

## Davis Creek Reservoir 2019 Fishery Survey Summary

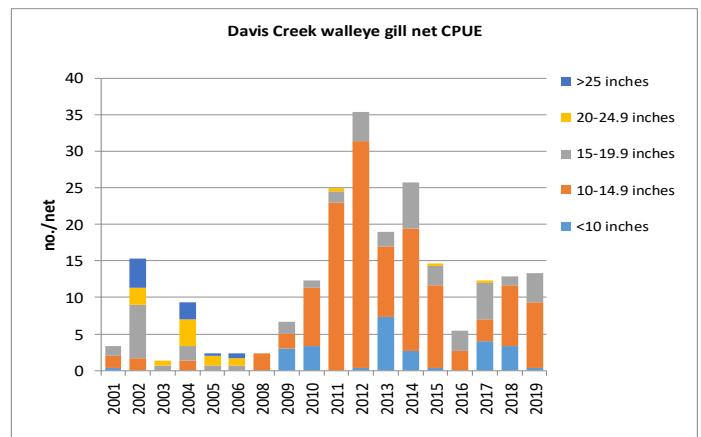
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Phil Chvala, Fisheries Biologist  
Andrew Glidden, Fisheries Biologist



The following text and graphs are the result of netting surveys completed May 29 (frame nets) and September 25 (gill nets) at Davis Creek Reservoir in 2019. In addition, electrofishing samples were conducted for gizzard shad and large-mouth/spotted bass in May. For comparative purposes it also shows results from previous years. Fish populations are sampled annually at Davis Creek using gill and frame nets. 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. 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, shad will be transferred from Calamus Reservoir.

### Walleye

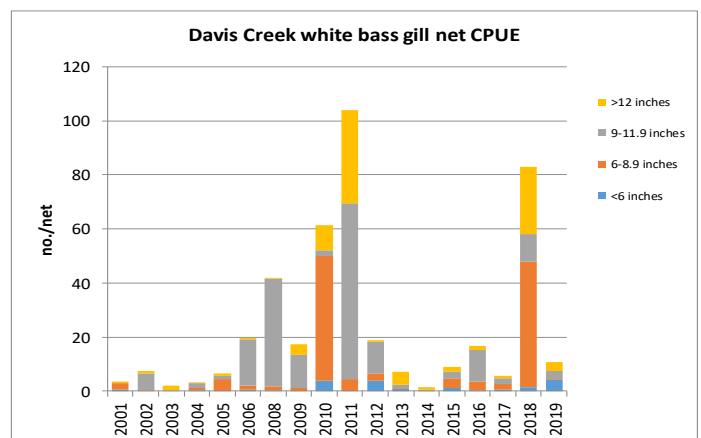
Walleye net catch is similar in total numbers to that seen in the 2018 sample. Walleye numbers appear to be on a slight increasing trend since the shad die-off of 2015/16 which impacted walleye numbers. Legal sized fish (>15 inches) made up about 30% of the sample in 2019, up from about 10% in 2018. About 56% of the walleye collected were from the 2018 year class with 36% from the 2017 year class. Fish from the 2017 year class are at or reaching the harvestable size of 15 inches. 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 to harvest on a sustained annual basis. Walleye in Davis Creek are reaching 15 inches in about 2 1/2 growing seasons. In 2020 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 2020 include 1.1 million walleye fry and 57,250 walleye fingerling.



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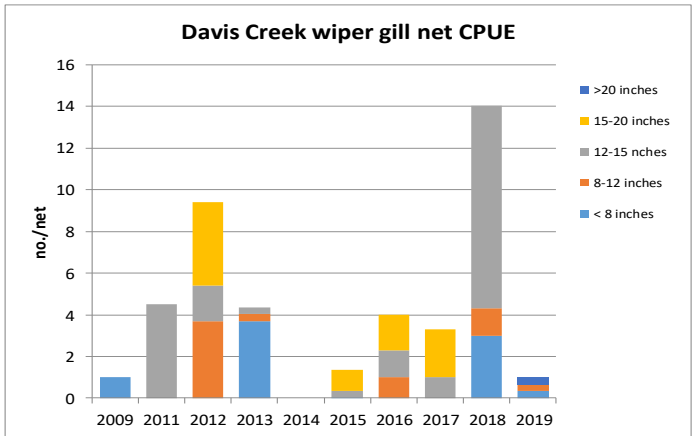
### White Bass

White bass numbers in the gill net decreased dramatically from 2018. White bass are a schooling fish and can be hit or miss with nets and 2019 was a big miss. However, though the net catch fell below expectations, the catch was more in line with those seen in 2012 through 2017. In fact, the catch of 11.3 in 2019 is slightly above the mean catch of 9.7 seen from 2012—2017. Good production occurred for white bass in 2019 as evidenced by the catch of fish less than 6 inches long. There is a good size distribution of white bass with some quality sized fish in the population. Six year classes of fish were found in the sample. Look for some good white bass angling opportunity in 2019, especially at the inlet in the Spring.



## Wipers

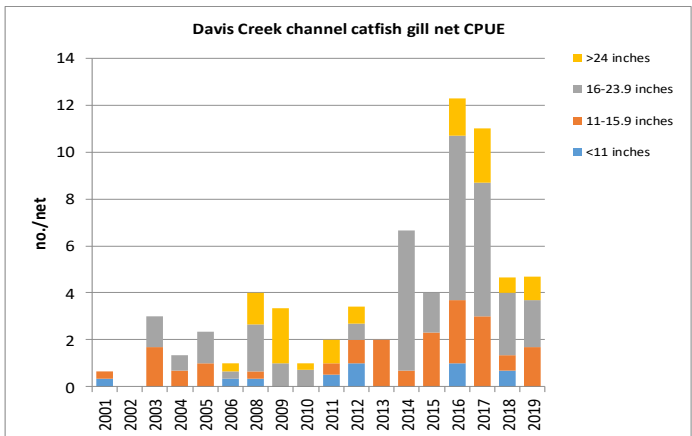
As with the white bass sample, wiper numbers decreased dramatically in 2018. It is difficult to infer anything from such a small sample size other than wiper gill net catch has typically been low. Anglers are aware that some quality sized wipers exist in the lake but numbers are relatively low. It is hard to say or explain what happened to all the 12-15 inch fish seen in the 2018 sample. Perhaps the timing of the sample was somewhat off and we didn't catch the fish in 2019. We will continue to request wipers for stocking on an annual basis to maintain a fishable population for anglers to enjoy. 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 or call Nebraska Wildlife Crimestoppers at 1-800-742-7627.



found in the fishing guide or call Nebraska Wildlife

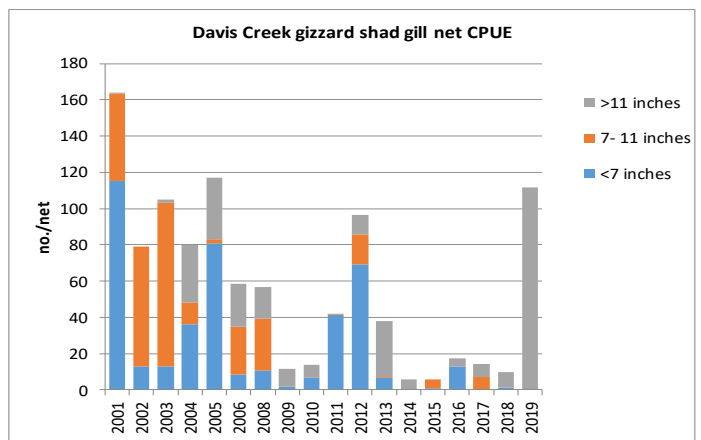
## Channel Catfish

Channel catfish abundance has historically been low at Davis Creek Reservoir but recently population levels have been on the increase. The number per gill net in the 2019 sample is nearly identical to that seen in 2018. 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 2019. 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 2020 and 5,500 ten inch fish are requested.



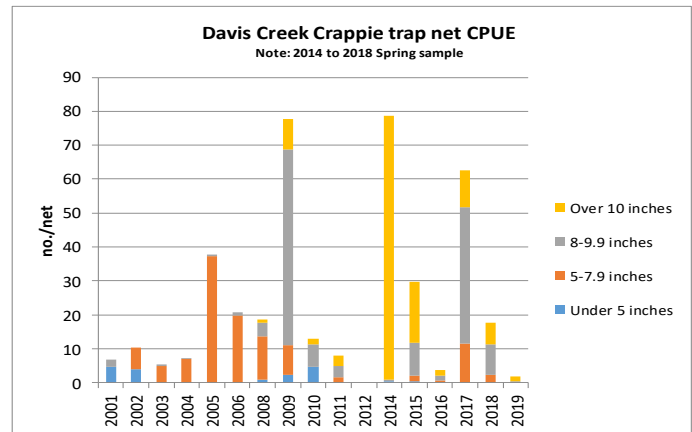
## Gizzard Shad

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 2019 gillnet sample was high but skewed toward large fish. Anecdotal information indicated good numbers of young-of-the-year fish were produced in 2019 that should have provided an excellent food supply for the sport fish. 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. Hopefully some of the numerous adult shad succumbed to winterkill but enough survived to produce abundant young. 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 2019 survey were extremely low. Spring sampling can be somewhat fickle as water level elevation and water temperature play a major factor in fish collection. In 2019 both of these worked against us, the lake was low due to canal delivery issues and we had a cold spring with wild fluctuations in the weather. 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. More effort will be directed at crappie sampling in 2020 to get a better handle on population size and structure.



## 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. Even largemouth bass numbers were low during a May electrofishing sample. Forty-five minutes of daytime electrofishing in various bays on the lake only yielded 4 largemouth bass and all were over 16 inches in length. No spotted bass were collected. Spotted bass will not be stocked in the future.

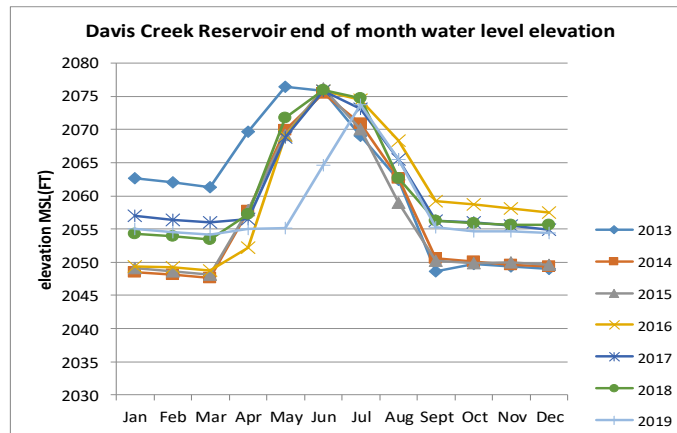
## Additional Information about Davis Creek Reservoir

### 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 5,500 ten-inch fish. Fish stocked in 2019 were 1.5 million walleye fry, 85,848 walleye fingerling, and 11,735 wiper fingerling. Requested again for 2020 are walleye (fry and fingerling), channel catfish, 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](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 2016–2019 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. Issues with canal damage during the March 2019 flooding resulted in water delivery issues to the lake. As a result the lake was filled later than normal and a steep drawdown occurred shortly after reaching full pool, not a good situation for the fish populations.

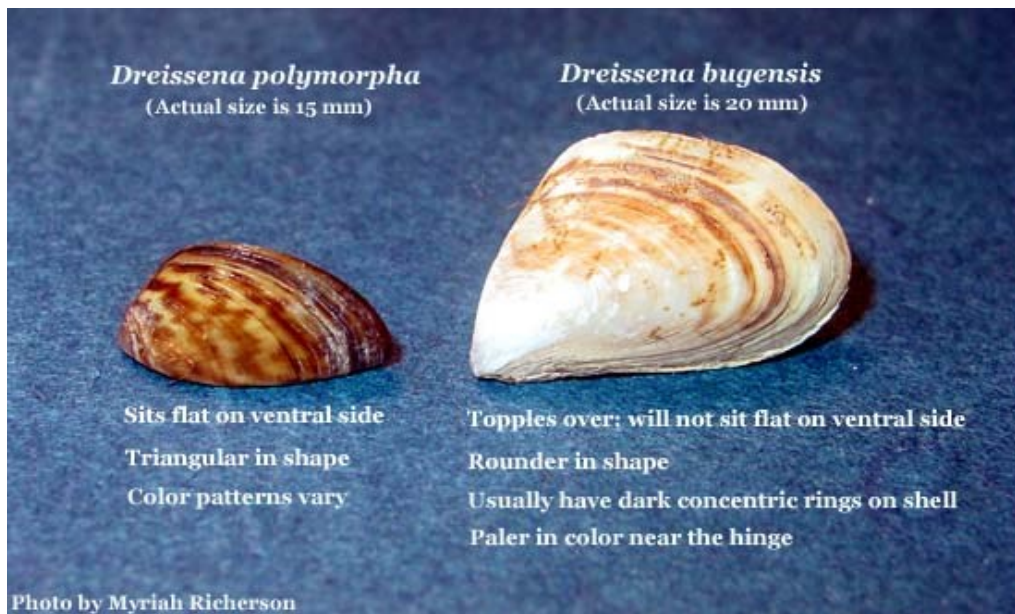


## Zebra & Quagga Mussels

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 2019, 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. In 2019, 169 boater inspections were conducted at Davis Creek Reservoir. 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. Nebraska Game and Parks aquatic invasive species regulations can be found at the Game and Parks website at [outdoornebraska.gov](http://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](mailto:jeff.schuckman@nebraska.gov)  
Biologist: Phil Chvala, [phil.chvala@nebraska.gov](mailto:phil.chvala@nebraska.gov)  
Biologist: Andy Glidden, [andy.glidden@nebraska.gov](mailto: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](http://OutdoorNebraska.org) or at Nebraska Game and Parks permitting offices.

Learn more about invasive species at [neinvasives.com](http://neinvasives.com).

