

2013 Lewis & Clark Reservoir Fall Fish Survey

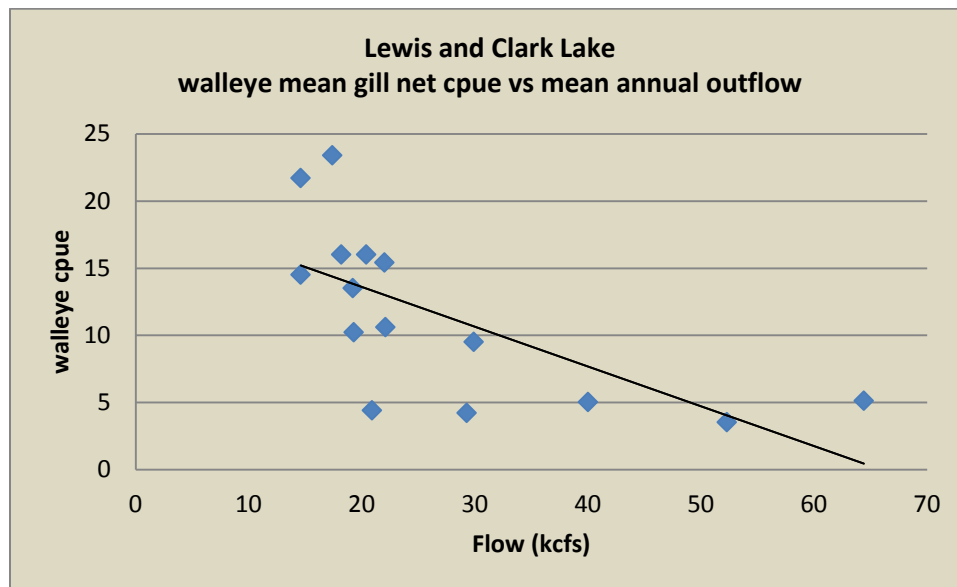
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The following text and graphs summarize data from the fall fish survey on Lewis and Clark Reservoir which took place on September 30th and October 1st, 2013. Sampling consisted of 5 gill nets along with one hour of night-time electrofishing. Gill nets 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 2013 production of those species. Both sampling methods are normally conducted on an annual basis.

The flood of 2011 had a substantial influence on Lewis and Clark Reservoir and the fishery is still recovering from its effects. 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 are less than 20,000 to 25,000 cfs appear to benefit the reservoir’s fishery but average outflow has not been below 20,000 cfs since 2008.



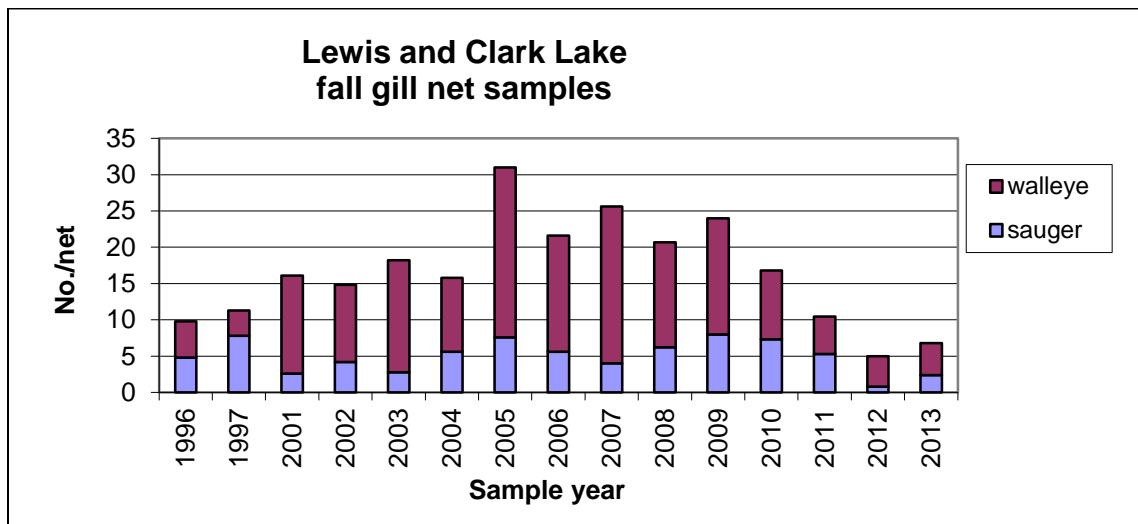
2013 Fall Fishery Survey Results

Walleye/Sauger

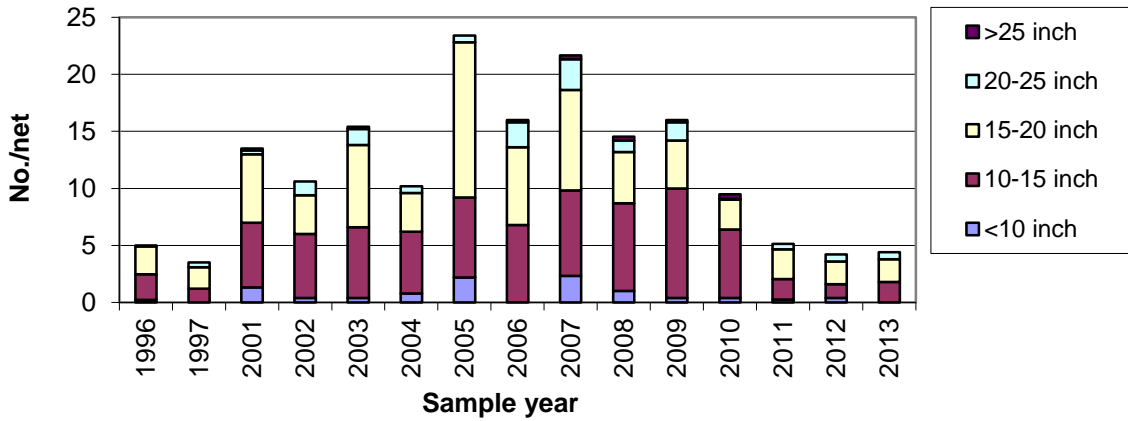
Walleye and sauger abundance remained quite low in 2013. Walleye gill net catch was similar to that of 2012 along with a similar size structure, thus the angling opportunity for walleye in 2014 will be similar to that seen in 2013. Sauger gill net catch was still relatively low but was above the 2012 catch rate. Anglers should see a slightly improved opportunity for sauger in 2014 with about half the population being of legal size. Young-of-the-year electrofishing sampling indicates a relatively poor year class for both walleye and sauger in 2013. Not only was the catch rate of young-of-the-year walleye and sauger low, the fish that were captured were quite small when compared to other sample years. Whether they were large enough to make it through the winter is questionable. The limited size of those fish could be attributed to the cold spring experienced in 2013 causing a late spawn and/or a possible shortage of prey fish such as emerald shiners.

As mentioned, the 2011 flooding did have a substantial effect on the Lewis and Clark fishery. In fact, that year recorded the highest flows in the history of the dam. Additional analysis indicated that years with average annual outflow less than 20,000-25,000 cubic feet per second (cfs) through Gavins Point Dam are instrumental in boosting walleye numbers in the reservoir, especially when they occur in consecutive years. The average flow passing through the dam in the 2011 flood year was 64,400cfs. Flows during the two following years still exceeded 20,000 cfs, 29,300cfs and 20,900cfs in 2012 and 2013, respectively. Conversely, average flow through the dam was below 20,000 cfs for all years from 2004 through 2008 which contributed to the best period of walleye fishing opportunity (2005 to 2010, see graph below) in the recent history of the lake.

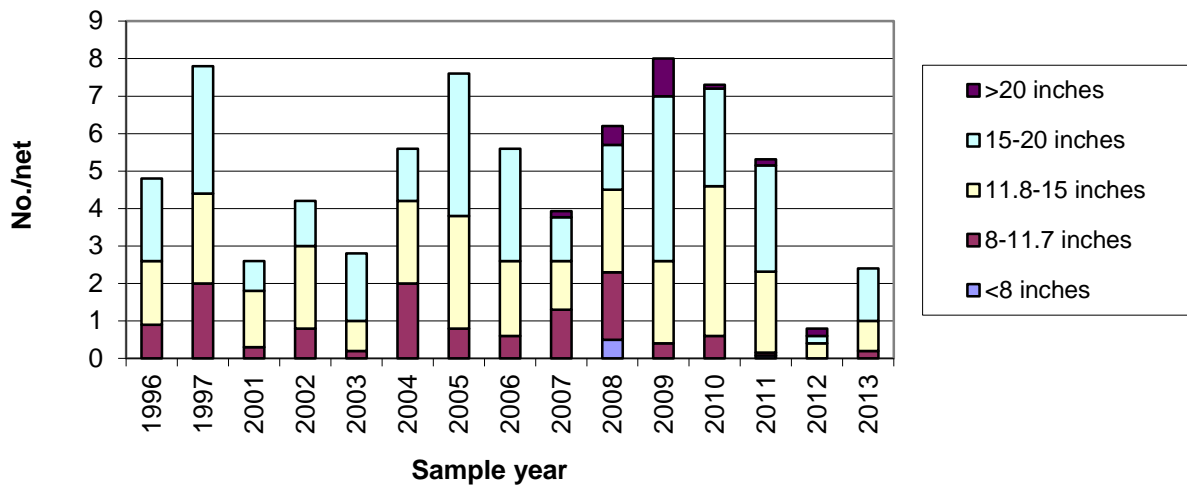
Sauger and walleye are managed under one regulation that includes a 15-inch minimum length limit and an aggregate (walleye and sauger combined) daily bag limit of 4 fish.

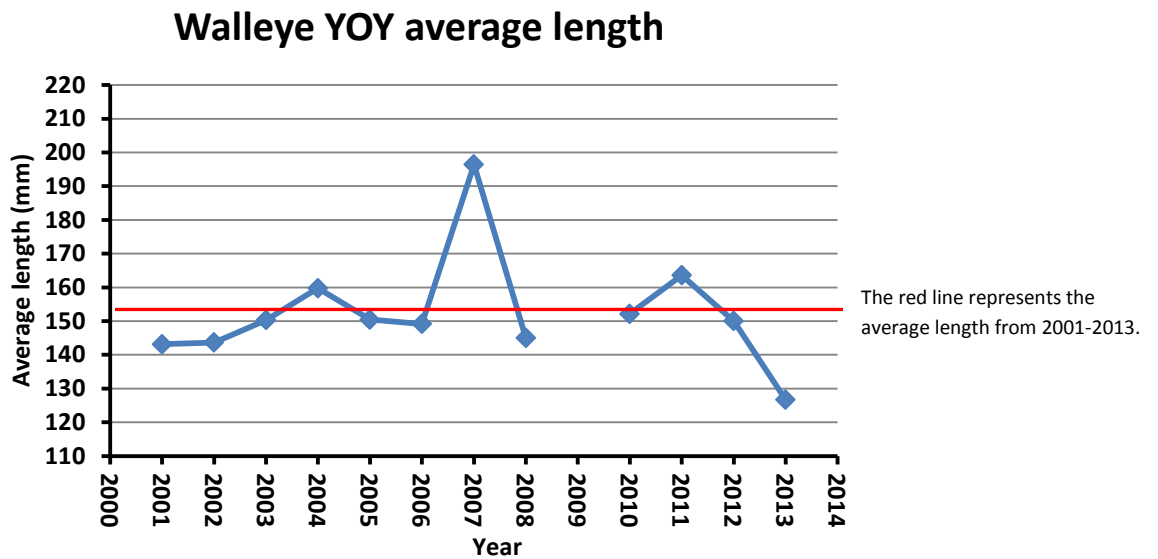
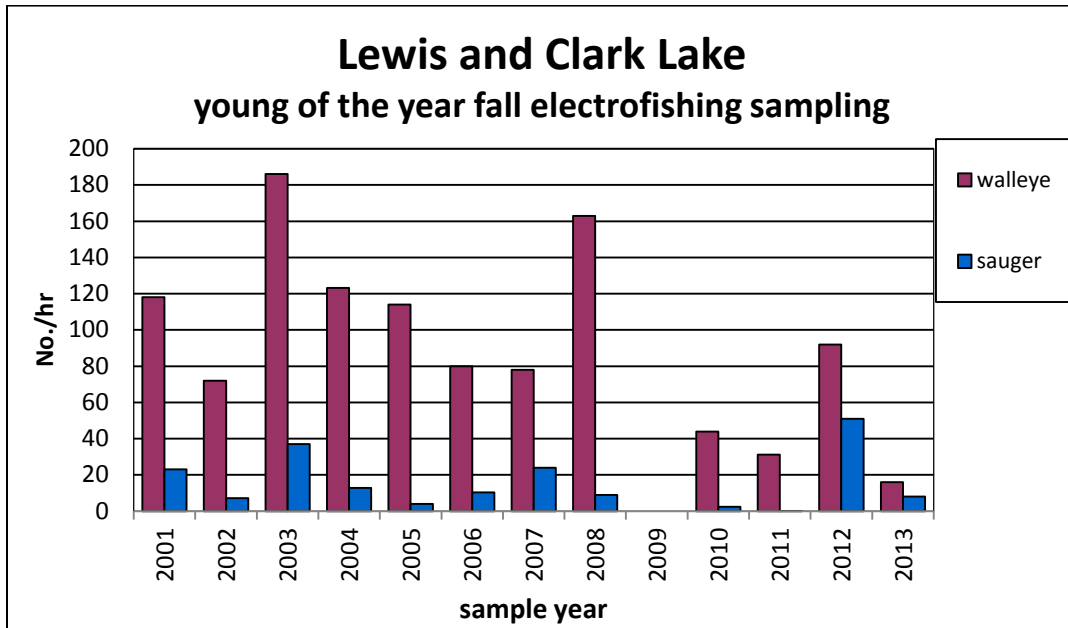


Lewis and Clark Lake fall walleye gill net sample



Lewis and Clark Lake fall sauger gill net sample

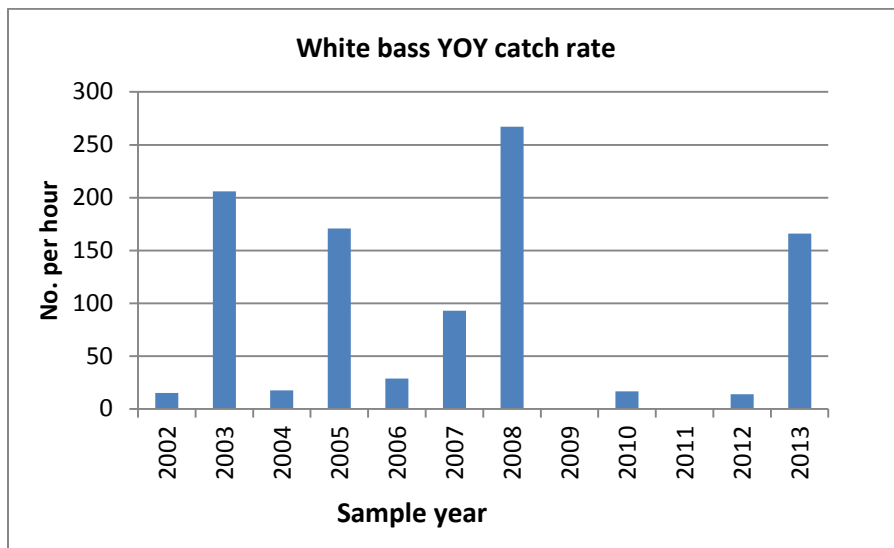
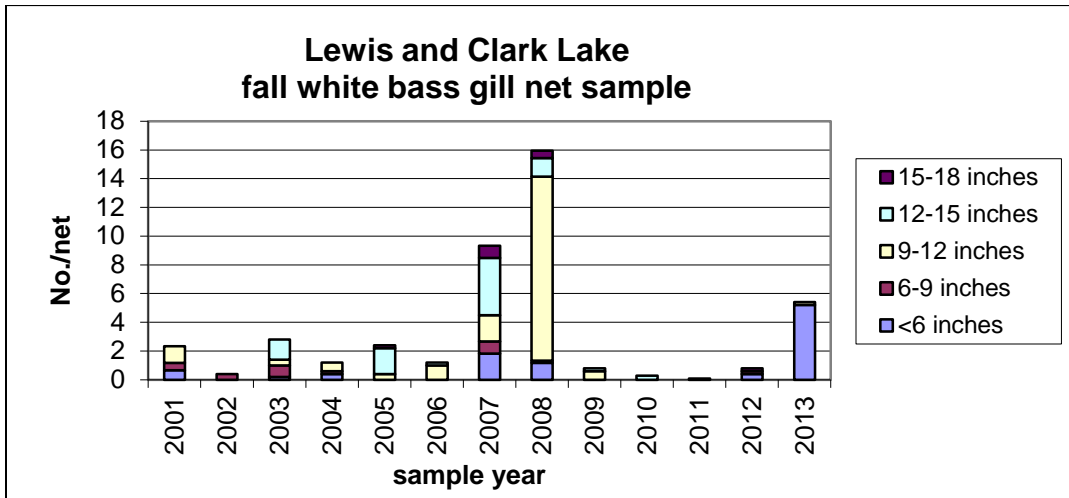




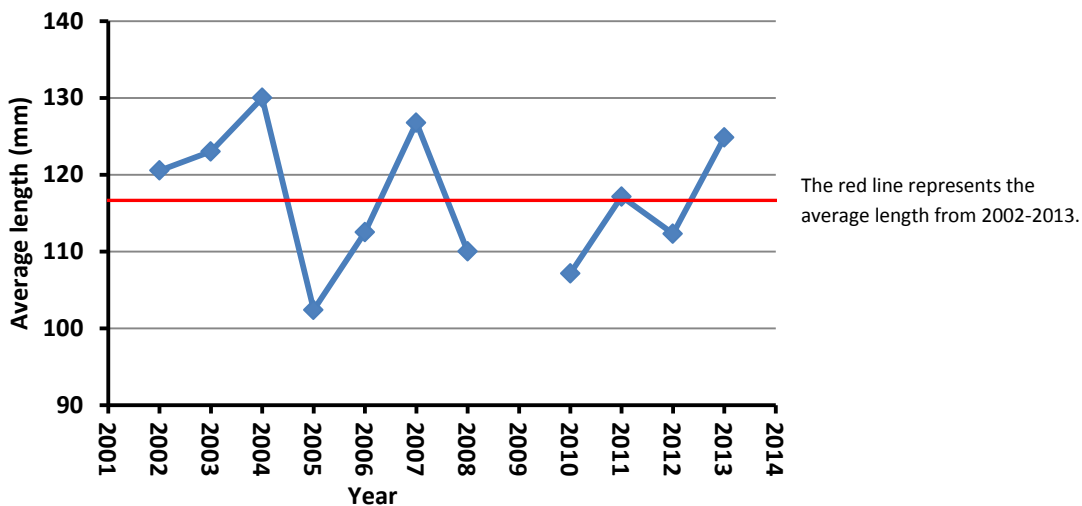
White bass

The gill net catch of white bass improved but was almost completely comprised of young-of-the-year (YOY) fish. Low catch rates are typical for white bass in Lewis & Clark but it isn't always a good indicator of their population abundance. They are an actively schooling species which makes them inherently difficult to sample consistently in a reservoir this large. That is, they can be very "hit and miss" when it comes to being captured in the nets. The high YOY

catch rates in both gill nets and night-time electrofishing bodes well for future white bass fishing in the reservoir, provided that releases through Gavins Point Dam are relatively stable and not excessive. White bass grow quickly in the reservoir, approaching 10 inches by age 2 and 12 to 13 inches by age 3. They appeared to get a good start in 2013 as the average length of YOY white bass was the best it's been in a number of years. White bass harvest is regulated with a 15-fish daily bag limit.



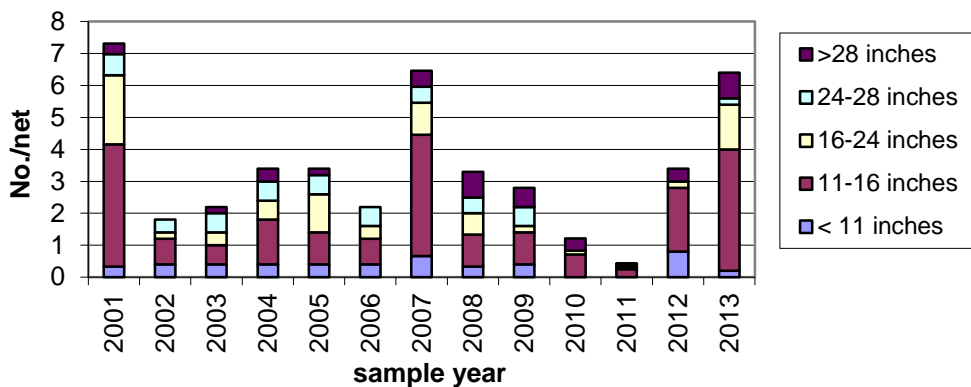
White bass YOY average length



Channel catfish

The 2013 catch rate of channel catfish was fairly high compared to most years. Additionally, a good proportion of fish exceeded 16 inches along with decent representation by fish over 28 inches. Smaller catfish were also well represented, with most hovering around 14-15 inches. Channel catfish typically reach 16 inches in 4 to 5 years in Lewis & Clark. Channel catfish in the reservoir proper (Santee to Gavins Point Dam) are regulated with a 5-fish daily bag limit.

Lewis and Clark Lake fall channel catfish gill net sample



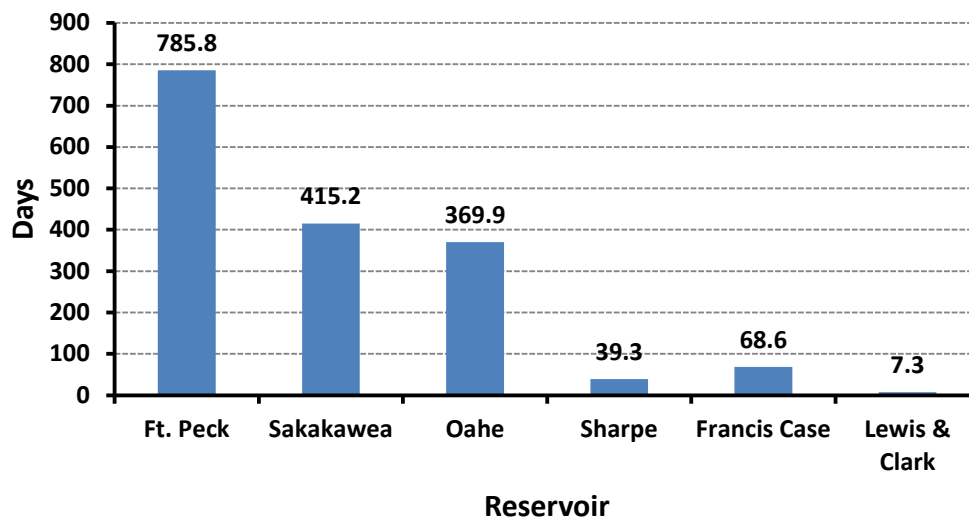
Other species

The lake received an influx of **northern pike** during the flood of 2011 and they have become a regular contribution 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 a bass angler 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 note

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 2013-2014 Nebraska Fishing Guide (pp. 28-29) and at the University of Nebraska's Invasive Species Project website: <http://www.neinvasives.com>.

Missouri River Reservoir Volume Exchange Rate



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).