

Calamus Reservoir 2019 Fall Fish Survey Summary

Nebraska Game and Parks Commission

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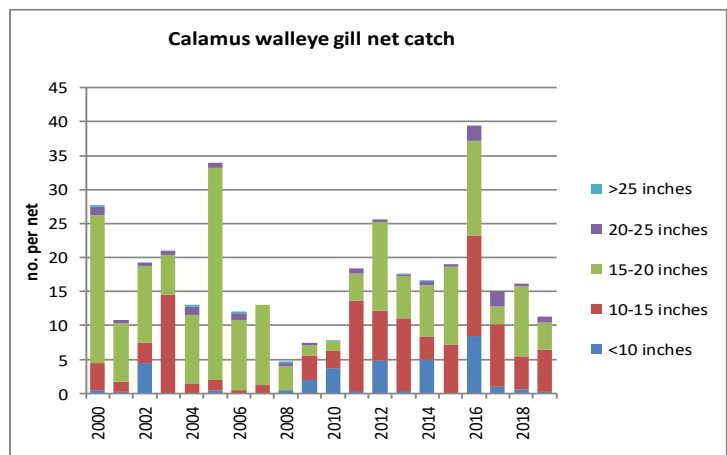
2019 Calamus Fish Management Summary

The following text and graphs are summaries from the 2019 fall gill net sampling conducted during October. Gillnets are used to sample fish species which primarily live in open water environments such as large reservoirs. Gill net sampling effort in 2019 was 6 nets located in the mid to lower reaches of the lake on October 9 and 17. Electrofishing for young-of-the-year fish was not conducted in 2019. The same general areas of the lake are utilized for sampling locations each year for standardization. No angler creel survey was conducted in 2019.

Walleye, channel catfish, and wiper populations are maintained through annual fish stocking. Muskellunge are stocked in low numbers biannually to maintain their population and angling opportunity. In 2019, 8.04 million fry and 435,582 fingerling walleye; 25,284 fingerling wipers; and 3,678 10-inch channel catfish were stocked in the lake. Fish stocking in 2019 will include walleye, wipers, and channel catfish. **A new walleye regulation took effect beginning in 2016. The daily bag limit is 4 walleye, however, anglers may have no more than 2 fish between 15 and 18 inches and no more than 2 fish over 18 inches. Keep in mind only one fish in the daily bag may be longer than 22 inches in length. In addition, a new regulation is in place for channel catfish. Only 1 fish over 30 inches is allowed in the daily bag limit of 5 channel catfish. This regulation is designed to protect large channel catfish from overharvest.**

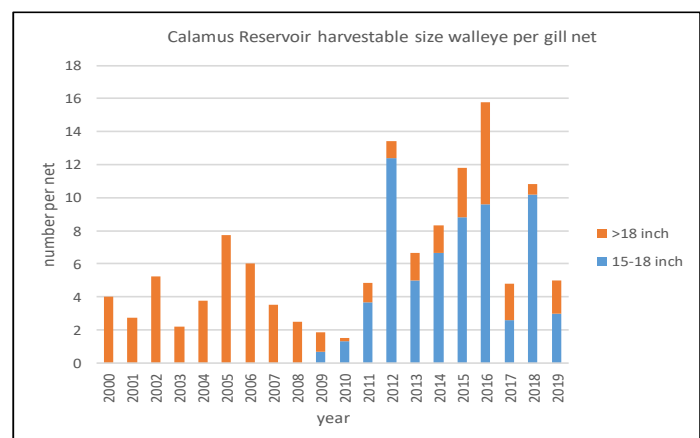
Walleye

The walleye fall gill net index fell slightly from the previous several years. The gill net catch was highly variable in 2019 and is likely due to weather variables. Two net runs were made a week apart and the second run resulted in lower net catches. The mean catch following the first sampling run was just over 13 per net. This is near the 5 year average of 17 per net if the extremely high 2016 catch is excluded. Harvestable sized fish made up about 40% of the sampled walleye with most of those fish in the 15-18 inch size range. Walleye over 18 inches made up about 12% of the sample. Six year classes of fish were collected with age 1 and 2 fish the most abundant. Walleye are reaching 15 inches between 2 and 3 growing seasons. Fish from the 2016 year class averaged 18 inches in the 2019 survey. The dual stocking of walleye fry and fingerling will continue in 2019 in an attempt to maintain high walleye recruitment levels and prevent a missing year class. Anglers should find good fishing again in 2019 with most fish subject to the 2 fish daily bag limit between 15 and 18 inches.



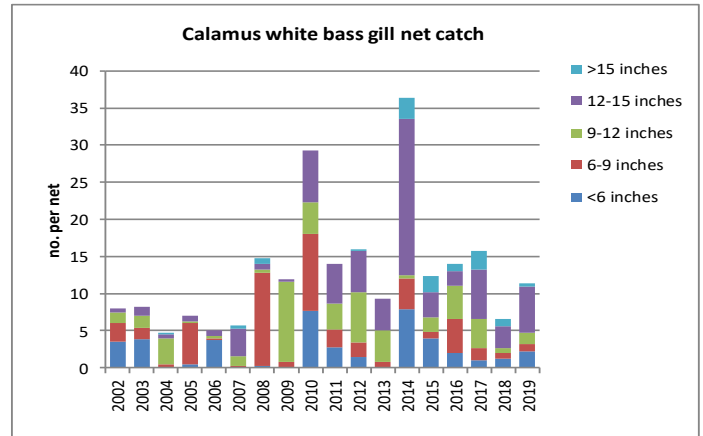
Since the inception of the concurrent fry and fingerling annual stocking and the change in length regulation allowing fish harvest in the 15 to 18 inch range, more walleye are available to harvest now than under the 18 inch minimum length limit. The chart to the right shows the catch rates of “keeper” walleye in annual gill net sampling. The mean number of harvestable walleye per net catch from 2000-2008 (18 inch minimum years) was 4.1. The mean net catch of harvestable sized walleye from 2011-2019 is 9.05.

Over twice as many walleye have been available to harvest by anglers under the current management strategies.



White Bass

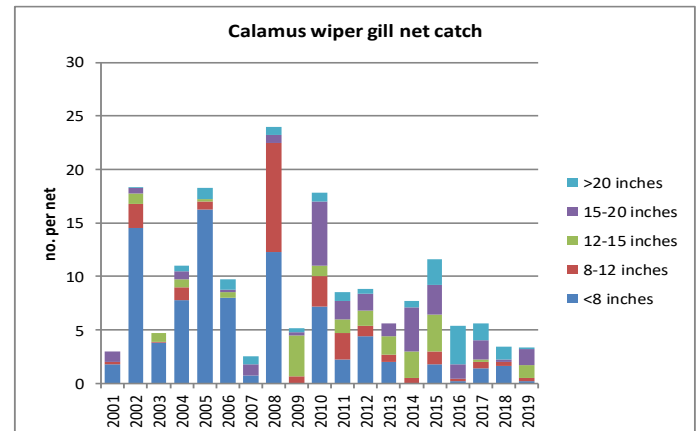
Net catch of white bass rebounded in 2019 over those seen in 2018. This was expected since cold water temperatures hindered the 2018 catch rate. A healthy, abundant white bass population is present in Calamus Reservoir. Once again larger fish are available to the angler and all size groups are represented. Some fish in 2020 will once again exceed 16 inches in length and anglers are reminded only 1 of these is allowed per day in the bag. White bass body condition is excellent, indicating good prey availability. White bass fishing in 2020 should be similar to the past few years. **Remember only 1 white bass/wiper greater than 16 inches is allowed in the daily bag limit.**



Wipers

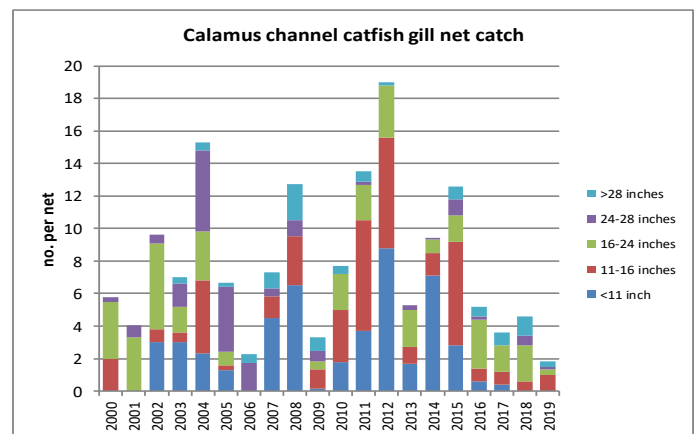
The wiper catch per net in the 2019 sample was similar to that seen in 2018 but below the previous five year average of 6.7/net. Fish were collected from all age groups 0 through 5. There was some natural mortality of wipers just after ice-out in the upper part of the lake in the Spring of 2017 which may still be affecting wiper numbers. As always, wipers are a schooling fish and they can be a “hit or miss” sample. Angler success on wipers in 2020 should be similar to that seen in 2019. There will be some quality size fish available to anglers in 2020. Wipers exhibit much faster growth than white bass and current data indicated reaching 17–18 inches in three to four growing seasons and over 20 inches in four to five growing seasons. Like white bass, prey availability in the form of young gizzard shad influences year class survival and growth rates. The wiper stocking request in 2020 is for 25,000 fingerling (2 inch) fish.

Only 1 wiper/white bass greater than 16 inches is allowed in the daily bag.



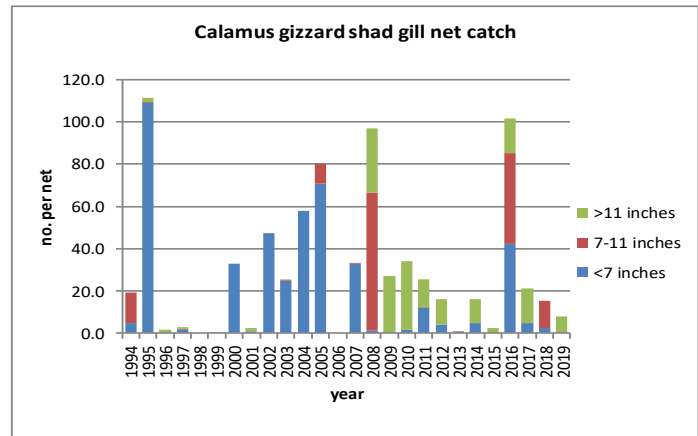
Channel Catfish

Channel catfish catch per net in the 2019 survey showed a decrease in numbers collected. The catfish catch of 1.8 is well below the previous 5 year average of 7. The difference in catch rates is partly due to the number of smaller fish found in the survey. The discrepancy in the catch rate of small fish can partially be explained by the timing of stocked channel catfish. Prior to 2016, larger ten-inch channel catfish had been stocked in the lake just prior to our Fall survey and the catch of those fish would be high. From 2016 to 2018, smaller 5 inch fish were stocked earlier in the year and in a different location from past stocking. It appears these fish have not recruited well to the population. It looks like the 5 inch stocking strategy will not be as successful and we are returning to stocking 10 inch catfish. As you can see from the graph, catfish sample catch numbers tend to vary widely at times. Trophy fish are present in Calamus Reservoir and catfishing can be quite good certain times of the year. We look for catfish angling opportunity in 2020 to be similar as that seen in 2019. A regulation change occurred for Calamus Reservoir beginning in 2020. **A 1 fish over 30 inches in the daily bag limit is now in place for channel catfish.**



Gizzard Shad

Gizzard shad are the primary prey for managed sport fish in Calamus Reservoir and their size distribution is critical for proper growth, recruitment and maintenance of desirable sport fish species. It is desirable to have high numbers of young-of-the-year shad to provide food for the desirable sport fish such as walleye and white bass but lower adult numbers so as not to compete with desirable sport fish for space and food. Shad numbers in the 2019 survey were skewed toward higher numbers of adult shad. Personal observation indicated a higher number of adult shad were present than the gill net catch indicated. Although the gill net catch of smaller shad appears low, anecdotal information and observation during the summer of 2019 suggested adequate numbers of young-of-the-year shad. Ice out in the spring of 2020 indicated a moderate winterkill of adult shad. Due to sedimentation in the upper end of the lake, shad were not able to get to the traditional winter area near Gracie Creek. An electrofishing survey is planned for April 2020 to determine the status of adult shad overwinter survival. Moderate winterkill of adult shad is a good thing for fish management purposes because the surviving adults produce a lot of young to serve as food for sport fish.



Other 2019 Activities

Fisheries Division conducted other activities at Calamus Reservoir in 2019. These included activities that affected boaters and anglers at the Reservoir and boat ramps. The Game and Parks Commission had an Invasive Species Technician conducting boat inspections and interviews for all boaters and lake users, primarily at boat ramps. **We appreciate your cooperation and patience when contacted by these technicians.** AIS technician boat inspections assist with zebra mussel prevention to protect our aquatic resources, protection of all water based recreation activity and protection of your personal property against these invaders. There was a total of 2,843 water craft inspections statewide in 2019. Of those, **854 inspections** occurred at Calamus Reservoir.

Zebra & Quagga Mussels

Anglers and recreational boaters should continue awareness for zebra and quagga mussels while using Nebraska lakes. Monitoring was completed at many Nebraska reservoirs during 2019, including the Calamus. Zebra mussels are found in Lewis and Clark Lake, the Missouri River, Lake Yankton, Offutt Air Force Base lake, and Glen Cunningham Lake in Omaha. Invasive species technicians will be inspecting boats periodically at Calamus again in 2020. Thank you for your assistance and patience while these surveys are conducted. In 2019, AIS technicians completed 854 watercraft inspections at Calamus Reservoir. Please clean, drain, and dry your water craft prior to leaving any water body and never arrive at a lake with water in your boat or live well from anything other than a domestic source. Invasive mussels have also been documented in several neighboring states including Iowa, Kansas, Missouri, and South Dakota. **Zebra mussels have been found in Lake Francis Case and Lake Sharpe in South Dakota. If you fish those lakes please take extra precautions to drain and dry your watercraft and tackle before returning to our Nebraska lakes and reservoirs.**

Invasive mussels will attach to almost any surface and have detrimental impacts on industry (power plants, water intakes, irrigation, etc), native fish and mussels, and recreational users (fouling boat motors, impacting beaches, etc). Invasive mussels cause an estimated \$5 billion per year in economic impacts in the United States for monitoring and control efforts. Inadvertent transfer by humans is the major source of new infestation for zebra and quagga mussels; primarily by boats, boat trailers, and fishing gear. Boaters and anglers are reminded that it is important to **clean, drain and dry** their equipment and boats before moving to different bodies of water. Anglers and boaters are encouraged to educate themselves on these and other aquatic invasive species. An excellent source of information regarding invasive species can be found on the University of Nebraska's Invasive Species Project website: <http://www.neinvasives.com>.

Regulations that took effect in 2013 mandate that all vessels and conveyance be drained of water prior to entering or leaving a lake to prevent the spread of invasive species. This means all livewells, baitwells, and boat hulls shall be drained and free of water except for water from a domestic source for bait fish. Additionally, all aquatic vegetation must be removed from boats and trailers prior to leaving a lake. Boats are subject to inspection by authorized personnel. Regulations will be strictly enforced. Remember to bring ice on your fishing trip to transport your fish home. All boats not registered in Nebraska must have a non-resident AIS sticker purchased and properly affixed to their watercraft.

For more information on fishing rules and regulations visit the Nebraska Game and Parks website at OutdoorNebraska.org.

For more information on the fisheries at Calamus Reservoir contact:

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Attention motorboat owners operating in Nebraska:

Starting in 2016, boaters whose motorized watercraft are registered in any state other than Nebraska must purchase and display a \$15 Aquatic Invasive Species (AIS) Stamp each year they launch their boat in Nebraska. The stamp will help fund AIS education and inspection programs.



- Boat inspections for AIS prior to launch in Nebraska are NOT mandatory at this time.
- Personal watercraft registered outside of Nebraska must have this stamp.
- Non-motorized craft registered in any state are exempt from the stamp.
- Stamps are not required for boats registered in Nebraska. A \$5 AIS fee is included on the residents' three-year boat registrations.
- Residents who register their boats in other states must have this stamp before launching in Nebraska.

This stamp is available online at OutdoorNebraska.org
or at Nebraska Game and Parks permitting offices.

Learn more about invasive species at neinvasives.com.

