Davis Creek Reservoir
2016 Fishery Survey Summary

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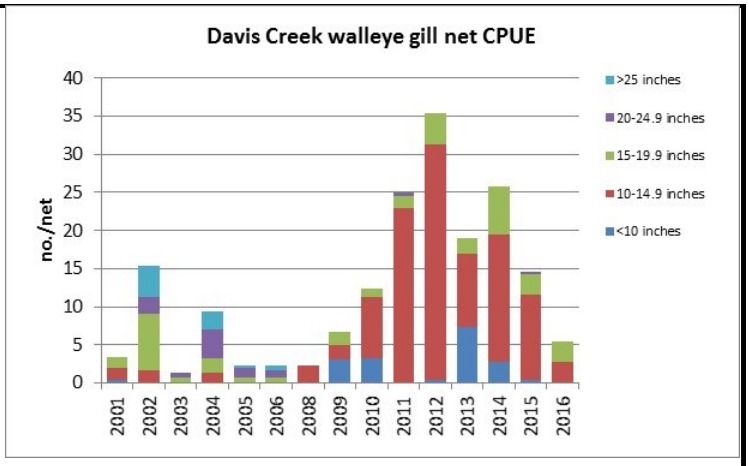
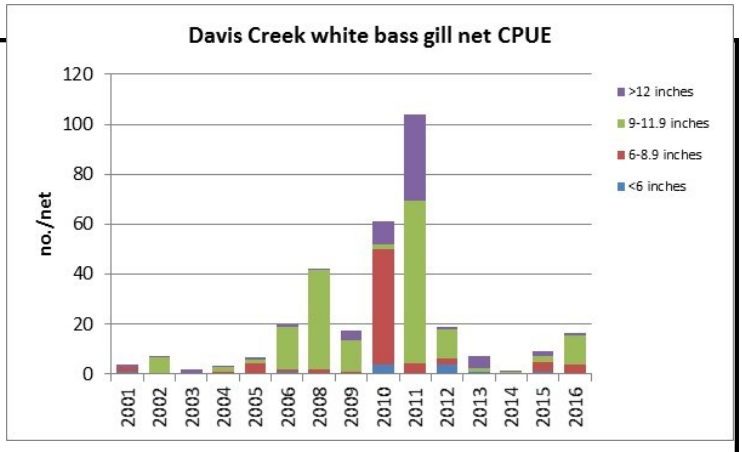
The following text and graphs are the result of netting surveys completed during May 18,19 and September 27,28 at Davis Creek Reservoir. For comparative purposes it also shows results from previous years. Fish populations are sampled each year at Davis Creek using gill and frame nets. Gill nets are used 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



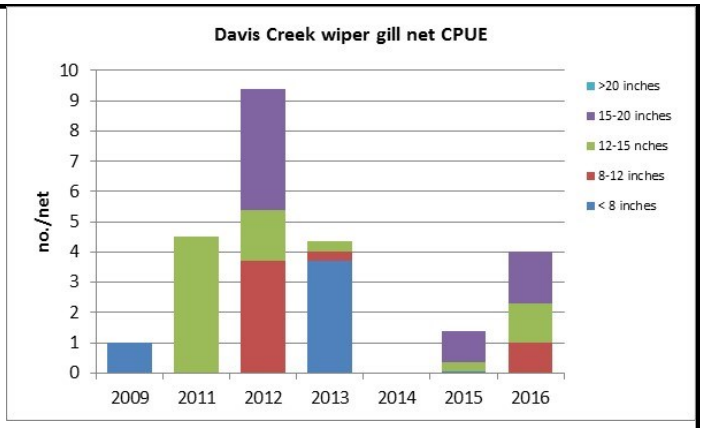
Walleye net catch decreased by 63% from the 2014 sample and is just 21% of what is was in 2014. Poor recruitment along with likely high mortality from low prey density in 2015 have taken their toll on the walleye numbers. One of the factors influencing walleye abundance was the lack of shad production in 2015. Young-of-the-year shad in the reservoir were few and large in size by Fall. Walleye growth and body condition was sub-standard in 2015 due to the lack of prey fish. Half of the walleye collected in the 2016 sample were at or above the harvestable size of 15 inches. The net catch rate for harvestable fish at the time of sample was the same in 2016 as 2015. The big difference is there are many fewer sublegal fish to grow to a harvestable size for 2017. Anglers will experience lower success rates in 2017 versus 2015 and 2016. Efforts for walleye management will center around increasing 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 2017 fisheries staff will transfer 200 adult shad to Davis Creek to ensure spawning fish are present and a sufficient prey base will be produced.

White Bass



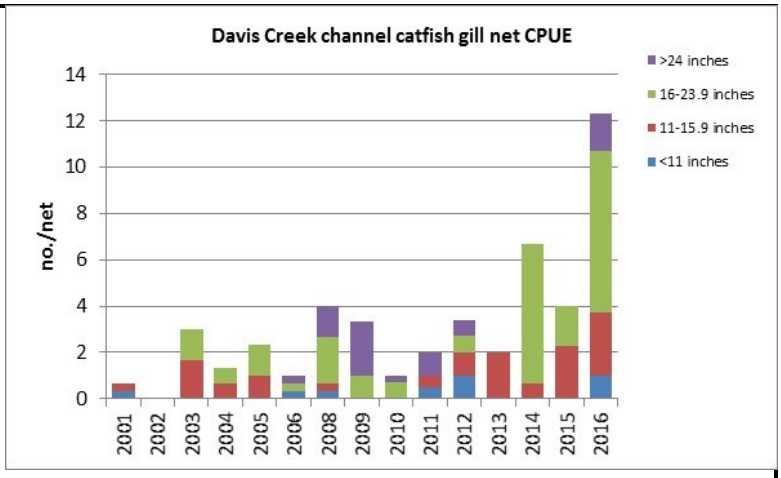
White bass numbers in the gill net survey increased over those found in the 2013 to 2015 but are still far below those numbers seen in 2010 and 2011. Those two years were phenomenal and the population has settled more into a “normal” density. White bass are a schooling fish and can be hit or miss with nets. Good numbers of young-of-the-year white bass were collected in the net survey and observed around the lake in the summer of 2016. Look for some decent white bass angling opportunity in 2017, especially at the inlet in the Spring. A positive note from the 2016 sample is that all size groups of white bass are represented so there is recruitment and anglers will find some larger white bass to harvest in 2017. 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.

Wipers



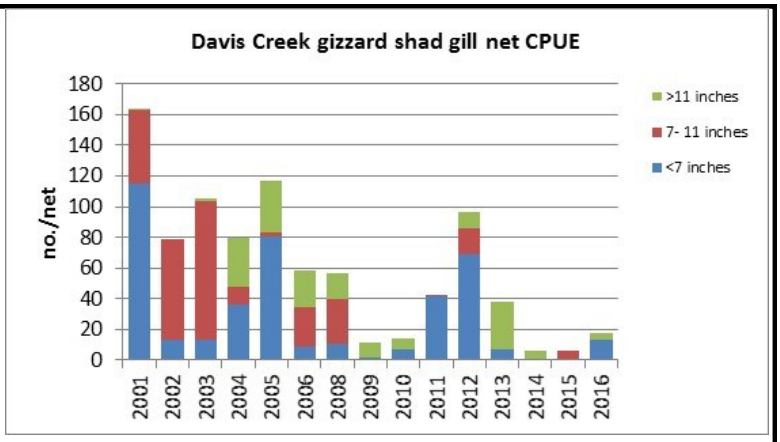
Wiper catch was up in the 2016 sample and is comparable to 2011 and 2013. The size structure of the wiper sample was good with fish collected up to 20 inches. Anglers will catch wipers in 2017, particularly near the inlet in the Spring as the lake is filling. We will continue to request wipers for stocking 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



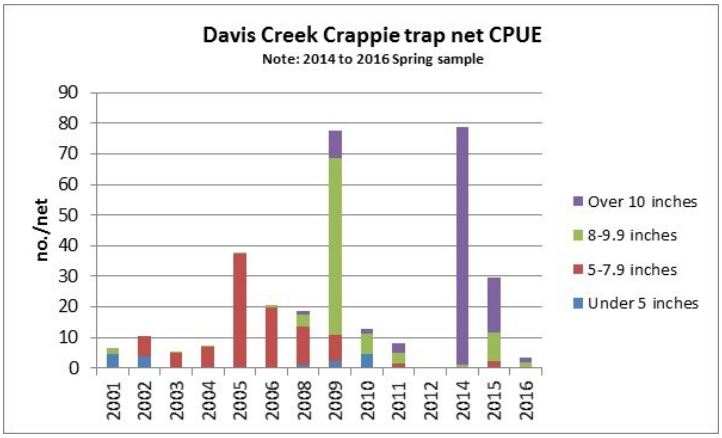
Channel catfish abundance has historically been low at Davis Creek Reservoir but recently population levels have been on the increase. Stocking that began in 2012 appears to be paying off in terms of higher catfish numbers seen in 2014 through 2016. The catfish gill net catch in 2016 is nearly 4 times the preceding five year average of 3.6/net. Some quality fish are present as evidenced by the catch of fish over 24 inches in length. The opportunity will exist in 2017 to catch a trophy sized catfish at Davis Creek. Anglers are reminded that the daily bag limit for channel catfish is five fish per day. Body condition for the catfish was good, especially for the larger sized fish.

Gizzard Shad



The gizzard shad population is monitored because they serve as the primary food source for walleye, white bass, and wipers at Davis Creek. Shad abundance increased in the 2016 gill net survey following the very low numbers seen in 2014 and 2015. It is likely the shad population suffered a winterkill in the winter of 2014/2015. 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. A preferred gizzard shad population is one dominated by young-of-the-year fish that serve as excellent prey for sport fish species such as walleye, white bass, wipers and crappie. Sport fish survival, growth rates and body condition decrease if abundant young shad are not available.

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 2016 survey are very low when compared to the last two years. The larger fish sampled in 2014 and 2015 were primarily from the 2008 and 2009 years classes and they are now gone. A strong year class is needed to have crappie numbers bounce back to a higher population level. It is difficult to predict when these strong year classes happened but with the current low population density it should happen soon. Also keep in mind that while Spring crappie trap net catch rates are generally higher due to the fact the crappie are near-shore looking for places to spawn, timing of the sample is critical and can influence catch rates. We strive to be consistent from year to year in terms of dates sampled and water temperature.

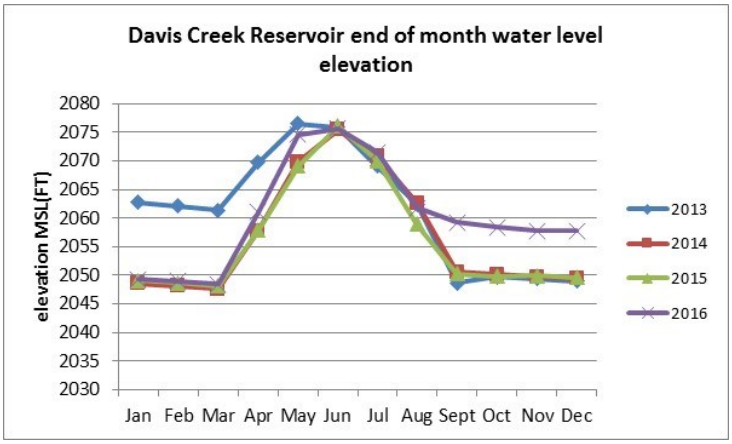
Additional Information about Davis Creek Reservoir

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. 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 2016** were 82,650 walleye fingerling, 11,475 Kentucky spotted bass fingerling, and 6,149 channel catfish. In addition, 178 adult gizzard shad were transferred from Calamus Reservoir to Davis Creek in April and May. Adult, spawning shad were stocked to insure adequate prey for sport fish such as walleye, wipers and crappie. No wipers were available for stocking in 2016. Requested again for 2017 are walleye, wipers, and gizzard shad. Sampling in 2017 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 completed.

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 and Bureau of Reclamation are conducting studies related to increasing overwinter water level elevation. In other words, filling the lake somewhat in the fall period. This elevation increase is seen in the following chart with the 2016 data. It is felt any increase in winter water storage and water level elevation will benefit the fish populations.

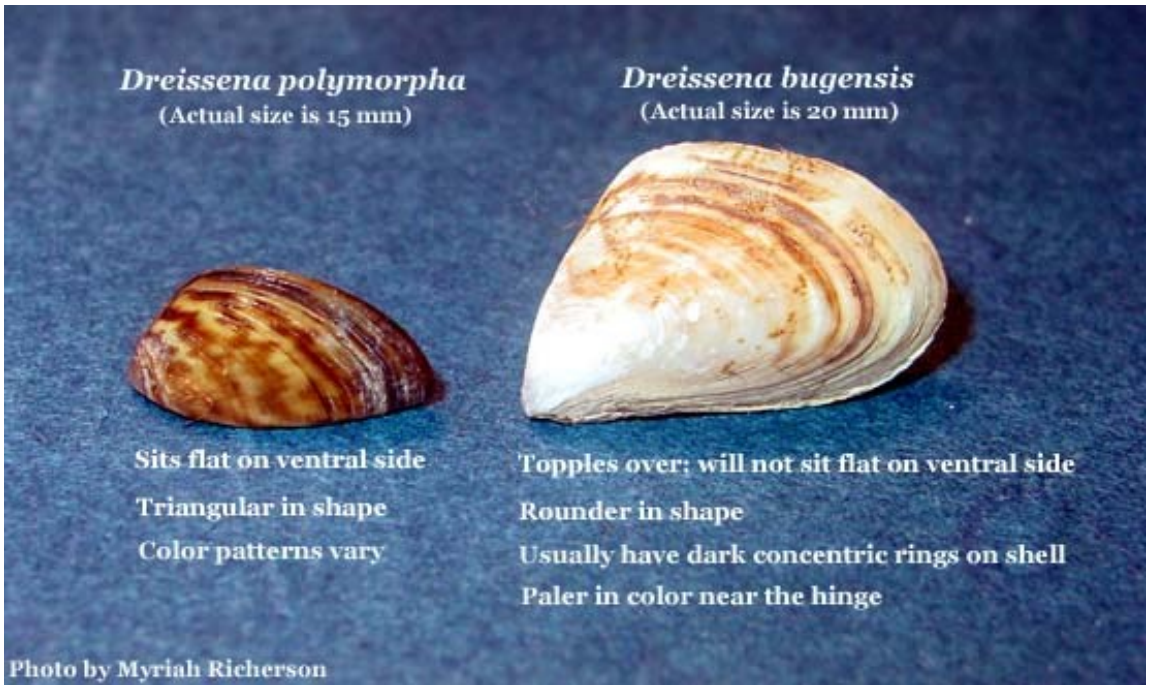


Zebra & Quagga Mussels

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 2016 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

Information regarding camping facilities at Davis Creek Reservoir can be found at Lower Loup NRD's website: http://www.llnrd.org/recreation.html. The Lower Loup NRD, along with the U.S. Bureau of Reclamation has sponsored a project to expand the campground area, add picnic shelters and, beginning in 2017, an additional boat ramp will be constructed in the bay south of the existing boat ramp. These projects should help with the overcrowding situation for lake users.

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