Davis Creek Reservoir
2018 Fishery Survey Summary

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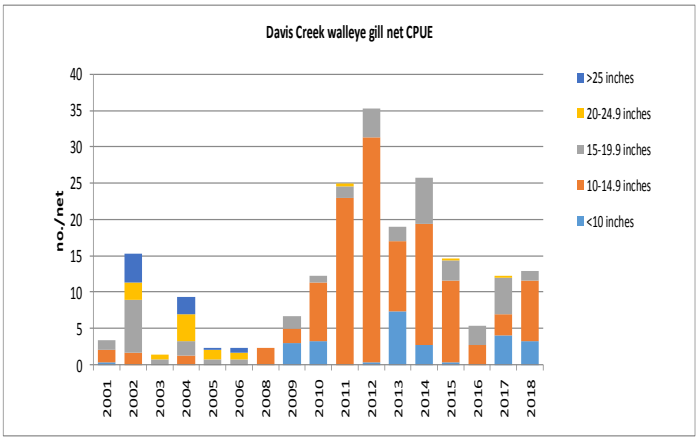
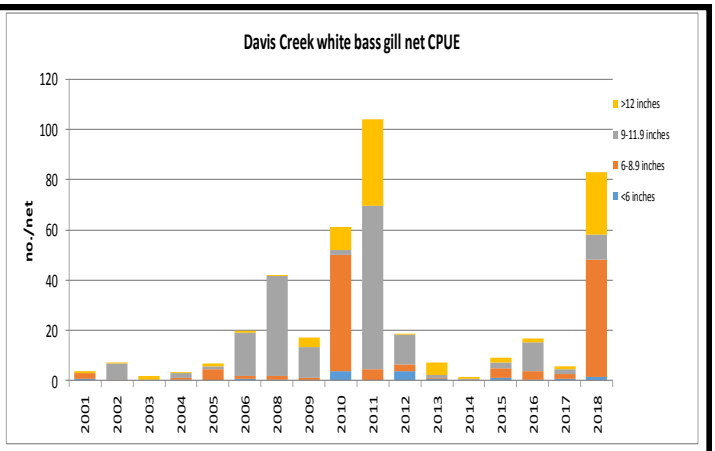
The following text and graphs are the result of netting surveys completed during May 16,17 (frame nets) and September 26,27 (gill nets) at Davis Creek Reservoir in 2018. For comparative purposes it also shows results from previous years. Fish populations are sampled each year at Davis Creek using gill and frame nets. Gill nets are used to sample fish species found primarily in open water, such as walleye, while frame nets are used to sample shoreline oriented species, such as crappie. 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 4 of this report. Daytime electrofishing surveys for shad in early May has been added to provide 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,

Walleye



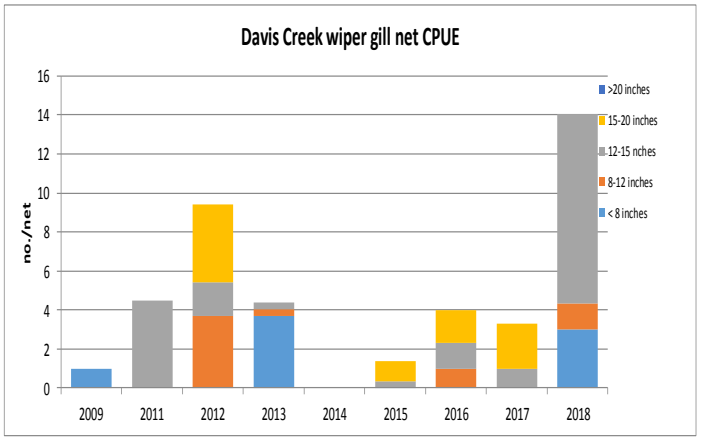
Walleye net catch is similar in total numbers to that seen in the 2017 sample. However, the majority of fish sampled in 2018 were in the 10 to 15 inch size range. Legal sized fish (> 15 inches) made up about 10% of the sample in 2018, down from about 40% in 2017. Some of the sub-legal fish were just under the 15 inch mark and should grow above that quickly. About 60% of the walleye collected were from the 2017 year class with 25% from the 2018 year class. A few fish from the 2015 and 2016 year classes were seen but most of those year classes have been harvested from the population. Walleye recruitment and growth appear to be adequate and sustainable. It appears the 2017 and 2018 year classes will be strong and hopefully lead to an increase in walleye numbers the next couple of years. Anglers should find similar success on walleye in 2019 as seen in 2018 but with fewer legal fish available. 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 to harvest on a sustained annual basis. Walleye in Davis Creek are reaching 15 inches in about 2 1/2 growing seasons. In 2019 fisheries staff will index adult shad numbers in the Spring and likely stock 200 adult shad in Davis Creek to ensure spawning fish are present and a

White Bass



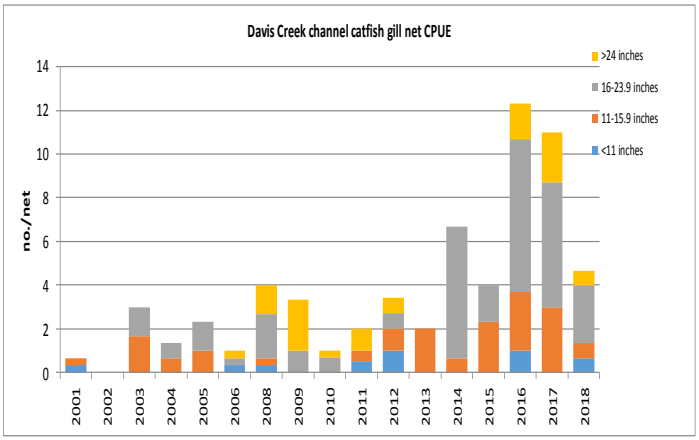
White bass numbers in the gill net increased dramatically over those seen the past 6 years. White bass are a schooling fish and can be hit or miss with nets and 2018 was a big hit!! Age 0 fish made up the bulk of the white bass collected, about 60%. Excellent production occurred for white bass in 2018 and these fish should provide good numbers through 2021. Even without those age 0 fish, good numbers of white bass from the 2015 and 2016 year class are present and those two years make up the majority of larger fish. Obviously the older aged fish we collected were in the lake the past couple years so conditions were perfect for us to get a large sample size in 2018 gill netting. Look for some good white bass angling opportunity in 2019, especially at the inlet in the Spring.

Wipers



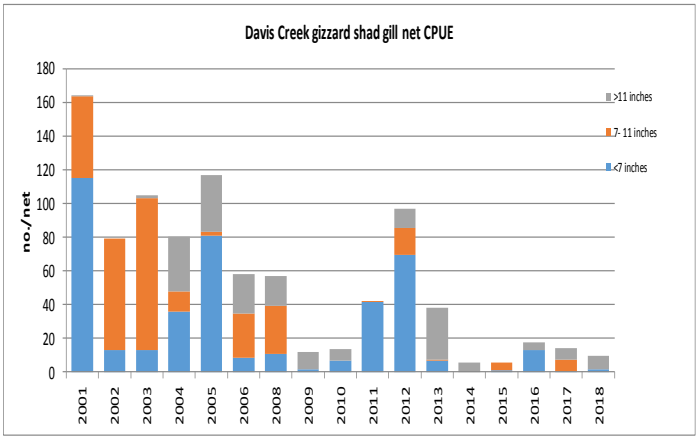
As with the white bass sample, wiper numbers increased dramatically in 2018. Most wipers sampled tended to be on the younger size groups but some are approaching 15 inches and they grow quickly to larger sizes. In fact, only two year classes made up the wipers caught in the 2018 sample. The 2017 year class is particularly strong and accounted for nearly 80% of the fish collected while young -of-the-year fish from the 2018 year class added the other 20%. We will continue to request wipers for stocking on an annual basis to maintain a fishable population for anglers to enjoy. **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 or call Nebraska Wildlife

Channel Catfish



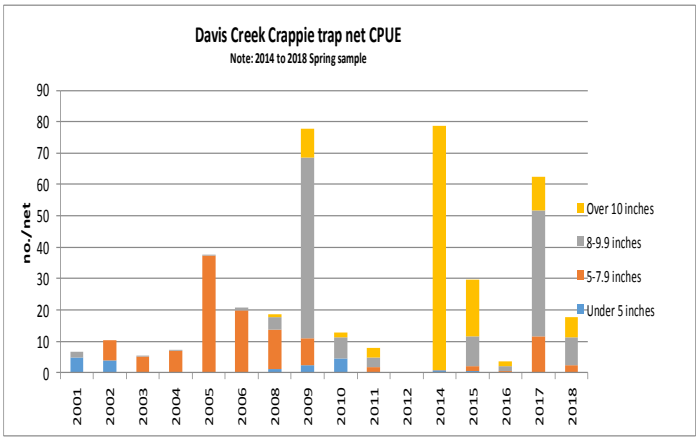
Channel catfish abundance has historically been low at Davis Creek Reservoir but recently population levels have been on the increase. However, the number per gill net in the 2018 sample dropped by about 60% from 2016 and 2017. Don't be too alarmed by this decrease because it is believed that catfish numbers are likely much higher than the 2018 gillnet sampling indicates. Spring frame nets had an average of 38 catfish per net with 80% in the 11-16 inch range. This is a high catch rate in frame nets. Bottom line is we believe the smaller catfish are in the lake, they just weren't collected in the gill nets. Stocking that began in 2012 appears to be paying off in terms of higher catfish numbers seen in 2014 through 2018. Larger fish are present as evidenced by the catch of fish over 24 inches in length. The opportunity will exist in 2018 to catch a trophy sized catfish at Davis Creek. Body condition for the catfish was good, especially for the larger sized fish. Anglers are

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 2018 gillnet sample was adequate and there appeared to be good numbers of young-of-the-year fish produced for fish such as walleye and white bass to feed upon. About 10 adult, spawning sized shad were collected per gill net in the Fall of 2018 so hopefully some of these fish will survive the winter and spawn in the Spring of 2019. In an effort to insure adequate prey numbers, we will once again conduct early spring electrofishing to determine if adequate adult numbers are present. A shad density index will aid us in determining if adult shad need to be stocked. 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.

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 2018 survey are down about 70% from the high numbers seen in 2017. Spring sampling can be somewhat fickle also as water level elevation and water temperature play a major factor in fish collection. 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 numbers seen in the Spring 2018 sample did provide good fishing throughout 2018. A good size structure exists in the crappie population and anglers can catch fish over ten inches. We will continue the annual Spring frame net sampling and explore options with the Bureau of Reclamation to add artificial crappie habitat in the future.

Spotted Bass/Largemouth Bass

Spotted bass have been stocked in Davis Creek Reservoir in 2012, 2014, 2015, 2016, and 2017. We have seen some limited numbers of spotted bass in the lake but it appears largemouth bass still dominate. Anecdotal information indicates high numbers of small (less than 8 inches) bass were present in 2018. These appeared to mostly be largemouth bass. Electrofishing sampling will be conducted in the Spring of 2019 to evaluate both largemouth and spotted bass population levels.

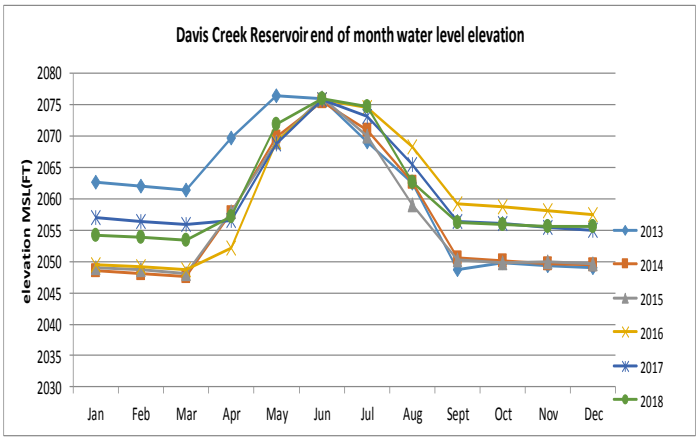
Additional Information about Davis Creek Reservoir

Fish Stocking

Walleye have been stocked annually from 2009-2017 at a rate of 50 fingerling per acre or about 60,000 per year and beginning in 2018 an additional stocking of fry was added. Wipers have been requested annually since 2010 but were only available for stocking in 2010, 2013 and 2015–2018. 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 6,500 ten-inch fish. Fish stocked in 2018 were 1.1 million walleye fry, 113,631 walleye fingerling, 11,554 wiper fingerling and 4,790 ten-inch channel catfish. Requested again for 2018 are walleye (fry and fingerling) and wipers. Sampling in 2019 will determine the survival and potential numbers of spotted bass in the lake. At this time no more spotted bass are scheduled for stocking until an evaluation is complete.

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 2016–2018 data. The winter lake levels have increased 6-7 feet over previous Winter water level elevations. It is felt any increase in winter water storage and water level elevation will benefit the fish populations.

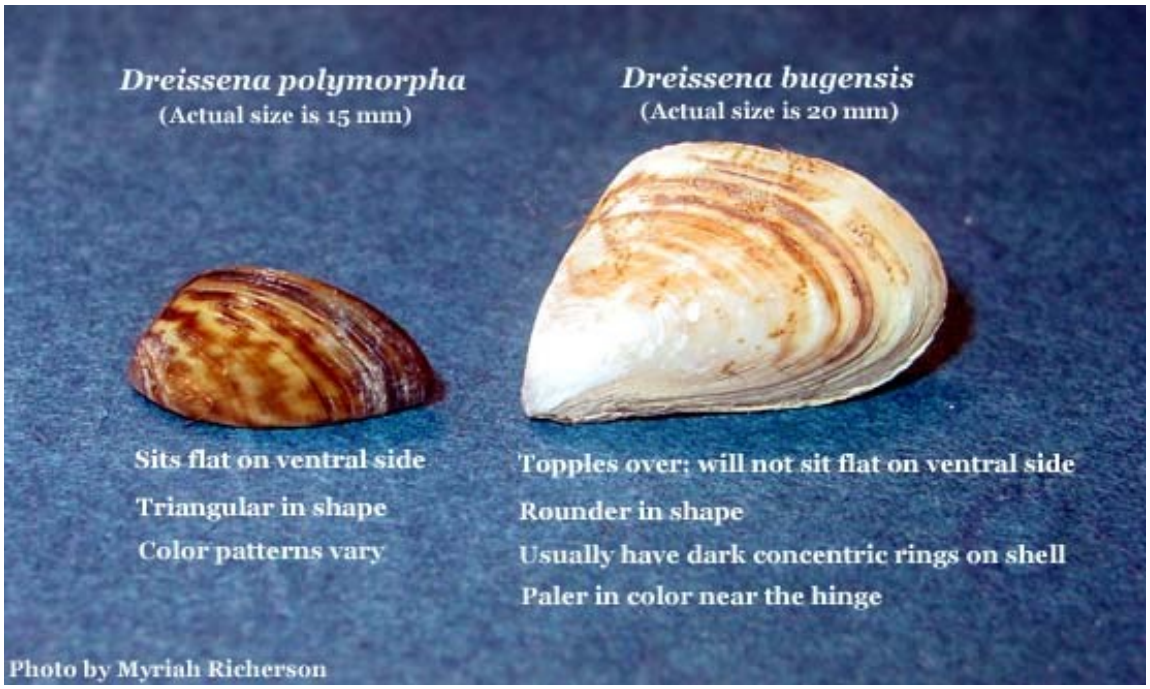


Zebra & Quagga Mussels

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 2018, including Davis Creek Reservoir, and no evidence of mussels were found at Davis Creek. Anglers and recreational boaters will be contacted by an Aquatic Invasive Species technician in 2019 and watercraft inspections and interviews will occur. 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!

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. Nebraska Game and Parks aquatic invasive species regulations can be found at the Game and Parks website at



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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