2014 Lewis & Clark Reservoir Fall Fish Survey

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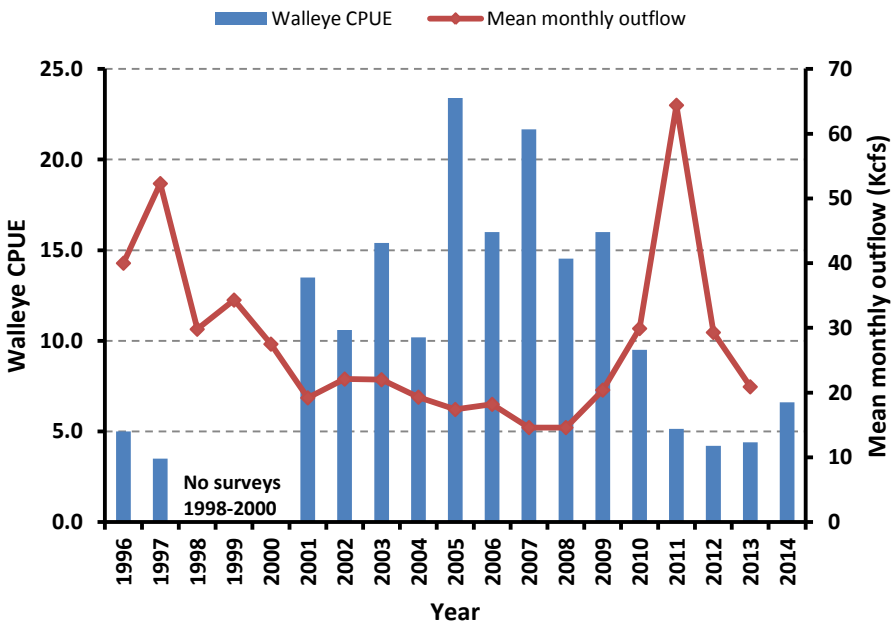
The following text and graphs summarize data from the fall fish survey on Lewis and Clark Reservoir which took place on September 30th and October 1st, 2014. Sampling consisted of 5 gill nets along with four hours of night-time electrofishing. Gill nets targeted walleye, sauger, white bass, and channel catfish and the electrofishing was used to monitor abundance of young-of-the-year walleye, sauger, and white bass as an index of 2014 production of those species. Both sampling methods are normally conducted on an annual basis.

The fishery in Lewis and Clark is still feeling the effects of the 2011 flood. Historical data has shown that high flows through the dam result in low catch rates of walleye in the reservoir as they are "flushed" through the system. Years when average monthly outflow is less than 25,000 cfs appear to benefit the reservoir's fishery. The average outflow in 2013 had dropped below 25,000 cfs for the first time in four years and that should benefit the fishery. Flow data for 2014 is not yet available.



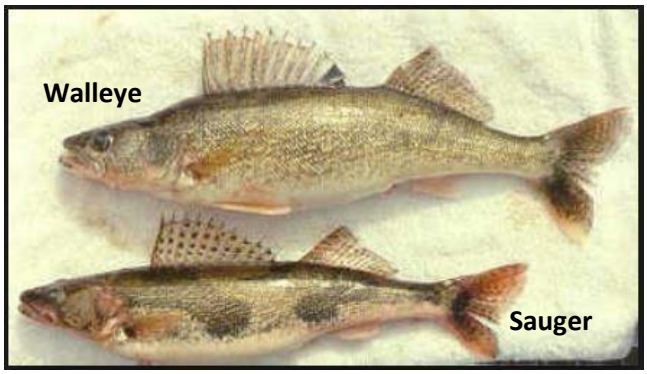
2014 Fall Fishery Survey Results

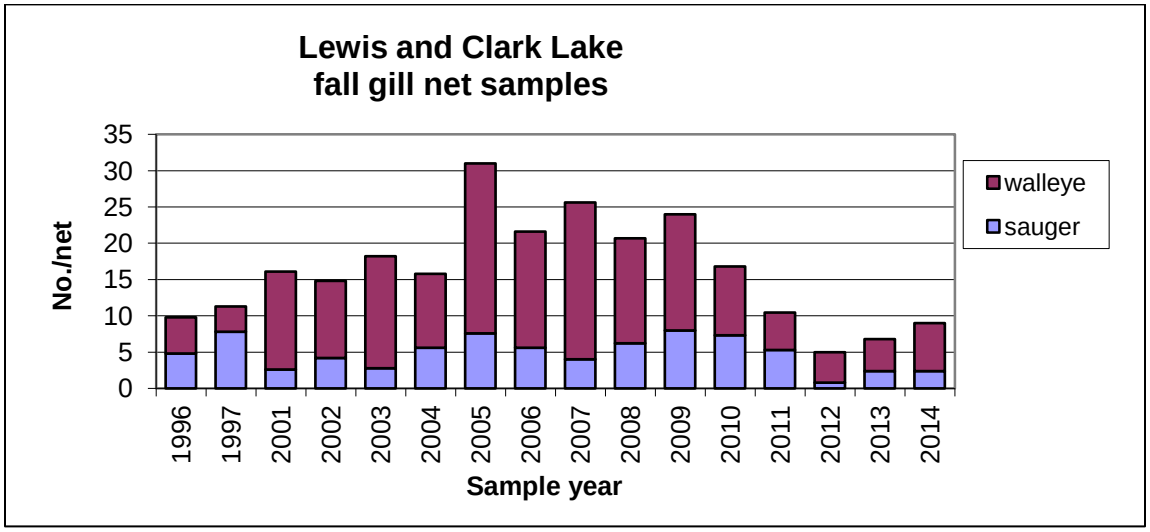
Walleye/Sauger

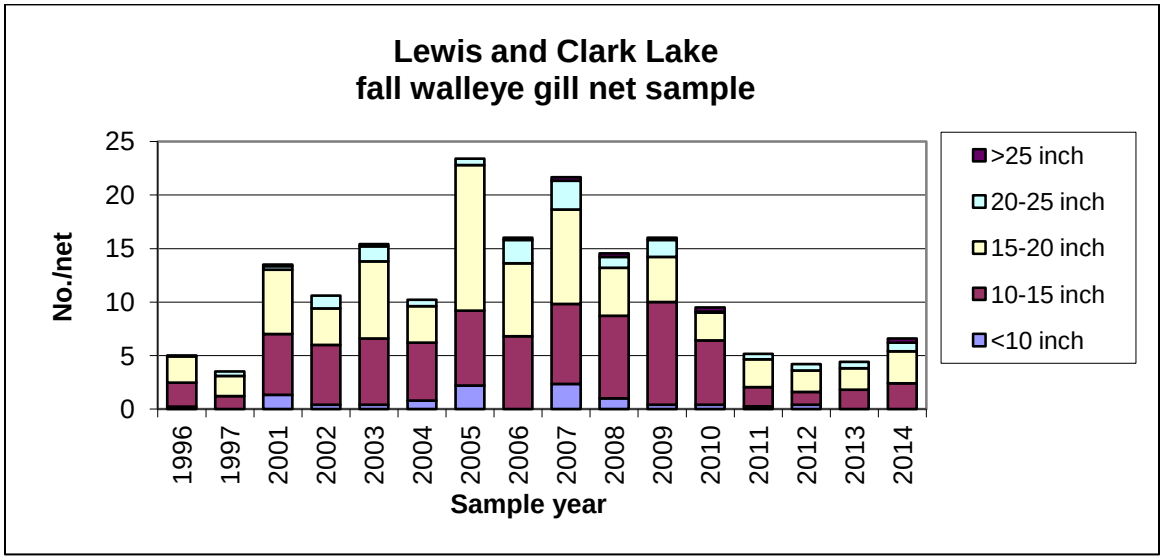
Walleye abundance has shown a slight increasing trend since the 2011 flood but still remained quite low in 2014, especially when compared to those "glory years" from 2005 to 2009. The sampling indicated decent size structure with around 60% of the walleye and sauger exceeding 15 inches. Young-of-the-year (YOY) electrofishing indicated improved numbers of juvenile walleye over 2013 but the catch was still well below the 15-year average of approximately 90 per hour. The catch of YOY sauger continued to show a declining trend though. However, YOY of both species should have better odds of recruiting through the winter as they each averaged nearly two inches longer than their 2013 counterparts that were collected at the same time a year ago. In addition, 14 million three-day-old walleye fry were stocked in the upper end of Lewis and Clark Lake in 2014. The stocked fish were chemically marked to aid in evaluation of the contribution of stocked fish to the overall walleye population. Otoliths were collected and analyzed from 200 YOY walleye to look for marked fish. Another stocking evaluation method is to compare annual electrofishing catch rates to determine if more YOY walleye are present in the lake following stocking. At this time, neither evaluation technique points to any contribution of stocked walleye to year class strength in 2014. Natural reproduction and recruitment appear to be sufficient to sustain the walleye population in Lewis and Clark Lake.

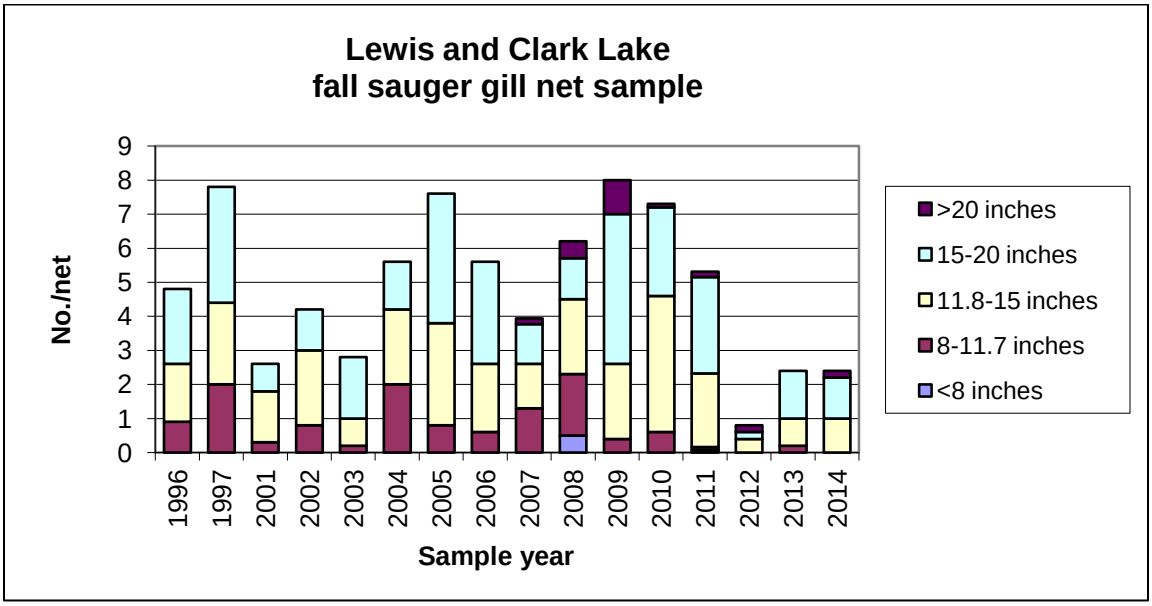
As mentioned earlier, reduced annual flows through Gavins Point Dam are instrumental in boosting or maintaining walleye numbers in the reservoir, especially when they occur in consecutive years as was the case from 2004 to 2008. Those repeated years of relatively low flows corresponded to the best period of walleye fishing opportunity (2005 to 2009, see graph below) in the recent history of the lake.

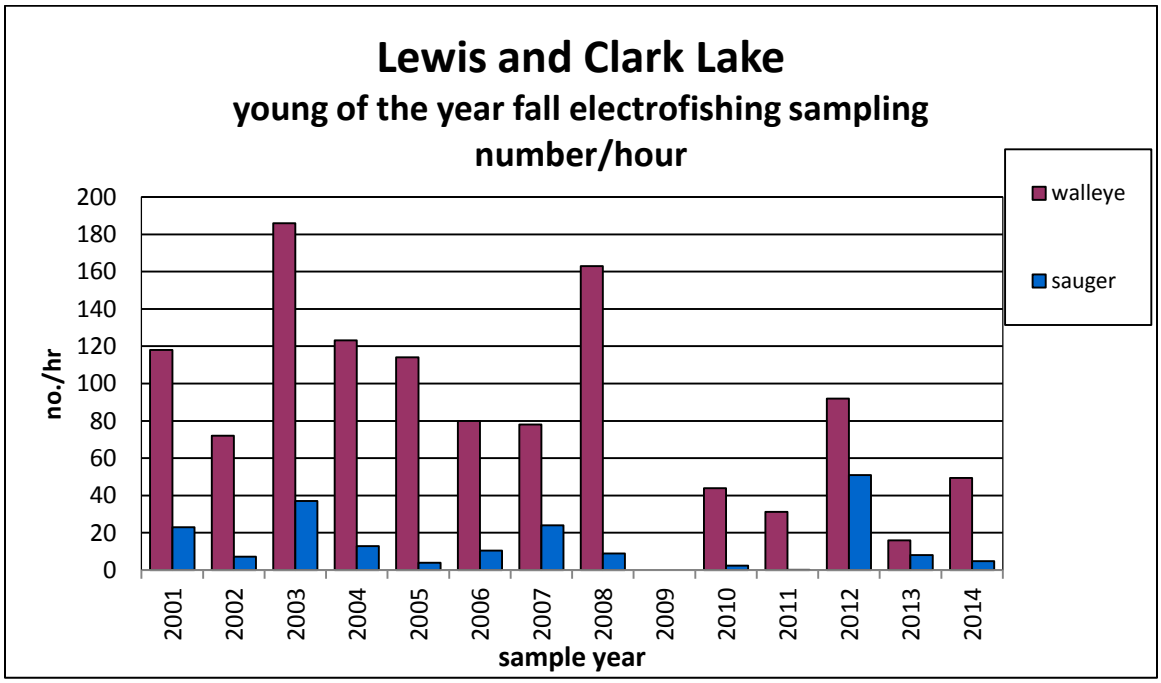
Sauger and walleye are managed under one regulation that includes a 15-inch minimum length limit and an aggregate (walleye and sauger combined) daily bag limit of 4 fish.

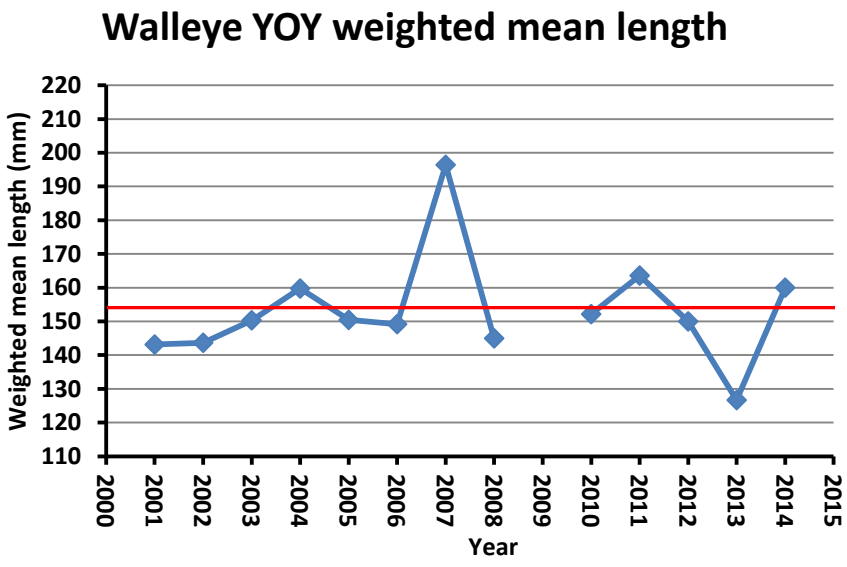



Lewis and Clark Lake
fall gill net samples
No./net
35
30
25
20
15
10
5
0
1996
1997
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Sample year
walleye
sauger

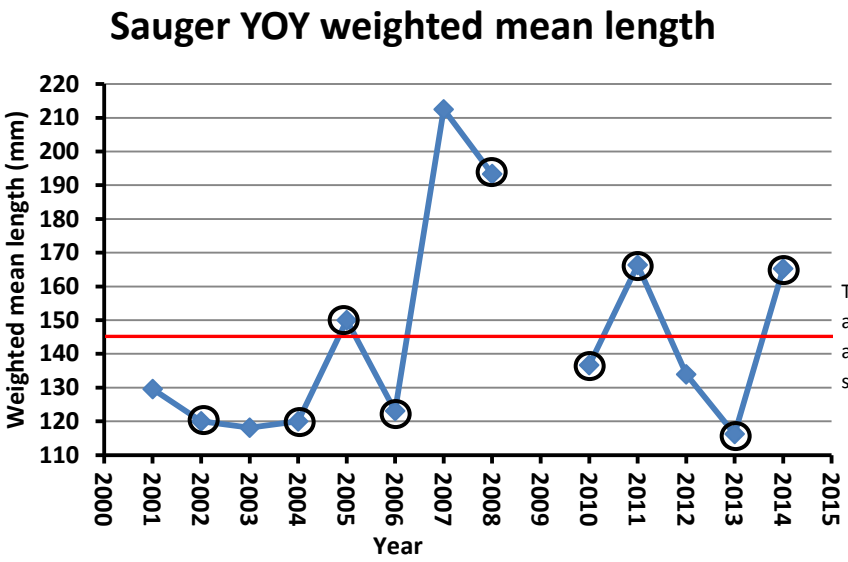

Lewis and Clark Lake
fall walleye gill net sample
No./net
25
20
15
10
5
0
1996
1997
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Sample year
>25 inch
20-25 inch
15-20 inch
10-15 inch
<10 inch


Lewis and Clark Lake
fall sauger gill net sample
No./net
9
8
7
6
5
4
3
2
1
0
1996
1997
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Sample year
>20 inches
15-20 inches
11.8-15 inches
8-11.7 inches
<8 inches





The red line represents the average length from 2001-2014.

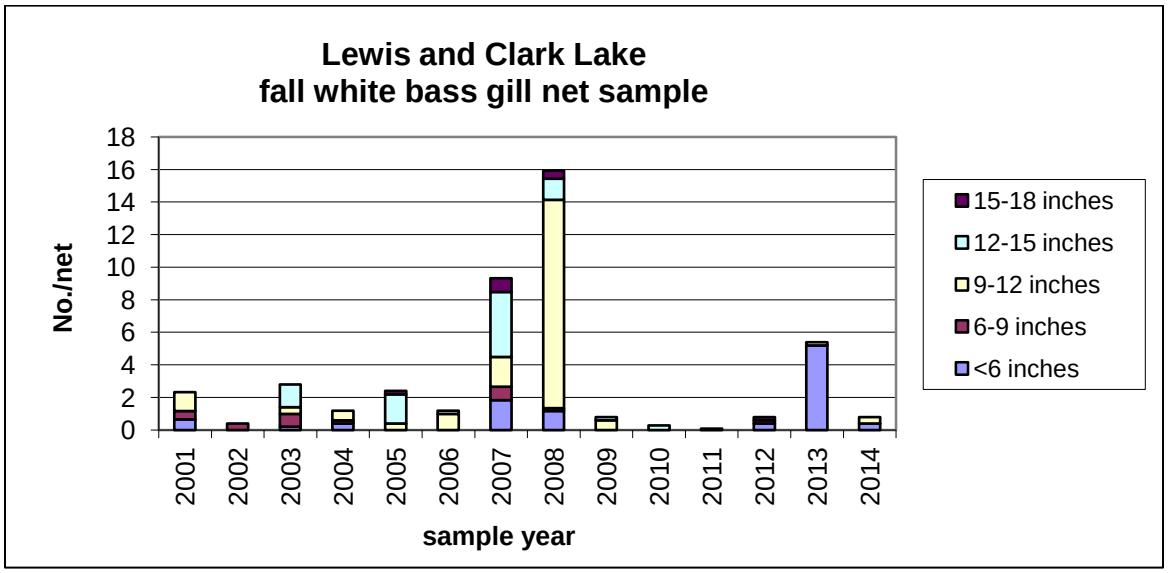


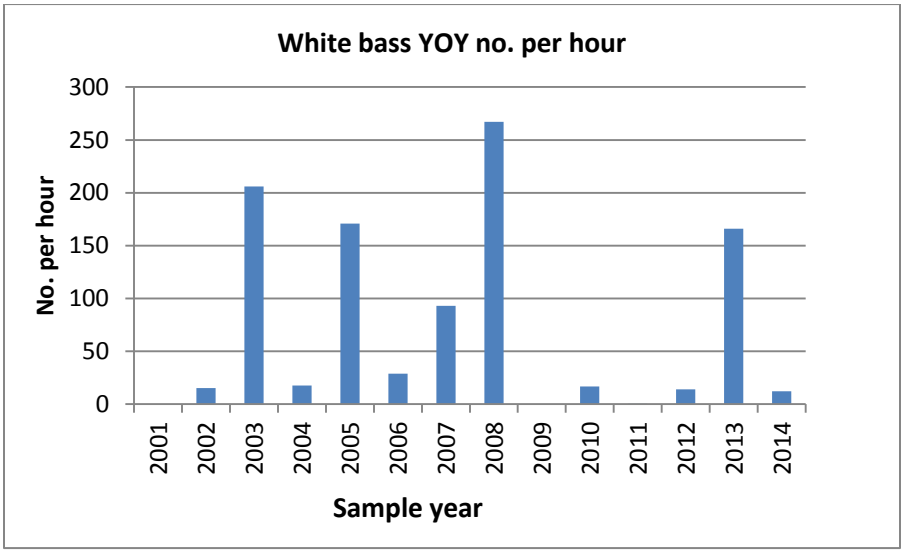
The red line represents the average length from 2001-2014 and the black circles indicate samples of less than 20 fish.

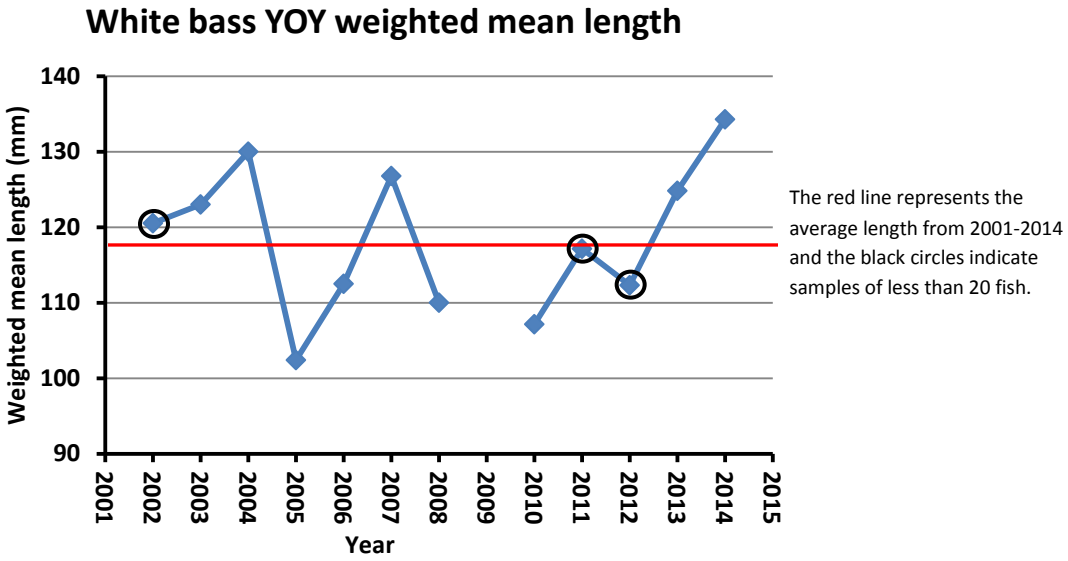
White bass

Low catch rates are typical for white bass in Lewis & Clark but it isn't necessarily a good indicator of their population abundance. They are an actively schooling species which can make them inherently difficult to sample consistently in a reservoir, especially one this large. That is, they can be very "hit and miss" when it comes to being captured in the nets. Provided that some of the fish that were observed in 2013 remained in the lake in spite of the increased flows in 2014, there could be some decent opportunity for them in 2015. White bass grow quickly in Lewis & Clark, approaching 10 inches by age 2 and 12 to 13 inches by age 3. Although the YOY catch was down, those white bass that were collected appeared to get a good start in 2014 as their average length (YOY) was the best it's ever been.

White bass harvest is regulated with a 15-fish daily bag limit.





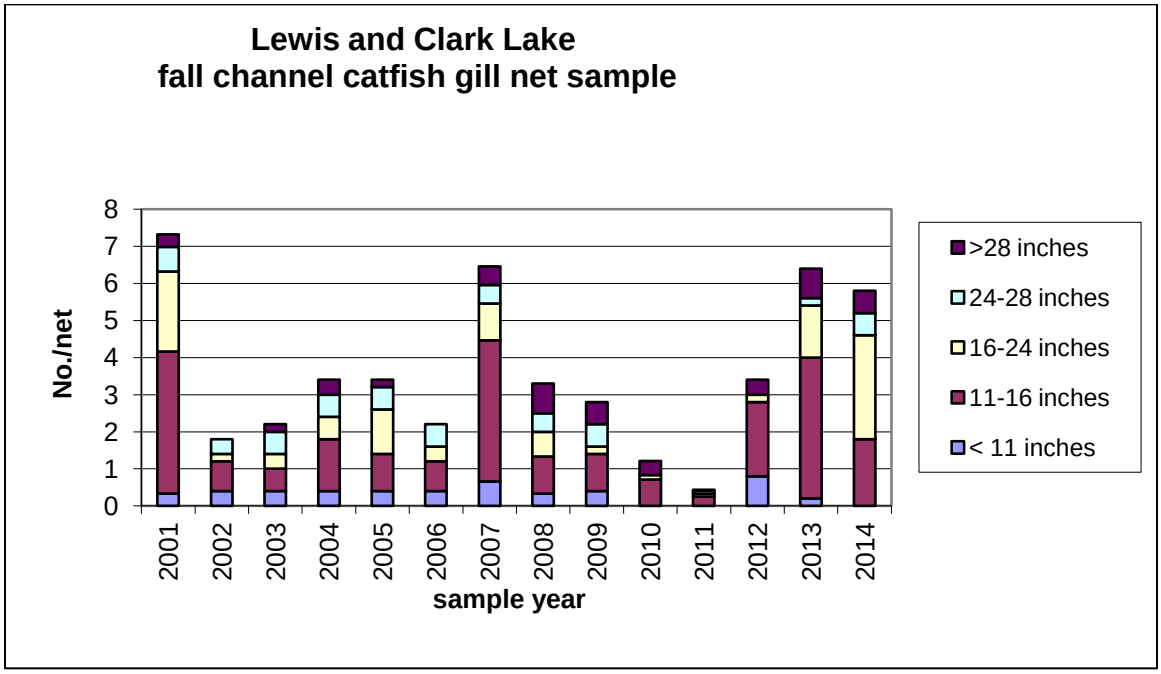


The red line represents the average length from 2001-2014 and the black circles indicate samples of less than 20 fish.

Channel catfish

The 2014 catch rate of channel catfish was similar to 2013 and again fairly high compared to most years. Additionally, the majority of fish exceeded 16 inches which will provide decent opportunity to harvest catfish in the reservoir. The population will also provide some opportunities for larger fish as a fair number were over 24 inches in length**.** Anglers fishing Lewis and Clark have an opportunity to catch a trophy sized fish as we consistently sample

catfish over 28 inches in length. Channel catfish typically reach 16 inches in 4 to 5 years in Lewis & Clark.
Channel catfish in the reservoir and Missouri River are regulated with a 10-fish daily bag limit.



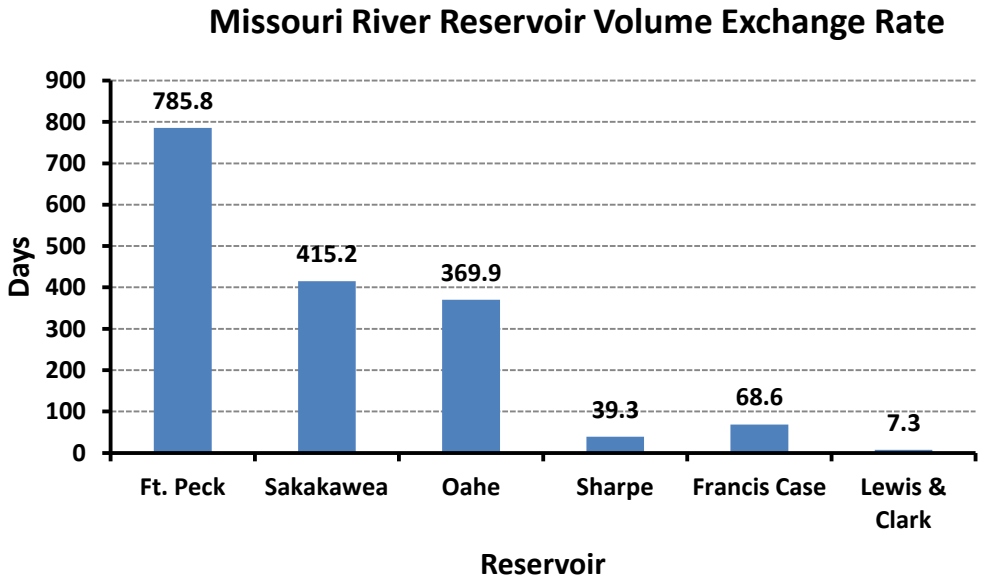
Other species

The lake received an influx of **northern pike** during the flood of 2011 and they continue to contribute to the catch in Lewis & Clark, including some fairly large fish. The lake is also a good destination for those seeking **black bass** (**largemouth** and **smallmouth bass**). Numbers appear to be down compared to pre-2011 but bass anglers can still get out and have a decent day. Rocky areas, bays, boat basins, and the marsh area on the west end will provide some of the better opportunities. **Flathead catfish** are picked up on occasion as are **panfish**. **Bluegill** can be caught along the rocks or in vegetated bays and anglers do pick up some **crappie** along the rocks and in the boat basins.

Additional notes

Anglers are reminded that 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**. These new regulations are meant to control the spread of aquatic invasive species such as zebra mussels, Eurasian watermilfoil, and curly-leaf pondweed to name a few. Additional information about preventing the spread of aquatic invasive species can be found in the 2015 Nebraska Fishing Guide (p. 30) and at the University of Nebraska's Invasive Species Project website: http://www.neinvasives.com. **Anglers

should also be aware that there will be additional efforts at Lewis & Clark in 2015 to increase awareness of and reinforce these invasive species regulations following the discovery of an adult zebra mussel on a boat dock located on the north side of the reservoir in 2014.



The graph above is included to show how Lewis & Clark differs greatly from other reservoirs on the Missouri River system. It depicts the amount of time it takes, based on the volume of the reservoir and the outflow through the related dam, to replace the entire volume of the reservoir. Compared to the other reservoirs, Lewis & Clark is basically a "wide spot in the river" as it only takes about a week, on average, to replace its entire volume with "new" water. In 2011, when outflow peaked around 160,000 cfs passing through the dam, the exchange rate would have been just over 1 day (approximately 27 hours). The volume exchange rate, or turnover time as it is called, is instrumental in keeping fish in a reservoir. High exchange rates result in fish movement out of the reservoir. This is true for fish of all sizes, young-of-the-year through adult.