Davis Creek Reservoir
2017 Fishery Survey Summary

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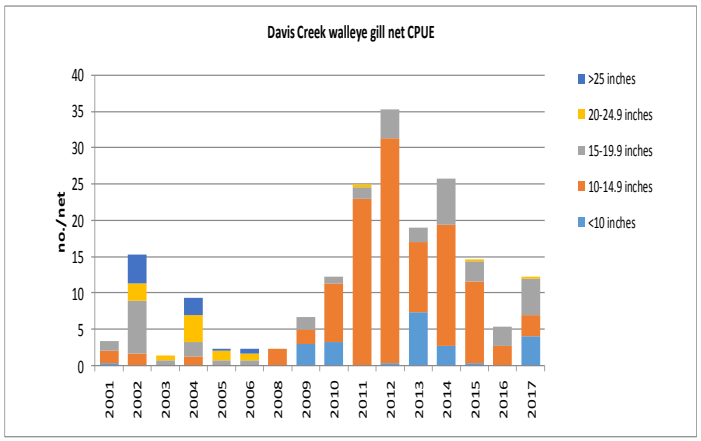
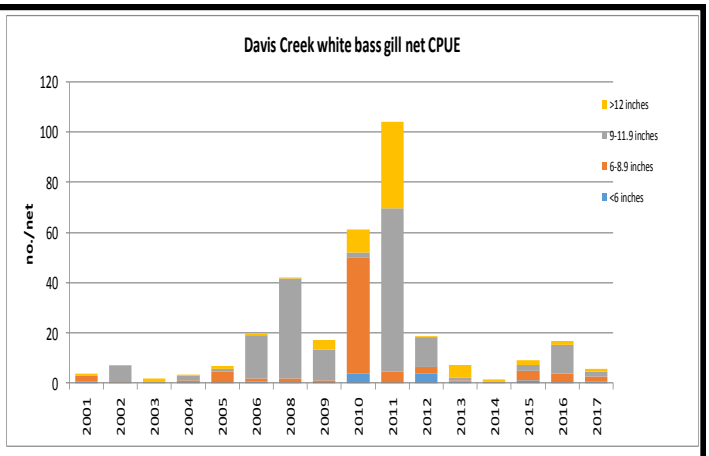
The following text and graphs are the result of netting surveys completed during May 16,17 (frame nets) and September 26,27 (gill nets) at Davis Creek Reservoir. For comparative purposes it also shows results from previous years. Fish populations are sampled each year at Davis Creek using gill and frame 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 3 of this summary report.

Walleye



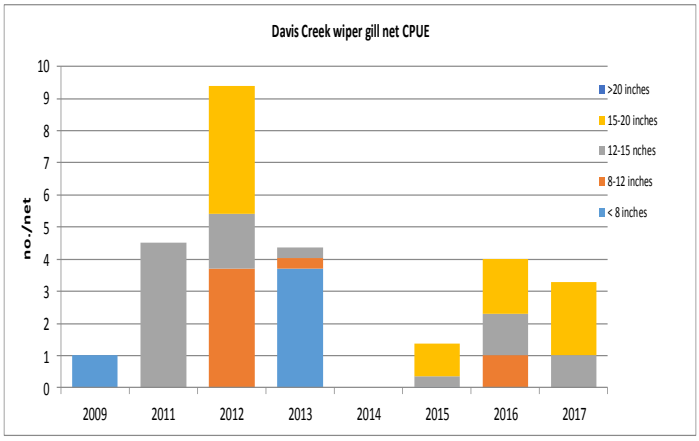
Walleye net catch more than doubled from that seen in 2016. Much of the increase is due to the number of fish collected that were less than 10 inches. These fish are from the 2017 fish stocking and indicated very good survival of those stocked fish. There was also an increase in the number of 15-20 inch fish which is good news for the angler. About 43% of the walleye collected in the 2017 sample were at or above the harvestable size of 15 inches. The catch per net of this size group of walleye is similar to that seen in 2012 and 2014. The numbers of 10-15 inch fish collected was down due to a poor 2016 year class. Age frequency of the 2017 walleye sample indicates survival from the 2016 stocking was poor. Poor shad numbers in 2015 translated to issues with walleye numbers, growth, and survival. Anglers should experience higher angling success rates in 2018 versus 2016. 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 2018 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



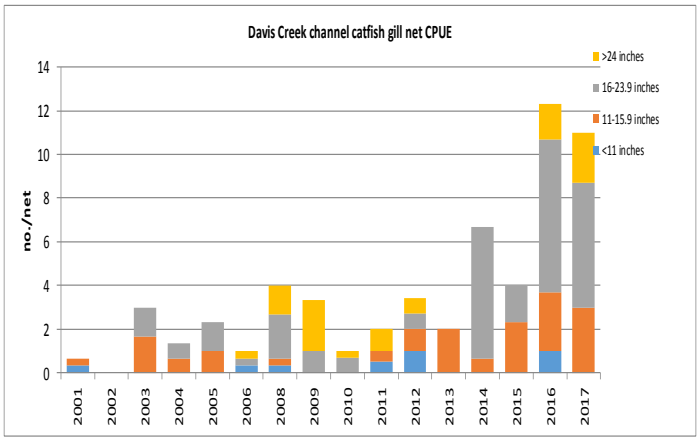
White bass numbers in the gill net survey decreased over those found in the 2015 and 2016. White bass are a schooling fish and can be hit or miss with nets. Anecdotal information and angler checks indicate white bass numbers are higher than what is projected from the gill net catch data. Look for some decent white bass angling opportunity in 2018, especially at the inlet in the Spring. As with walleye, the low production on gizzard shad in 2015 likely had a negative influence on white bass abundance and growth. Numerous schools of young shad are desirable for white bass to prey upon and maintain good growth. It is hoped that a strong year class of white bass will be produced in the next year or two to get the white bass numbers back up to the 20–25 fish per net range.

Wipers



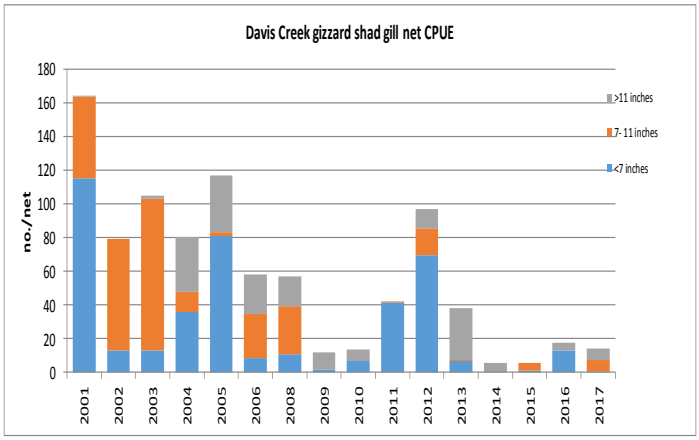
Wiper catch in the 2017 sample is comparable to numbers seen in 2016. The size structure of the wiper sample was good with fish collected up to 20 inches. However, there were no wipers sampled under age 2. Hopefully there was some survival from the 2016 and 2017 wiper stocking efforts. Anglers will catch wipers in 2018, particularly near the inlet in the Spring as the lake is filling. 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 Crimestoppers at 1-800-742-7627.

Channel Catfish



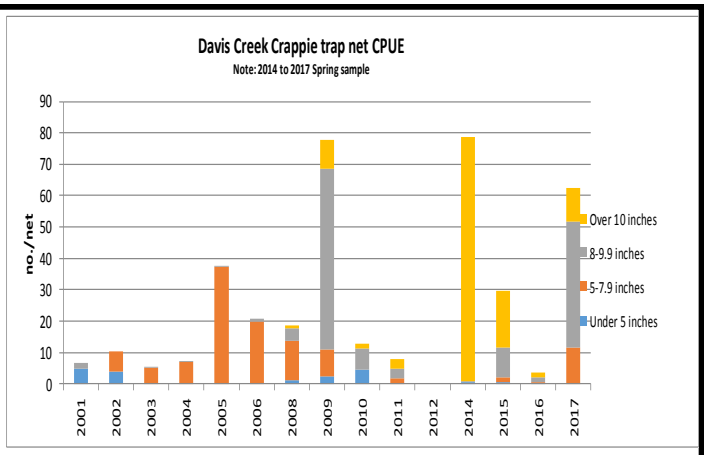
Channel catfish abundance has historically been low at Davis Creek Reservoir but recently population levels have been on the increase. Stocking that began in 2012 appears to be paying off in terms of higher catfish numbers seen in 2014 through 2017. The catfish gill net catch in 2017 is at a level that should be reflected through increased angler success. Good numbers of 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 reminded that the daily bag limit for channel catfish is five fish per day.

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 2017 was similar to that seen in 2016. We believe the shad population suffered a major winter kill in the winter of 2014-15. Central and northern Nebraska is on the northern edge of the gizzard shad range and winterkill is not uncommon. In an effort to insure adequate prey numbers, we will transfer 200 adult pre-spawn shad to the lake in April or May for, hopefully, enough shad production to support the sport fish populations. In addition, we will attempt to create an index of the shad numbers with 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.

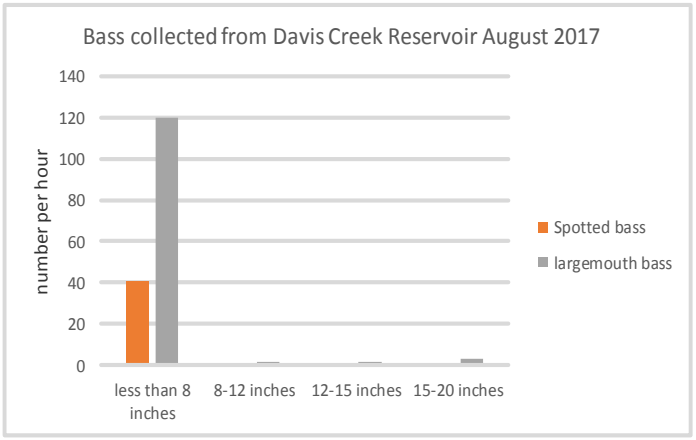
Crappie



Due to low numbers of crappie caught in the Fall survey when the lake is at full draw-down, 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 2017 survey are very good with fish distributed over 3 of the 4 size groups. Fish from the 2015 year class (age 2) were collected in the highest number followed by the 2013 year class. All these fish are represented in the grey and yellow colors of the 2017 bar. The low catch in 2016 illustrates the variability of the sampling effort and the issue weather combined with timing of the sampling effort. Obviously the larger fish collected in 2017 were present in the lake in 2016 but bad weather and cooler than normal water temperatures reduced the number of fish caught by frame nets. We strive to standardize our fish sampling to the same time frame each year but sometimes environmental impacts skew the sample. Due to a small staff and a high number of lakes to sample we are not able to sample lakes multiple times per year. The fairly good catch of smaller sized crappie in 2017 hopefully means good crappie fishing for a couple more years.

Spotted Bass/Largemouth Bass

Spotted bass have been stocked in Davis Creek Reservoir in 2012, 2014, 2015, 2016, and 2017. Based on the success of this bass subspecies in Elwood Lake, it was theorized that they would do well in Davis Creek due to the similar draw-down scenario between the two lakes. Limited daytime electrofishing sampling was conducted on August 29. Although it is not the ideal time of the year to collect a bass sample, both spotted bass and largemouth bass were collected. Largemouth bass were collected at a rate of 126 per hour and spotted bass were collected at a rate of 40.5 per hour. About 95% of the largemouth collected were young-of-the-year fish as were 100% of the spotted bass. A few largemouth bass were in the 15-20 inch range indicating quality fish are present in the lake. Sampling efforts in 2018 will be conducted in the Spring or early Summer before the severe draw-down occurs.



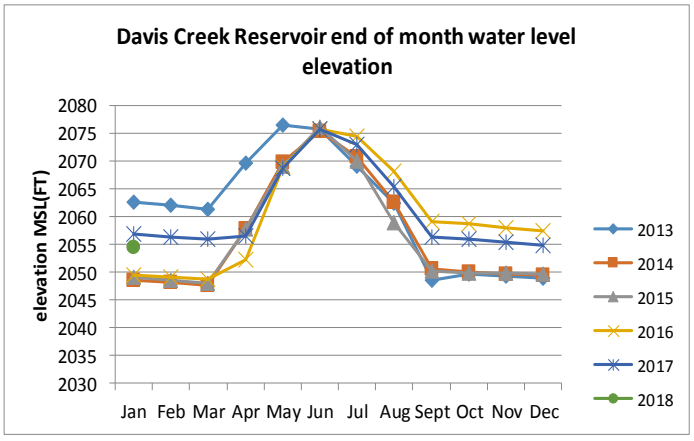
Additional Information about Davis Creek Reservoir

Fish Stocking

Walleye have been stocked annually since 2009 at a rate of 50 fingerling per acre or about 60,000 per year. Wipers have been requested annually since 2010 but were only available for stocking in 2010, 2013 and 2015–2017. 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 2017 were 1.1 million walleye fry, 107,000 walleye fingerling, 10,296 Kentucky spotted bass fingerling, 11,539 wiper fingerling and 134 adult gizzard shad. Adult, spawning shad were stocked to insure adequate prey for sport fish such as walleye, wipers and crappie. Requested again for 2018 are walleye (fry and fingerling), wipers, channel catfish and gizzard shad. Sampling in 2018 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 and 2017 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.

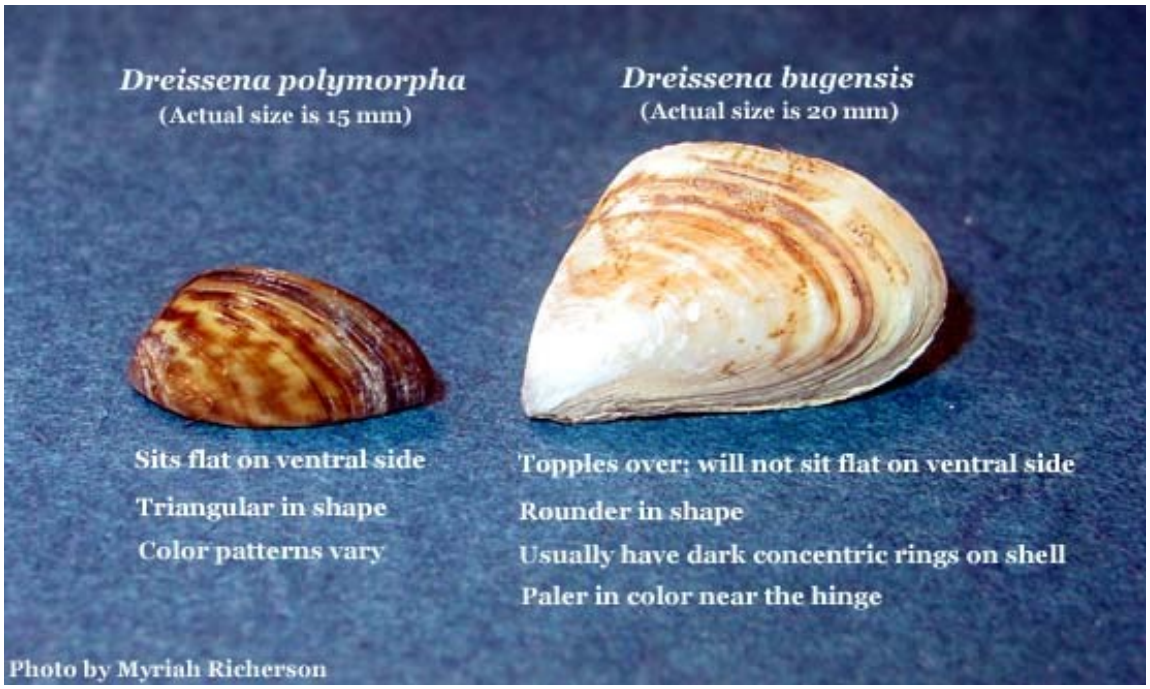


Zebra & Quagga Mussels

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 2017, including Davis Creek Reservoir, and no evidence of mussels were found except Lewis and Clark Lake, the Missouri River below Gavins Point, and Offutt Airforce Base lake.

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. 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.**

NEBRASKA GAME & PARKS