rates, and fishing regulations. The data also allows Nebraska Game and Parks staff to guide anglers to waterbodies that contain targeted fish species. The graphs shown below depict the 2021 fisheries survey that is conducted annually at Sutherland Reservoir. For more information on how fisheries surveys are conducted in the state of Nebraska see this <u>article</u> from Nebraskaland magazine.



Walleye Catch Rate

Walleye catch rate per net shows an increase of 19% of from 2020 to 2021. In 2021, 25 Walleye were sampled per gill net with the majority (49%) in the 10-to-15-inch range. Sutherland Reservoir was stocked with 121,156 1-inch Walleye in 2021. To view the stocking reports for Nebraska, see <u>NGPC's Stocking Reports</u> webpage.



Walleye 15 Inches or Greater

Walleye that are greater than 15 inches continued to increase from previous years (2018, 2019, and 2020). From 2020 to 2021 there was a 56% increase in Walleye caught per net that were 15 inches or greater.



Channel Catfish Catch Rate

A decline in the amount of Channel Catfish caught per net was seen in the 2021 survey compared to years prior. This resulted in a 53% decrease when compared to 2020 sampling. The majority (73%) of Channel Catfish sampled in the 2021 survey were in the 16-to-24inch range. The largest Channel Catfish sampled was 24 inches in length.



White Bass Catch Rate

Catch rates per net for White Bass showed a decline resulting in a 77% decrease overall when comparing data from 2020 to 2021. The catch per net was evenly distributed between the 6-to9-inch, 9-to-12-inch, and 12-to-15-inch classes.



Wiper (Hybrid Striped Bass) catch per net increased when compared to the previous four years of sampling. In comparison to 2020 there was a 25% increase in catch per net for 2021 sampling. It is recommended to practice "Catch and Release" when angling for Wipers so that they may reach their full growth potential. For Sutherland Reservoir a low-density population consisting of trophy sized individuals (greater than 20 inches in length) is desired. Identification of Wipers can be difficult, see the <u>NGPC Fish Identification Guide</u> for tips on identification prior to harvesting.

Creel Report

The Nebraska Cooperative Fish and Wildlife Research Unit, which is housed at the University of Nebraska-Lincoln conducted a creel survey at Sutherland Reservoir from April - October 2021. Creel surveys help biologists to better understand angler participation and their influence on fish populations. Highlighted below are some of the results from the 2021 creel conducted at Sutherland Reservoir. The first table shows angler trips which is mean trip length per month by angler type. The next table shows, catch rate, harvest rate, harvest, and release rate by species. Catch rates are fish caught per angler hour. Harvest rates capture fish harvested per angler hour. Harvest by species is the number of fish harvested throughout the entire creel for 2021 (April – October). Release by species is the number of 9,696 hours for bank anglers and 10,782 hours for boat anglers. The creel will be conducted again in 2022 and anglers are encouraged to take time to participate in the survey.

Species	Catch Rate	Harvest Rate	Harvest	Release Rate
Channel Catfish	0.197	0.102	2079	1958
White Bass	0.164	0.046	947	2412
Wiper	0.015	0.009	180	118
Walleye	0.444	0.116	2366	6725
Smallmouth Bass	0.127	0.005	95	2498

2021 Sutherland Creel Survey Results

2021 Angler Trips

Month	Bank	Boat
April	384	80
May	1151	721
June	1057	743
July	891	381
August	375	240
September	633	322
October	71	19



Sunset at Sutherland Reservoir 2021.

Photo Credit: Meghan Manary



Creel clerk conducting angler survey at Sutherland Reservoir. Photo Credit: Meghan Manary



Walleye harvested from Sutherland Reservoir. Photo Credit: Meghan Manary

New at Sutherland

A new arrival at Sutherland Reservoir made its debut in 2021, the <u>Barracuda – 60115 Fish</u> <u>Cleaning and Grinder Station</u>. This is located at the Inlet State Recreation Area. This new fish cleaning station is convenient for anglers to utilize and has an ADA compliant cutting table. The cleaning station was funded by Fisheries and Parks Divisions programs.



Fish cleaning station located at Sutherland Reservoir.

Photo Credit: Jared Lorensen

Aquatic Invasive Species (AIS)

Distribution of Zebra Mussels (*Dreissena polymorpha*) surrounding Nebraska is expanding, especially in Kansas and South Dakota. Currently the only waterbodies in Nebraska that are confirmed with Zebra Mussel infestations are the Missouri River, Lewis and Clark Lake, and Offutt Base Lake. The map shown below portrays the spread of these invasive mussels throughout the United States. Access U.S. Geological Survey's Site for more information.

In 2016, the <u>Aquatic Invasive Species Stamp</u> was implemented in Nebraska to fund programs combatting aquatic invasive species (AIS). When Nebraska residents register their motorized watercraft, they acquire the stamp. For boaters who have their motorized watercraft registered outside of the state of Nebraska they must purchase a physical AIS sticker to be displayed on their watercraft.



Eurasian watermilfoil is an invasive aquatic plant that has been recorded in 18 waterbodies across Nebraska including Lincoln County. This plant spreads through tiny fragments of leaves and can grow up to 20 feet deep. New infestations are often caused by boaters not following the "Clean, Drain, and Dry" protocol and introducing fragments into new lakes. Be sure to clean all aquatic vegetation from your boat to prevent this invasive aquatic plant from spreading to new waterbodies.



Cross section of Eurasian watermilfoil from North Platte I-80 City Lake. Photo Credit: Anna Medina

Bighead and Silver Carp have invaded every tributary of the Missouri River in Nebraska including the Platte, Elkhorn, Loup, and Nemaha rivers. Due to the substantial amount of damage these species can inflict on infested waterbodies it is important for anglers to be aware and report any sightings outside of the range shown in the map below.



For questions and to report aquatic invasive species sightings in the state of Nebraska please utilize the information below:

Email: <u>ngpc.AIS@nebraska.gov</u> Telephone: 402-471-7602





Invasive carp.

Photo Credit: NGPC