

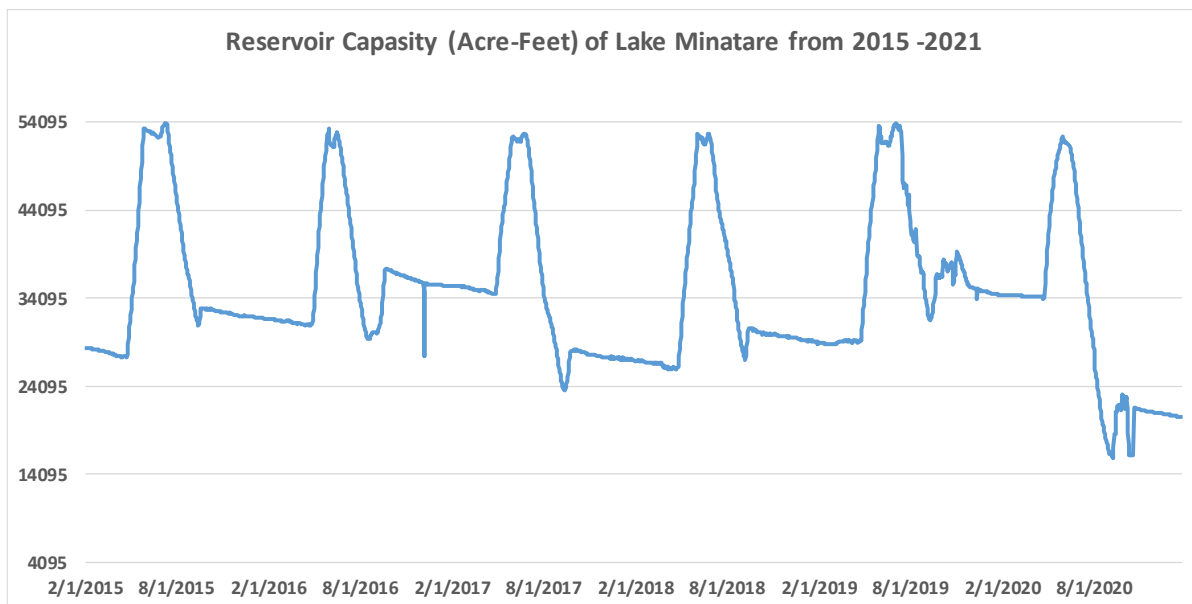
Lake Minatare 2020 Fall Survey Summary



Joe Rydell Fisheries Biologist

Lake Minatare State Recreation Area is located 6 miles east and 8 miles north of Scottsbluff, NE in the North Platte River Valley. The reservoir was built in 1915 by the U.S. Bureau of Reclamation primarily for irrigation purposes. The fishery and land adjacent to the reservoir is managed by the Nebraska Game and Parks Commission for recreational activities. Fishing is available at Lake Minatare for a variety of fish species which include Walleye, White bass, Northern Pike, Channel Catfish, Smallmouth Bass, Largemouth Bass, Crappie, and Yellow Perch. The lake was once part of the North Platte Wildlife Refuge and because of its history as a refuge for migrating waterfowl, it is closed to public use from October 15 through January 14.

Lake Minatare has a total storage capacity of 58,795 acre-feet of water or 2,147 surface acres when at full pool. The water levels as of January 1st 2021 are approximately 35% of capacity at 20,776 acre-feet of water. This is below the average water levels for this time of year of 24,673 acre-feet. Without some substantial spring moisture, lake levels will likely remain lower than average for 2021.



The following text and graphs are the result of gill netting surveys completed during the fall of 2020 at Lake Minatare. For comparative purposes it also shows the results from previous years. Gill nets are used to sample fish species that are primarily found in open water such as walleye, white bass, and wipers. The nets are set each year at approximately the same locations and dates as previous years to allow for trend comparisons. Although species such as Largemouth Bass, Smallmouth Bass, or Crappie are present in Minatare in good abundance, their populations were not surveyed in 2020.

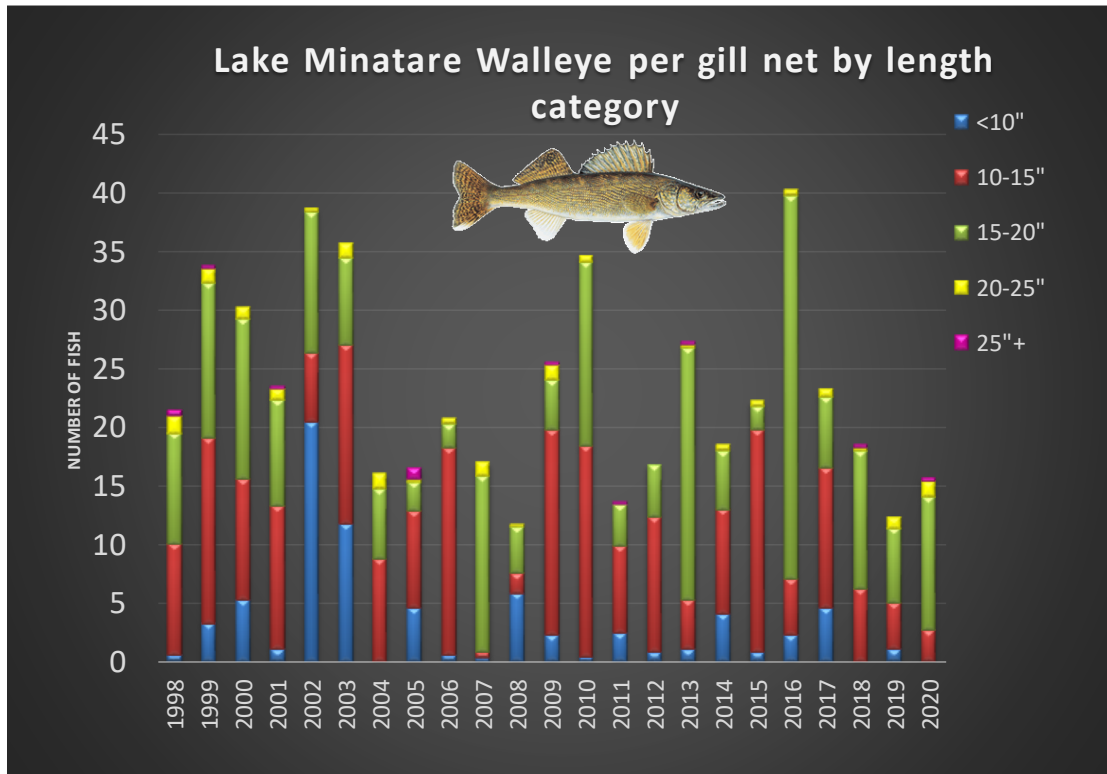


Walleye

Walleye abundance at Lake Minatare in 2020 was 15.6 fish per gillnet. Although this is slightly higher than 2019, it remains below the long-term average of 23.2 per gillnet. Age and growth analysis suggests that fish from age 0 to 8 years old persist in the population. Some fish older than 8 years old are likely still in the lake but at such a low density that they did not show up in the survey. The population is dominated by a 2016 year-class of 4 year-old fish. We are going on our 3rd year of poor recruitment to the population.



The average size of walleye collected in the 2020 survey was approximately 17 inches and the largest collected was 28.8 inches. Anglers should have a good harvest year on Lake Minatare since approximately 83 % of the population was over the minimum length limit of 15 inches. Lake Minatare will be stocked with 110,000 fingerling (2 inches) walleye in 2020.



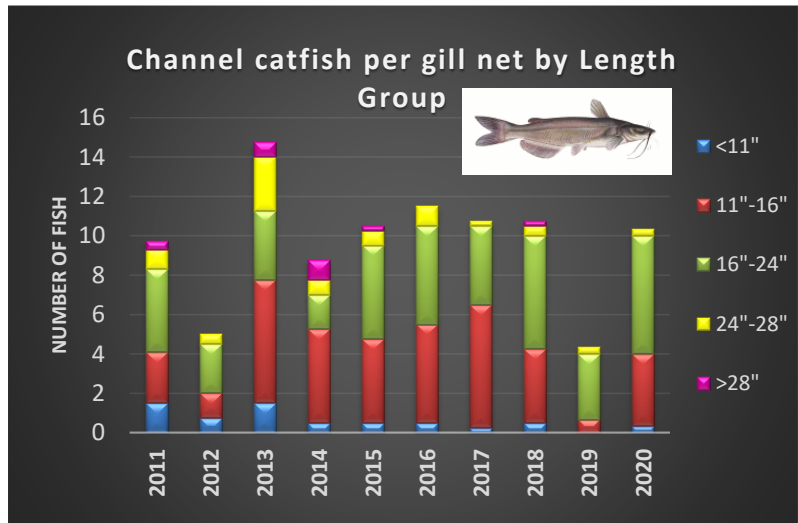
Gizzard Shad

Gizzard Shad are a primary prey species in many Nebraska irrigation reservoirs and are the main food for the predator fish in Lake Minatare. This prey species sometimes has a tough time surviving the winter season due to Lake Minatare sitting on the northern edge of their geographic range. If dead shad are observed by anglers, it is encouraged to contact the fisheries office and report the dead fish. If a die off occurs, adult shad are stocked prior to them spawning to assure there is an adequate forage base for fish such as walleye, white bass, and catfish.

Channel Catfish

The Channel Catfish gill net catch in 2020 was 10.3 fish per net.

Although this was higher than the 2019 catch, it is about average compared to the long term catch data. Size structure of Catfish in Minatare doesn't change much from year to year. The population has all sizes of Catfish with a few over 24 inches. Although no Catfish over 28 inches were collected in 2020, angler reports suggest they persist in the lake. The average length of Channel Catfish sampled was 17.1 inches in 2020 and the largest was 25.1 inches. Lake Minatare will be stocked with 8,000 ten-inch Channel Catfish in 2021.

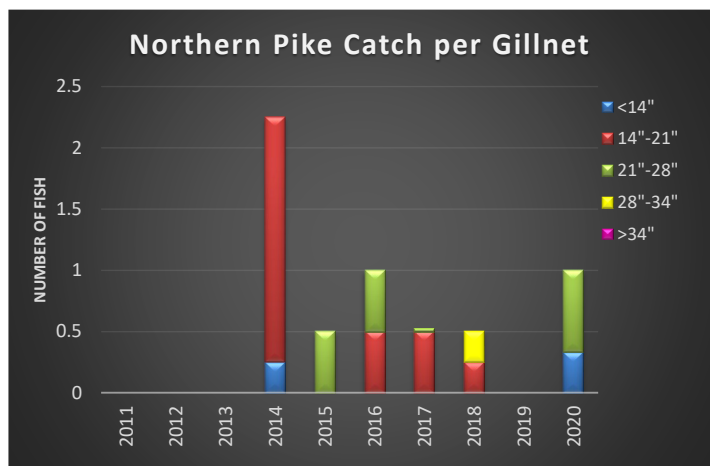


In 2007, 3600 Blue Catfish were stocked into Lake Minatare. Although not many showed up in surveys after the first year, they are still persisting in the lake. One Blue Catfish was collected in 2020. It measured 29 inches and weighed 12.1 pounds. It is the anglers responsibility to be able to differentiate the species because Channel Catfish have a bag limit of 5 fish per day and Blue Catfish are managed as a trophy fish statewide with a daily bag limit of 1 fish per day.



Northern Pike

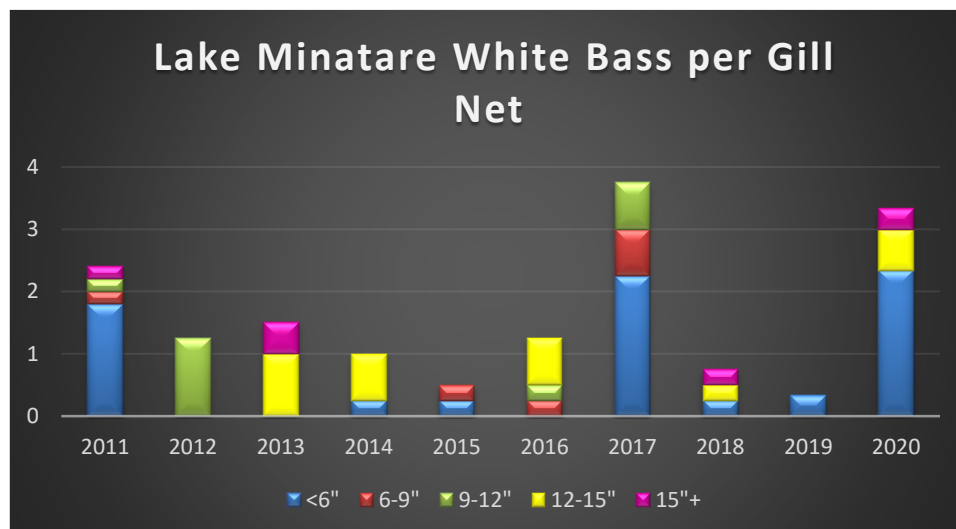
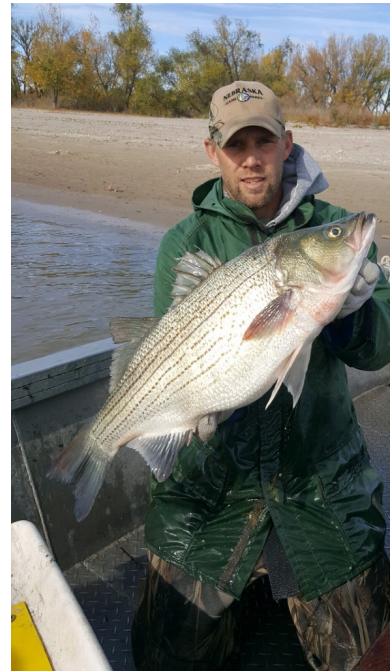
Northern Pike abundance remains low in Lake Minatare at 1 pike per gill net in 2020. Although the average size collected in 2020 was only 20.2 inches, some pike over 34 inches are reported annually from angler reports. Pike are typically in excellent body condition and can provide some action when fishing for other species is slow. Pike are also shoreline oriented most of the year, which provides bank anglers an opportunity to catch a large aggressive predator fish.



White Bass and Wipers

White bass abundance in Minatare remains low at 3.3 per gill net in 2020. This was the highest catch in over 20 years except for 2017. White bass can be difficult to sample due to their schooling behavior but trend data suggests that white bass do not thrive as well in Minatare compared to other Nebraska reservoirs. Lake Minatare is an off channel reservoir that receives water during particular times of the year rather than a constant inflow. Although Minatare fills during the time of year when White Bass reproduce, they do not get big year-classes like reservoirs with rivers flowing year-round into them. White bass in Minatare do grow exceptionally well regularly producing fish over 15 inches.

Wipers were last stocked in Minatare in 2011. They were discontinued in an attempt to reduce competition with white bass and boost the white bass population. A few large wipers still persist with a 2020 catch rate of 1 per gillnet. The largest wiper collected in 2020 was 25.9 inches and pictured here.



Invasive Species

Over the past several years invasive species have become a rising concern in Nebraska. It is illegal to either arrive or leave any water body in Nebraska with water other than from a domestic source (water supply system, well or bottled) except for firefighting purposes.



Zebra mussels (pictured right) and quagga mussels are small fingernail-sized mussels and adults are usually ¼ to ½ inches long with alternating yellow and brownish colored stripes on their shell. These mussels can spread in their immature form known as veligers by being transported in bilge, ballast, or live-well water or as adults attached to boat hulls, engines, aquatic vegetation, or other surfaces. Sampling for these veligers occurs statewide from the months of May through September. At Lake Minatare Zebra mussels will be sampled bi-monthly in 2021 during those months.

Zebra mussels were first documented in Nebraska in 2006 at Offutt Air force Base Lake and have since been discovered at Zorinsky Lake (2010) (mussels eliminated via a winter drawdown that froze them out but has had a positive veliger sample since leaving it a suspect lake), Lewis and Clark Lake (2015), Lake Yankton (2017), Glen Cunningham Lake (2018) and below Gavins Point Dam in the Missouri River.

Aquatic vegetation such as curly-leaf pondweed and Eurasian water milfoil are also invasive species present in Nebraska. Both of these plant species form dense mats of vegetation near the water's surface which make recreational fishing, boating, and swimming difficult. Spread of these plants can happen through stem fragmentation. A single segment of plant material can be transferred to another water body and form a new colony therefore removing any visible plant material from boats and trailers is a must and remember to **CLEAN, DRAIN, and DRY!**

CLEAN- Remove plants, animals, mud and thoroughly wash equipment that came into contact with the water.

DRAIN- Drain all water before leaving, including wells, bilge, ballast, and any parts or equipment that can hold water. Remember to remove all boat plugs before leaving the boat launch area and don't put them back in until ready to launch again.

DRY- Allow all equipment to dry completely before launching into another body of water. Don't fish more than one body of water in a day without drying all equipment first.

For more information on invasive species in Nebraska visit neinvasives.com.

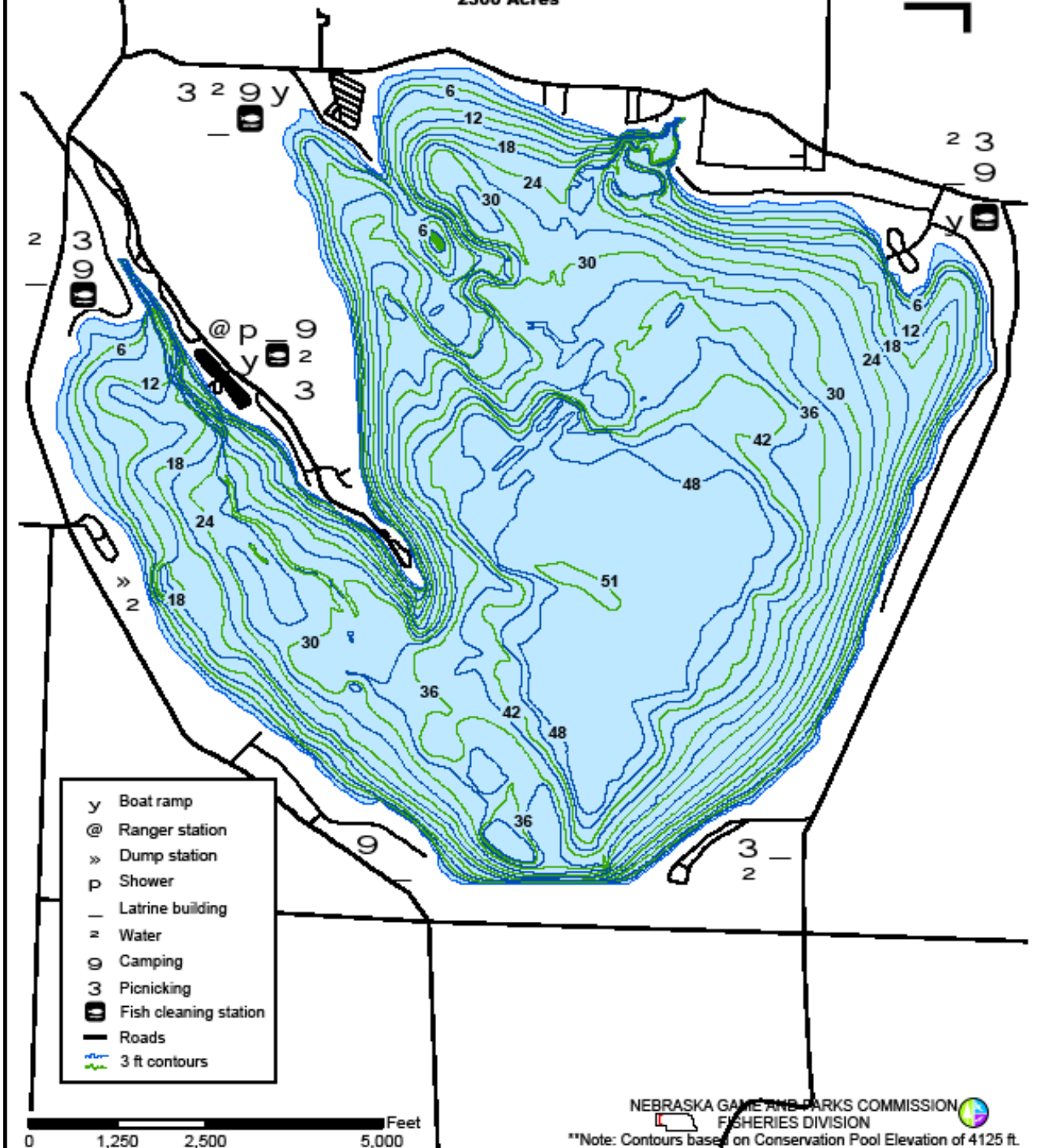


Don't forget to lower your outboard motor to drain all the water from your lower unit before leaving a boat launch facility.



Lake Minatare

12 NE of Scottsbluff
2300 Acres**



For additional information about fisheries management at Lake Minatare please contact the following personnel by phone or email addresses listed below.

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