Davis Creek Reservoir
2020 Fishery Survey Summary

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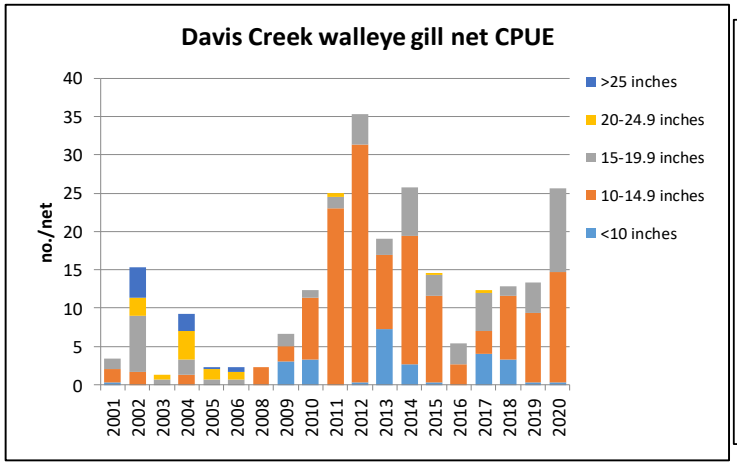
The following text and graphs are the result of netting surveys completed April 27 (electrofish shad), May 21 (frame nets), September 9 (nighttime Young-of-the-Year collections) and September 22 (gill nets) at Davis Creek Reservoir in 2020. For comparative purposes this report shows results from previous years for gillnets and frame nets. Fish populations are sampled annually at Davis Creek using gill nets, frame nets and electrofishing. Gill nets are used to sample fish species found primarily in open water, such as walleye and white bass, while frame nets are used to sample shoreline oriented species, such as crappie. Electrofishing is conducted for young-of-the-year fish and gizzard shad. Gill nets are used in the Fall and frame nets were switched from a Fall sample to a Spring sample beginning in 2014 due to high variability in catch in the Fall. The following graphs show the total 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. A fish stocking summary is presented on page 6 of this report. Daytime electrofishing surveys for shad in April provides data on population levels prior to shad spawning season. Gizzard shad are a very important prey fish in Davis Creek and winterkill of shad can be an issue. If adult numbers are low, shad will be transferred from Calamus Reservoir.

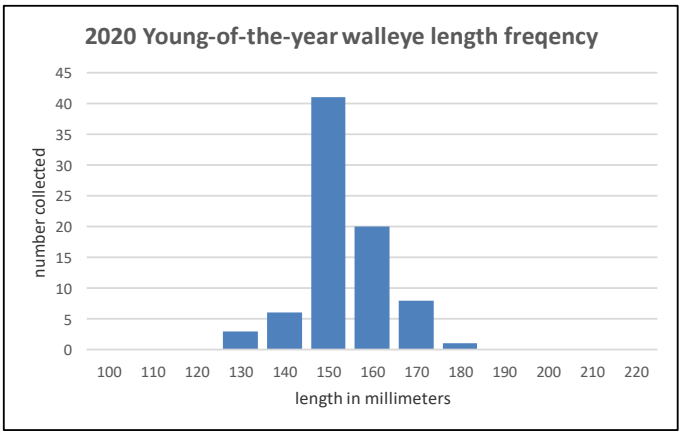
Walleye

Walleye net catch is nearly double that seen in the 2019 sample. Walleye numbers continue the increasing trend since the shad die-off of 2015/16 which impacted walleye numbers due to low food supply. Walleye numbers are more on par with those seen in 2011-2014 and are higher than the target objective of 15-20 per net. Legal sized fish (>15 inches) made up about 43% of the sample in 2020, up from about 30% in 2019. Walleye were collected from the 2017 through 2020 year classes. Fish from the 2018 year class (age 2 fish) were the most numerous fish in the sample and nearly 40% of these fish were over the 15 inch minimum length limit. All of the fish from the 2017 year class (3 year olds) exceeded 15 inches. As with most years, no fish over 20 inches were collected in the survey. The fishing pressure and angling mortality is simply too high to produce large fish. Walleye recruitment and growth appear to be adequate and sustainable. Anglers should find similar success on walleye in 2020 as seen in 2019. Efforts for walleye management will center around maintaining recruitment and insuring adequate prey numbers. The management philosophy at Davis Creek is to have a lake where we hope to maintain high walleye recruitment rates and cycle fish through to the angler for harvest on a sustained annual basis. Walleye in Davis Creek are reaching 15 inches in about 2 1/2 growing seasons. In 2021 fisheries staff will index adult shad numbers in the Spring to ensure spawning fish are present and a sufficient prey base will be produced. Stocking plans in 2021 include 1.1 million walleye fry and 57,250 walleye fingerling.

Walleye Recruitment Evaluation in 2020.

Nighttime electrofishing was conducted in 2020 to gather information on relative density of walleye young-of-the-year and to determine if any natural reproduction is occurring. Only walleye fingerling were stocked in 2019 due to Covid-19 restrictions and all the stocked fish carried a chemical mark from an oxytetracycline bath. The age 0 walleye collected were all examined for the OTC marks and the data indicated stocked fish made up 93.5% of the age 0 sample (72 of 77). Hopefully this once and for all dispels the myth that the walleye at Davis Creek are coming down the canal system from Calamus. The fact is Davis Creek is a stocked walleye population. Walleye YOY were collected at a very good rate of 82 per hour. Most age 0 walleye were 6-7 inches long at the time of sampling in early September.



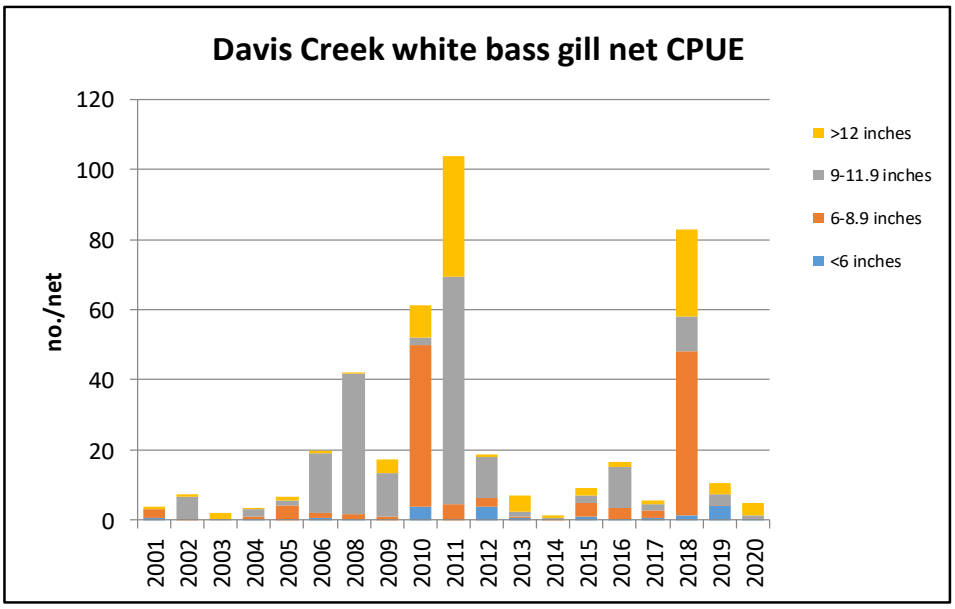


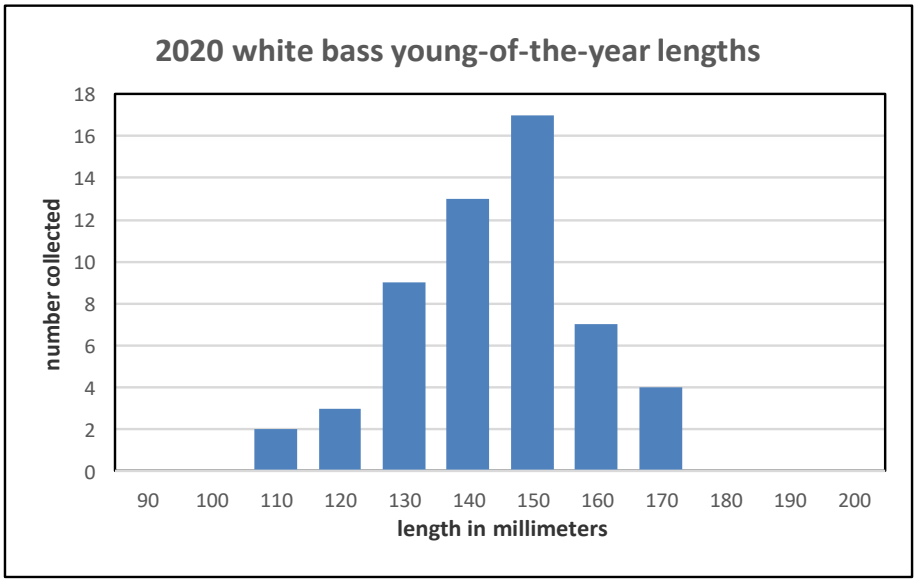
White Bass

White bass numbers in the gill net decreased once again in 2020. Anecdotal information and angler contact indicates white bass are numerous in Davis Creek but do not always show up in the net survey. Schooling white bass were very evident when young gizzard shad were bunched up in late May and early June. White bass are a schooling fish and can be hit or miss with nets and 2020 was a another big miss. However, though the net catch fell below expectations, the catch was more in line with those seen in 2013 through 2017 and again in 2019. The gill net catch of 5 in 2020 is slightly below the mean catch of 9.7 seen from 2012—2017. Four age classes of white bass were collected in the 2020 sampling with most adult fish being 12-15 inches long.

Good production occurred for white bass in 2020 as evidenced by the catch of young-of-the-year fish while nighttime electrofishing in early September. These age 0 fish were collected at a rate of 68 per hour which is a high catch rate. The majority of these fish were 5-7 inches long at the time of capture. Natural reproduction is driving the recruitment of white bass at Davis Creek.

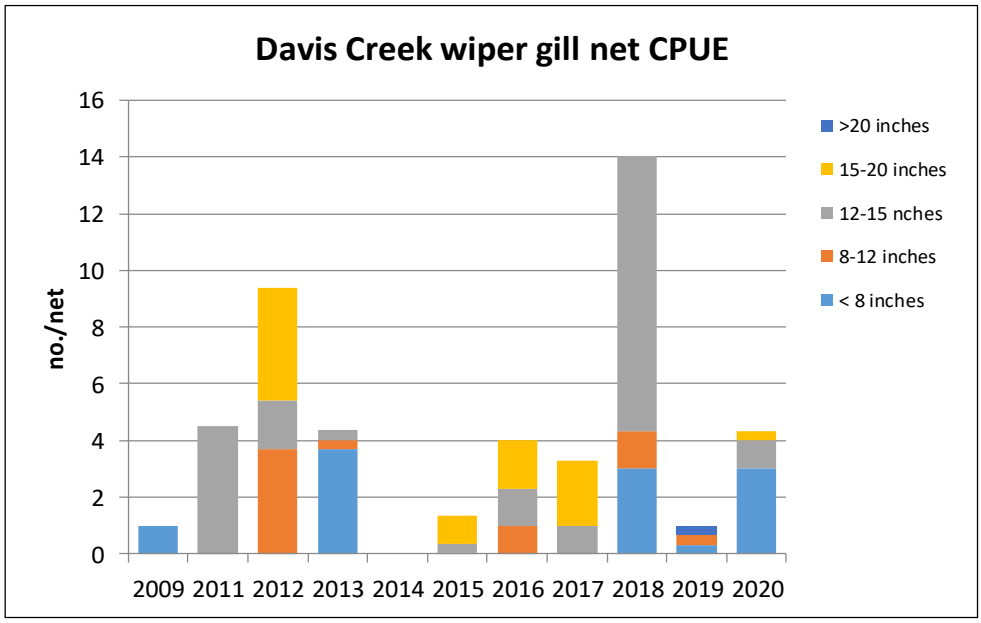
Look for some good white bass angling opportunity in 2021, especially at the inlet in the Spring.

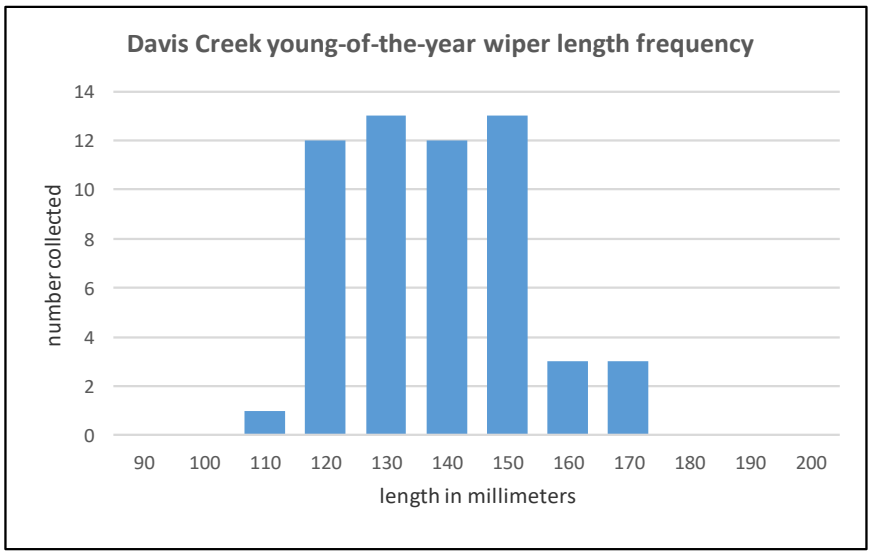




Wipers

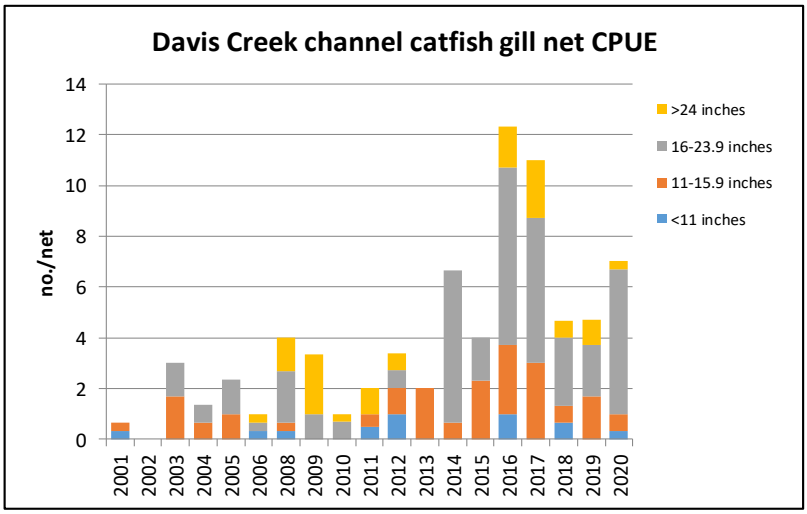
Wiper numbers in the 2020 gill net survey increased over 2019 to a more average catch on 4.3 per net. It is difficult to infer anything from such a small sample size other than wiper gill net catch has typically been low. Anglers are aware that some quality sized wipers exist in the lake but numbers are relatively low. Survival and recruitment of the 2020 year class looks very good. Young-of-the-year wipers were collected at a rate of 48 per hour of nighttime electrofishing which is excellent. We will continue to request wipers for stocking on an annual basis to maintain a fishable population for anglers to enjoy. Due to excellent production of wipers in the NGPC hatchery system, the 2020 wiper stocking was increased to 25,000 to hopefully establish a good year class. The wiper request for 2020 is 11,450. **Anglers are reminded that only one white bass/wiper over 16 inches is allowed in the daily bag limit.** Problems are encountered at the inlet area in the Spring when anglers were violating the "one over" part of the daily bag limit for wipers. Please report all violations to the local Conservation Officer whose name and number can be found in the fishing guide.





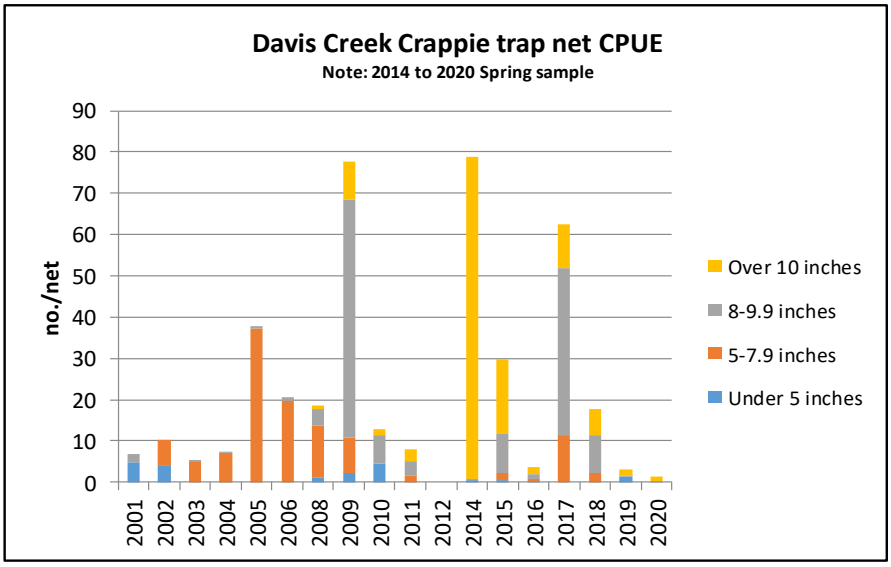
Channel Catfish

Channel catfish abundance has historically been low at Davis Creek Reservoir but recently population levels have been on the increase. The number per gill net in the 2020 sample increased to the third highest recorded. Some nice sized catfish are present in the population and are frequently caught by anglers along with some trophy fish. Stocking that began in 2012 appears to be paying off in terms of higher catfish numbers seen in 2014 through 2020. Body condition for catfish is good, especially for the larger sized fish. Anglers are reminded that the daily bag limit for channel catfish is five fish per day. Channel catfish are stocked every other year in even years. The next stocking is scheduled for 2022 and 5,500 ten inch fish are requested.



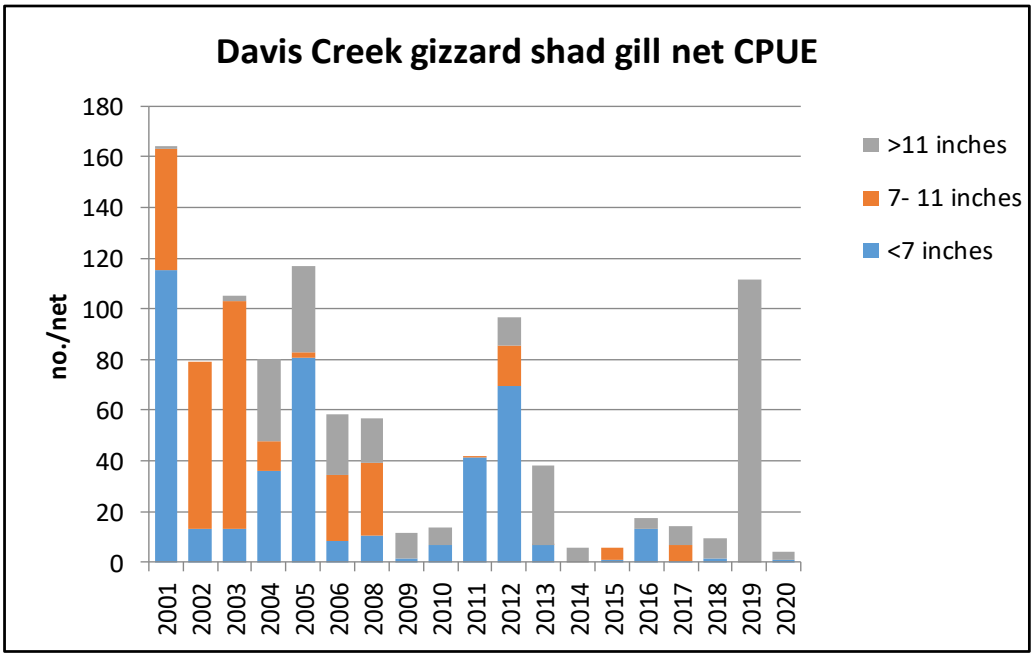
Crappie

Due to variability of numbers of crappie caught in the Fall survey when the lake is at full draw-down, and our belief we did not adequately sample larger sized fish, we began sampling crappie in the Spring beginning in 2014 with trap nets when the crappie are in-shore for spawning. Crappie numbers in the 2020 survey were once again extremely low. Spring sampling can be somewhat fickle as water level elevation and water temperature play a major factor in fish collection. In 2020 both of these worked against us, the lake was low due to late filling and the lake did not reach a full pool elevation like previous years. We try to sample the same time of year with closely similar water temperatures but it is difficult to duplicate exact conditions from year to year. The bottom line is that crappie numbers are quite low and anglers are aware of that. When good reproduction occurs the lake grows crappie well. Crappie recruitment has been poor since 2017. In an effort to boost crappie numbers we will be requesting crappie for stocking for the next five years.



Gizzard Shad

The gizzard shad population is monitored because they serve as the primary food source for walleye, white bass, crappie and wipers at Davis Creek. Shad abundance in the 2020 gillnet sample was low and skewed toward large fish. However, anecdotal information indicated good numbers of young-of-the-year fish were produced in 2020 that should have provided an excellent food supply for the sport fish. Early spring sampling indicated good numbers of spawner sized adult shad were present with an electrofishing catch rate of 52 per hour. A preferred gizzard shad population is one dominated by young-of-the-year fish with moderate adult numbers. Sport fish survival, growth rates and body condition decrease if abundant young shad are not available. The high numbers of shad seen in the lake prior to 2009 was prior to the annual stocking of predator fish species.



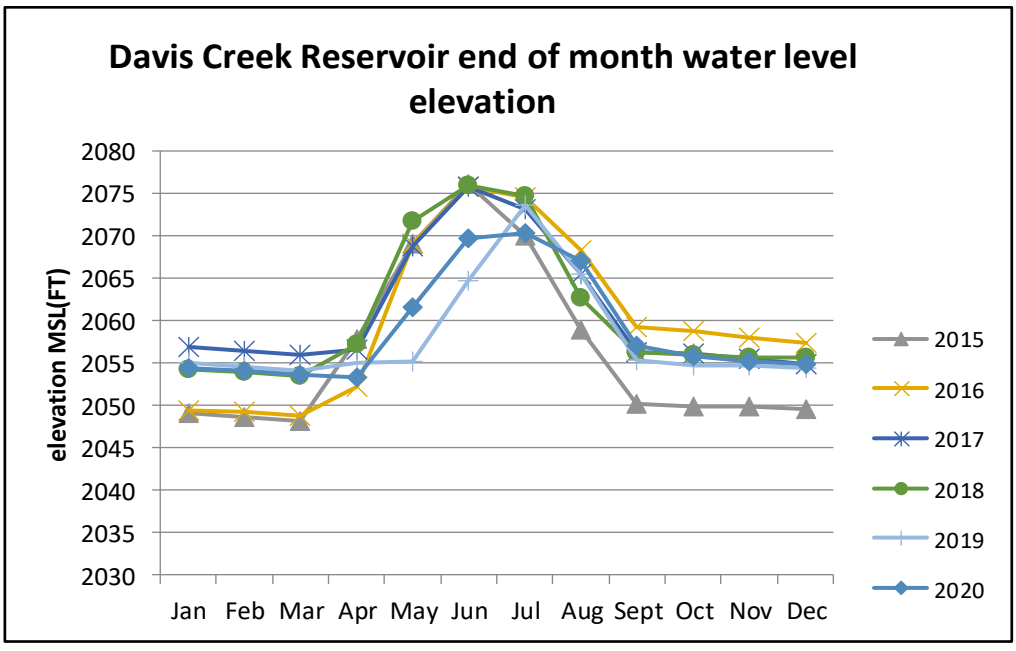
Additional Information about Davis Creek Reservoir

Fish Stocking

Walleye have been stocked annually from 2009-2020 at a rate of 50 fingerling per acre or about 60,000 per year and beginning in 2018 an additional annual stocking of fry was added. Due to Covid-19 shutdowns, only fingerling walleye were stocked in 2020. Wipers have been requested annually since 2010 but were only available for stocking in 2010, 2013 and 2015–2020. Wipers are requested for stocking at about 10 fingerling per acre or about 11,000 fish. Channel catfish supplemental stocking began in 2012 and will be conducted in even years at 5,500 ten-inch fish. Fish stocked in 2020 were 60,246 walleye fingerling, 25,000 wiper fingerling and 4,494 ten-inch channel catfish. Requested again for 2021 are walleye (fry and fingerling), black crappie, and wipers.

General Information

Typical of irrigation reservoirs in Nebraska, fluctuating water levels have a large impact on available aquatic habitat at Davis Creek Reservoir. Shoreline habitat is best when the reservoir is near conservation pool and reduced when the reservoir is low in the Fall and Winter. The addition of deep water habitat structures may improve winter survival of shoreline-oriented fish species such as crappie. Normal pool level (full pool) is elevation 2076.0 Current lake elevations can be found on the U.S. Bureau of Reclamation website:http://www.usbr.gov/gp-bin/arcweb_dane.pl. The irrigation district and Bureau of Reclamation are conducting studies related to increasing overwinter water level elevation. In other words, partially filling the lake in the Fall period. This elevation increase is evident in the following chart noting the 2016–2020 data. The winter lake levels have increased 5-7 feet over previous Winter water level elevations (notice the 2015 winter lake level). It is felt any increase in winter water storage and water level elevation will benefit the fish populations. Issues with canal damage during the March 2019 flooding resulted in water delivery issues to the lake and a delayed filling that year. Filling was delayed again in 2020 and the lake did not fill completely and remained about 5 feet below other years full pool.

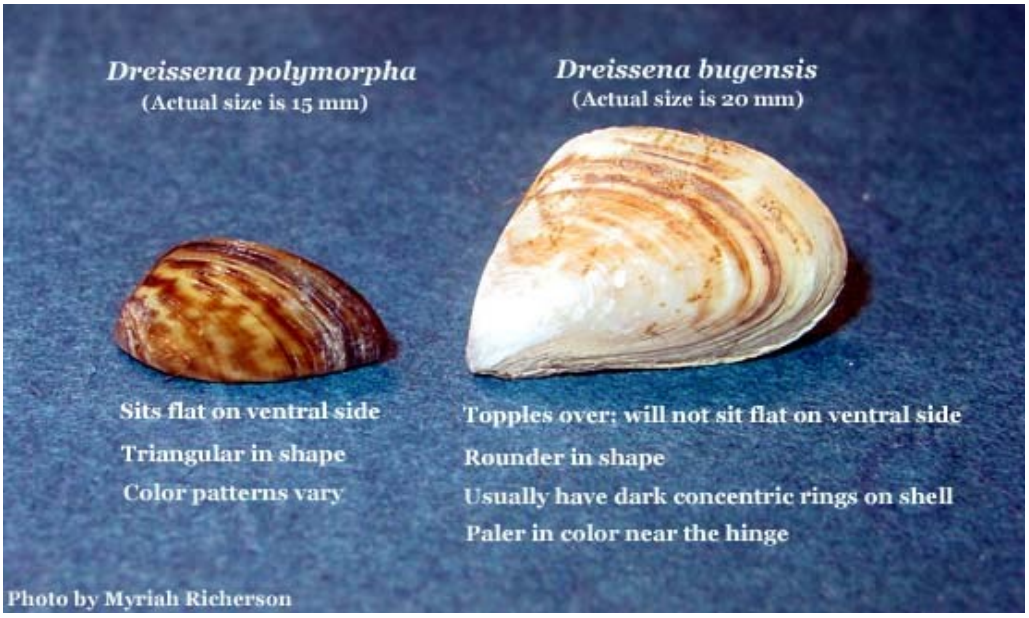


Zebra & Quagga Mussels

Anglers and boaters need to be aware of zebra and quagga mussels while using Nebraska Lakes. While no mussels have been identified at Davis Creek Reservoir, zebra mussels have been found in Lewis and Clark Lake on the Missouri River, and are present in several reservoirs in Kansas. Monitoring was completed at several Nebraska reservoirs during 2020, including Davis Creek Reservoir, and no evidence of mussels were found at Davis Creek. An aquatic invasive species inspection technician will periodically be contacting boaters and anglers at Davis Creek. We appreciate your patience and participation with these inspections and ask for your help to please Clean, Drain, and Dry and stop the spread of invasive species! If you find any organism that you think may be a zebra or quagga mussel please contact the Norfolk Game and Parks office or contact your local conservation officer to report the finding.

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/

****Special Note to Boat Anglers**—>**As of January 1, 2013, new regulations require that any boat that has been on a waterbody must drain all water from all compartments, equipment, or containers before leaving the launch area and that all aquatic vegetation must be removed from the boat and trailer before leaving the launch area. Boats will not be allowed to launch without decontamination if water is found in the boat or livewells. Nebraska Game and Parks aquatic invasive species regulations can be found at the Game and Parks website at outdoornebraska.gov. Click on the Fishing tab and go to "fishing guide and reports".



For additional information about fisheries management at Davis Creek Reservoir, please contact the NGPC Norfolk office at 402-370-3374, or by email at the addresses listed below.

District Manager: Jeff Schuckman, jeff.schuckman@nebraska.gov
Biologist: Phil Chvala, phil.chvala@nebraska.gov
Biologist: Andy Glidden, andy.glidden@nebraska.gov

All powered watercraft not registered in Nebraska must purchase a non-resident Aquatic Invasive Species sticker and have it properly affixed to the watercraft.

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.**

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