

SPRING 2021

CHENEY DISTRICT FISHERIES

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FISHING PROGRAMS

Master Angler Award Program

Are you a Master Angler? Prove it! Kansas Department of Wildlife, Parks, and Tourism has a program called the Master Angler Award Program. If you catch a fish in Kansas large enough to qualify, you will receive a Master Angler Award certificate! Sizes of each species as well as a certificate application form can be found here:

<https://ksoutdoors.com/Fishing/Special-Fishing-Programs-for-You/Master-Angler-Award-Program>

Trout Program

Trout season runs from November 1st through April 15th. KDWP&T will stock certain urban waters with adult sized trout ready to be caught. For more information on the Trout program including stocking locations and stocking dates click here:

<https://ksoutdoors.com/Fishing/Special-Fishing-Programs-for-You/Trout-Fishing-Program>

Remember that KDOT East, Vic's Lake, and Slough Creek are Type 1 trout waters and all anglers fishing those waters November 1st - April 15th must have a trout permit.



Urban Fishing Program



KDWP&T has created the Urban Stocking Program to provide local fishing opportunities. Adult sized Channel Catfish (3/4lb-3lbs) are stocked in many public waters in Reno and Sedgwick counties. These fish are harvestable size and ready to catch. For more information on stocking locations and dates click here:

<https://ksoutdoors.com/Fishing/Special-Fishing-Programs-for-You/Urban-Fishing-Program>

SAMPLING OVERVIEW: Crappie

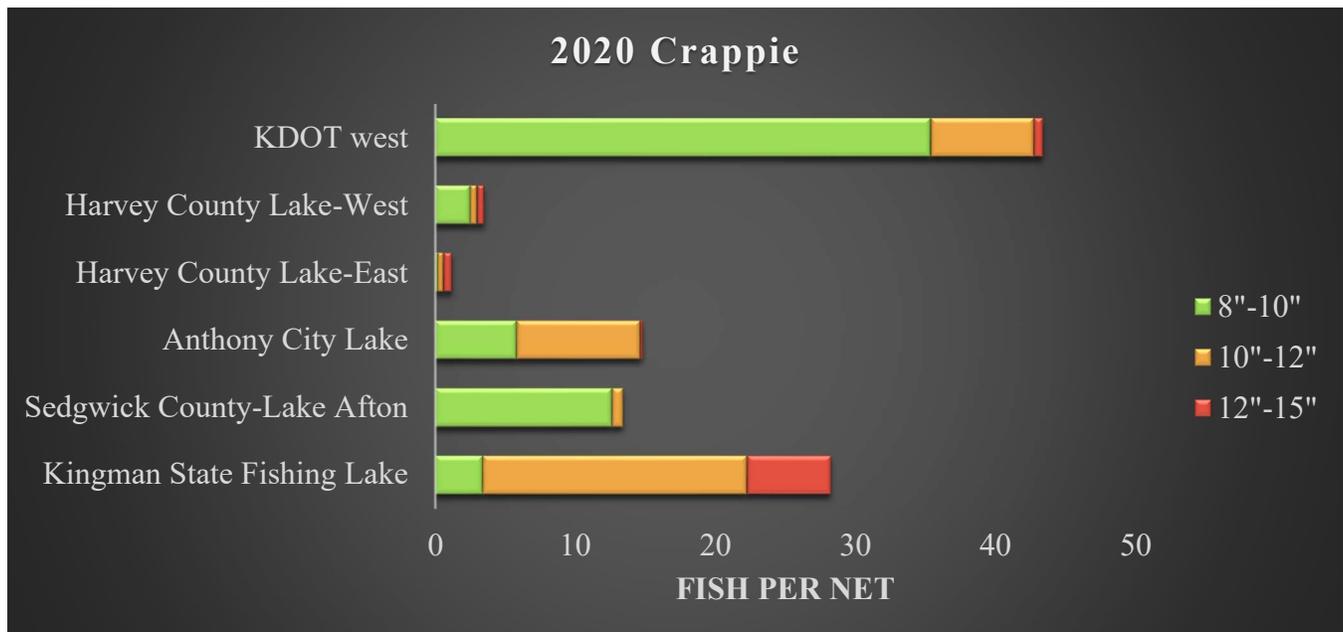


Figure 1. Catch rates of White Crappie (Anthony City Lake = Black Crappie) measured by average number of fish caught per net. Catch rates are divided by size class.

District Summary: Crappie

Crappie are sampled every fall using trap nets. The figure above shows the catch rates of different size classes at each respective water body. It is important to note that this figure does not show catch rates of Crappie under 8 inches. Those smaller fish will play a role in how we view the population even though they are of little interest to anglers. Instead we summarize the data on what some consider to be catchable size crappie. It is obvious to see that KDOT West lake had the highest overall catch rates. The majority of which were 8-10". Kingman State Fishing Lake has the highest catch rates of Crappie 10-12" and 12-15". The Harvey County lakes had low catch rates of Crappie >8". However, they both had high catch rates of Crappie <8". I will go into detail on what that means for each lake later in this article. Overall, most of these populations are healthy and have benefited from the flood in 2019. Some fish from the 2019-year class are represented in the above figure while others still have some growing to do. Another thing to note, this figure is only comparing Crappie populations within the Cheney district. If you would like to see how these populations compare to others across the state, you can do so by using this link: <https://ksoutdoors.com/Fishing/Fishing-Forecast>

SAMPLING RESULTS: Crappie

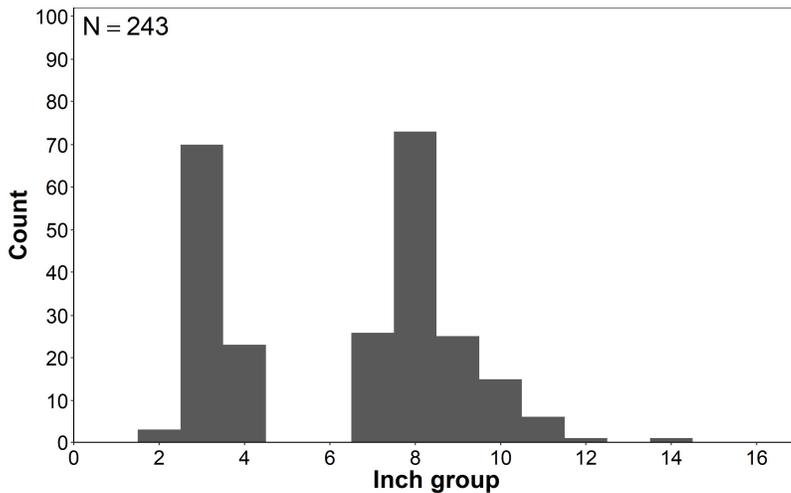


Figure 2. Length Frequency histogram of White Crappie collected at KDOT West in the Fall of 2020.

KDOT West Lake

The Crappie have taken off at KDOT West lake with some of the highest catch rates in the state. This was not the case in previous years (2012). The population is dominated by two strong cohorts that will hopefully grow into larger sizes (Figure 2). The majority of the fish are just about harvestable size. If these fish continue to grow, KDOT West lake could have one of the better Crappie fisheries in the region.

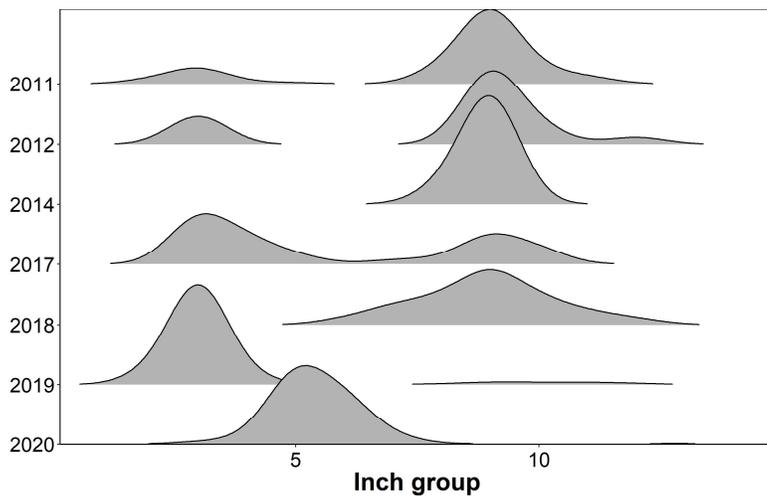


Figure 3. Ridgeline plots showing size distribution of White Crappie at Harvey County East Lake in the Fall of 2020. *These plots only compare size structure and do not represent numbers of fish sampled.

Harvey County- East Lake

Despite having low catch rates of Crappie >8” as seen in Figure 1. Catch rates of Crappie <8” at Harvey County East Lake were very high in 2019 and 2020. I presume that the White Crappie had a successful spawn in 2019 leading to a strong year class. This year class would have been about 2-3” in 2019. In 2020 that year class averaged about 5-5”. In Figure 3, you can see how they have grown from 2019 to 2020. Their growth is slower than other populations. As long as they continue to grow, there is the possibility of very high numbers of quality sized crappie.

SAMPLING RESULTS: Crappie

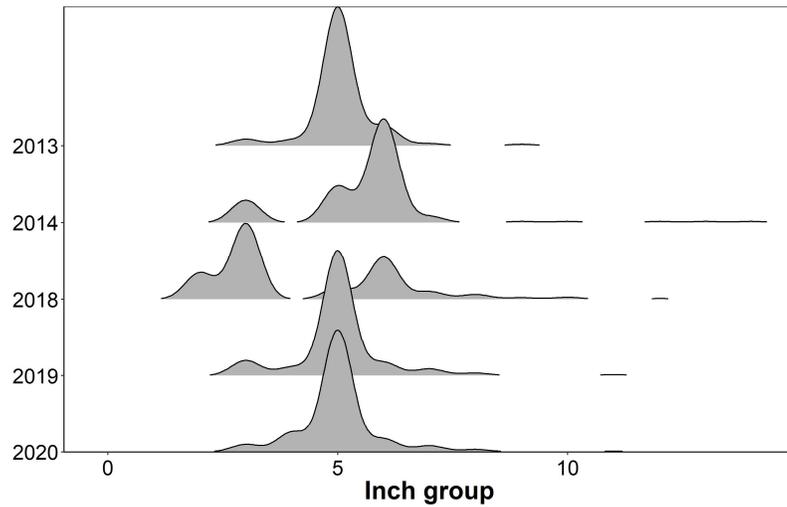


Figure 4. Ridgeline plots showing size distribution of White Crappie at Harvey County West Lake in the Fall of 2020. *These plots only compare size structure and do not represent numbers of fish sampled.

Harvey County-West Lake

Catch rates of Crappie <8” at Harvey West Lake have been high throughout the years. However, catch rates of larger Crappie have always been low. Figure 4 shows that most Crappie do not grow past 5 inches. We assumed that the population is overpopulated and stunted so we took age structures to confirm. Figure 5 shows that the majority of the fish stop growing around 5-6”. There were a few that broke the mold and exhibited faster growth but overall, the population is very stunted. Their numbers need to be reduced in order for growth to improve.

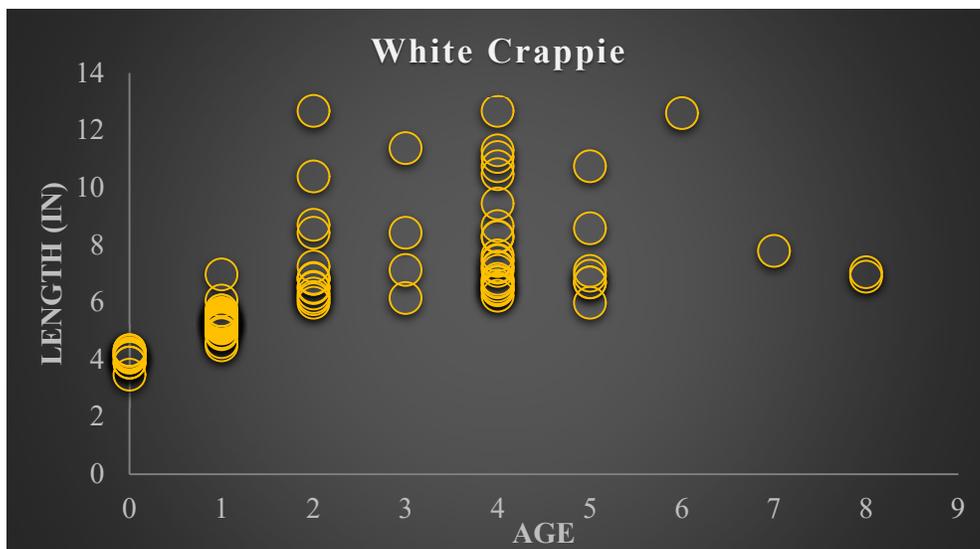


Figure 5. Length at age for White Crappie collected at Harvey County West lake with trap nets in the Fall of 2020.

SAMPLING RESULTS: Crappie

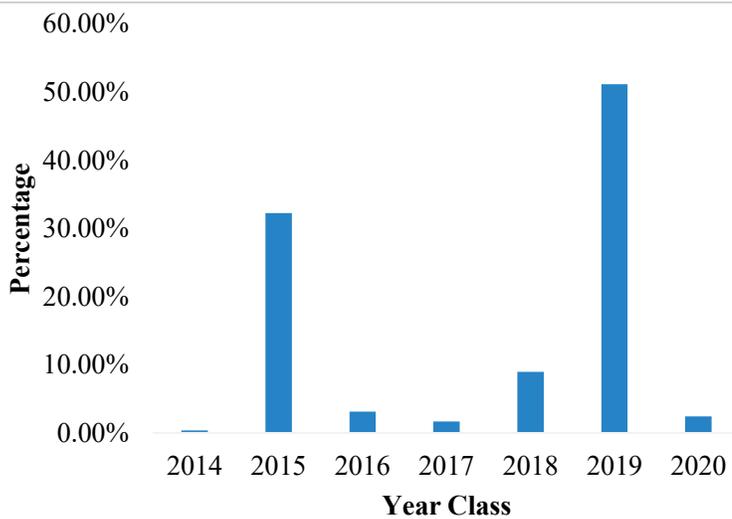


Figure 6. Year class percentage from age estimations of White Crappie collected at Kingman State Fishing Lake using trap nets in the Fall of 2020.

Kingman SFL

The Crappie population at Kingman State Fishing Lake has seen a major increase in fish over 8 inches. Catch rates of Crappie over 10 inches are some of the highest in the state. Age structures were collected to observe growth and recruitment variability. We found that the majority of fish were from two-year classes 2015 (32%) and 2019 (51%)(Figure 6). The 2019 year class is likely a result of the high water in that year. Crappie recruitment is typically variable, and the Kingman SFL population is no different. Figure 7 shows the individual lengths at estimated ages. We see that growth is fast within the first 2-3 years. After which the average length is about the same from age 3 to 5. We only sampled one age 6 fish which was by far the largest of the sample. It is likely this and other fish from the 2014-year class experienced faster growth before the population became so abundant and competition increased. We presume that harvest of crappie at Kingman SFL will be high given the amount of shoreline access allowing anglers to target spawning fish. The 2019-year class was quite strong and will help support the population. However, if harvest is high, and recruitment is low for a few years, the number of 10-inch size fish may drop drastically.

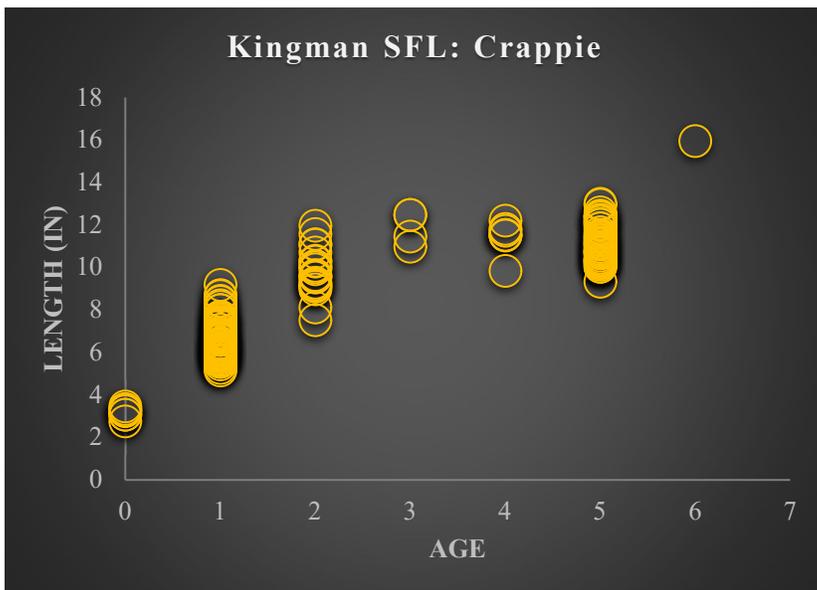


Figure 7. Length at age for White Crappie collected at Kingman State Fishing Lake with trap nets in the Fall of 2020.

SAMPLING RESULTS: Cheney reservoir

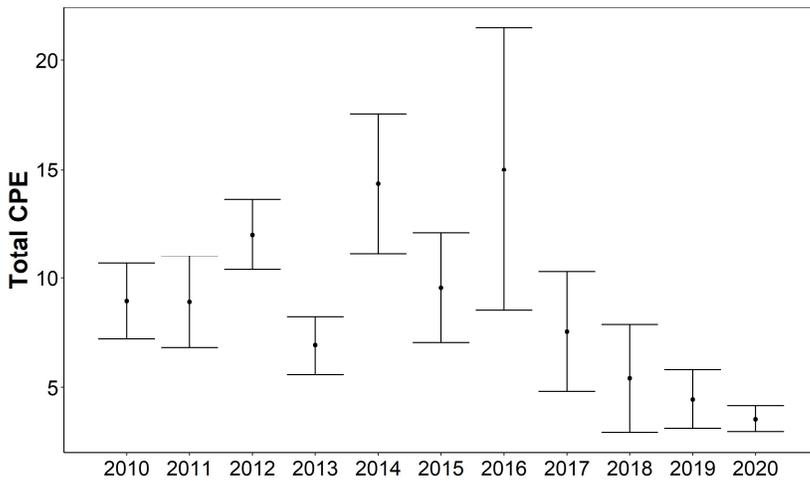


Figure 8. Average catch rates measured as fish per net of Wiper at Cheney reservoir using gill nets during the Fall of 2020. The vertical bars represent a 95% confidence interval.

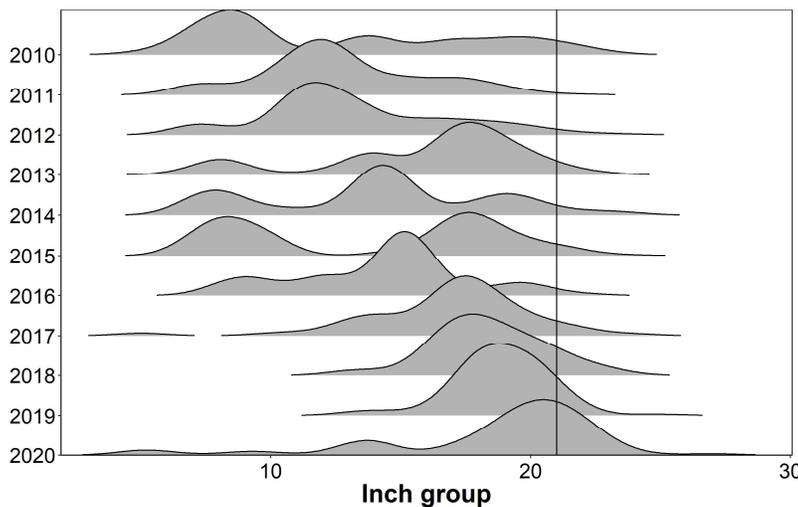


Figure 9. Ridgeline plots showing size distribution of Wiper at Cheney reservoir using gill nets in the Fall of 2020. The vertical bar represents the 21inch minimum length limit. *These plots only compare size structure and do not represent numbers of fish sampled.

Wiper

Catch rates of Wiper have been steadily declining over the past four years as shown in Figure 8. In contrast, the size structure of fish sampled has shifted towards larger fish. In the past three years a larger proportion of Wiper were at or over the 21-inch minimum length limit than prior years (Figure 9). Still, overall numbers have decreased, especially smaller fish. Since stocking rates have remained the same, the reduce Wiper numbers may be due to increased competition with White Perch. The size structure of White Perch shifted towards smaller fish around the same time as Wiper numbers and size changed. We did sample a few Wiper under 8 inches in 2020. These were fish stocked earlier in 2020. There had not been any fish under 10 inches sampled since 2017. The presence of 8" fish may be a sign that the 2020 stocking was a success.



SAMPLING RESULTS: Cheney reservoir

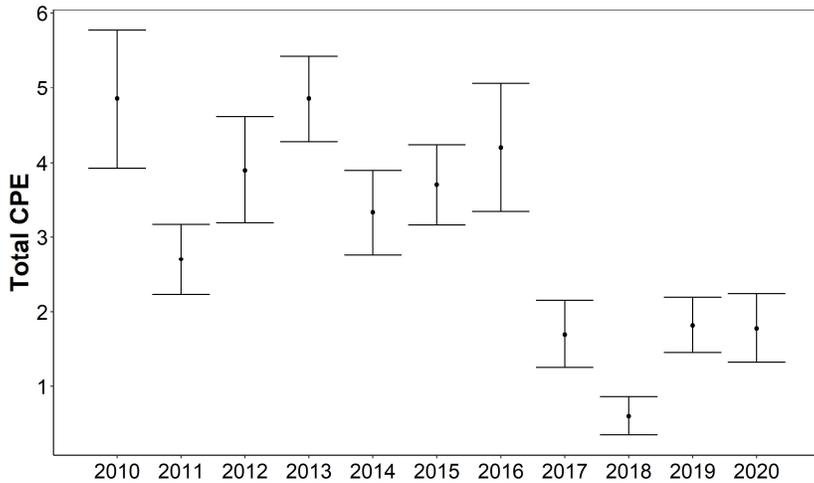


Figure 10. Average catch rates measured as fish per net of Walleye at Cheney reservoir using gill nets during the Fall of 2020. The vertical bars represent a 95% confidence interval.

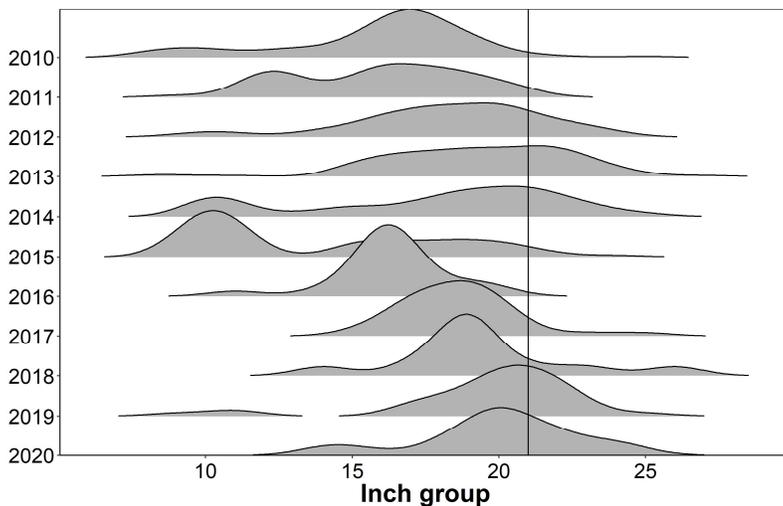


Figure 11. Ridgeline plots showing size distribution of Walleye at Cheney reservoir using gill nets in the Fall of 2020. The vertical bar represents the 21inch minimum length limit. *These plots only compare size structure and do not represent numbers of fish sampled.

Walleye

Similar to Wiper, Walleye numbers have also been down the past four years. However, stocking rates have not been consistent. Due to increased demand across the state, stocking rates had to be reduced starting in 2014. New hatchery facilities are currently being constructed. Once completed, the additional production is expected to meet Walleye stocking demands. Also similar to Wiper, the Walleye size structure has been dominated by larger fish since about 2016. Part of the reason Walleye recruitment is limited is predation and competition from White Perch. In an attempt to increase stocking success, we have begun to stock Intermediate sized (6-8", pictured below) Walleye in addition to the smaller sizes normally stocked. Stocking larger fish will avoid predation by White Perch. With additional hatchery production in the near future, we will increase stocking effort and continue to stock different sizes of Walleye at different times of the season until the relative abundance reaches more desirable levels.



SAMPLING RESULTS: Cheney reservoir

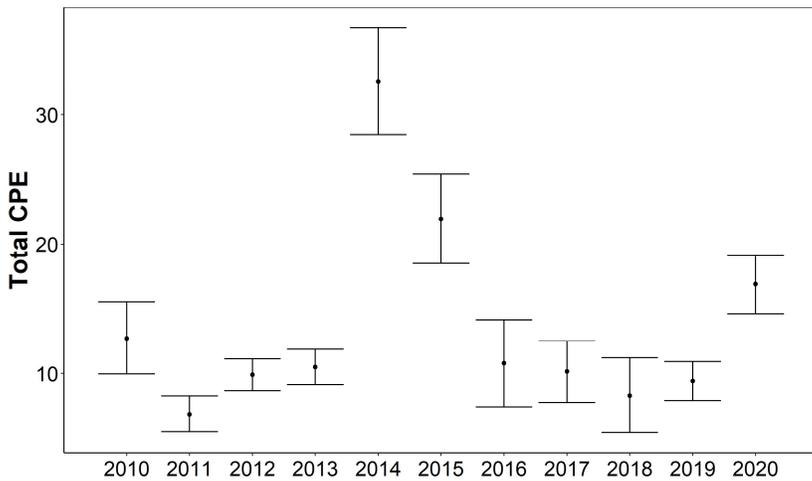


Figure 12. Average catch rates measured as fish per net of White Perch at Cheney reservoir using gill nets during the Fall of 2020. The vertical bars represent a 95% confidence interval.

White Perch

Catch rates of White Perch in 2020 were the third highest seen in the last 10 years (figure 12). They likely had a strong year class during the flood of 2019 which increased their numbers. While the relative abundance did not experience a major trend over the past few years, the size structure saw a shift towards smaller fish beginning in 2016 (Figure 13). This shift in size structure comes at about the same time as the shift in size structure and relative abundance of Walleye and Wiper. It is possible that reduced stockings of Walleye increased the abundance of smaller White Perch thus increasing the competition between White perch and juvenile sportfish. This may have helped shift the size structure of Walleye and Wiper as well. Increased predator density should reduce numbers of White Perch and subsequently for more growth to where we see a more diverse size structure and more White Perch over 10”.

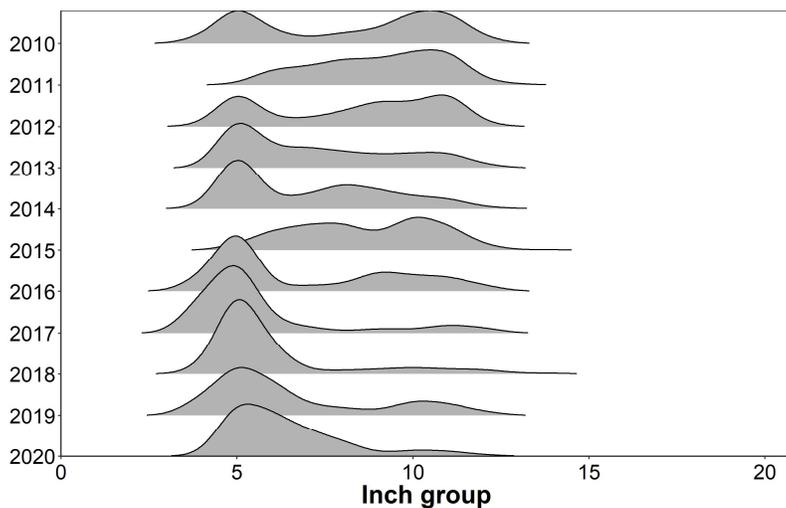


Figure 13. Ridgeline plots showing size distribution of White Perch at Cheney reservoir using gill nets in the Fall of 2020. *These plots only compare size structure and do not represent numbers of fish sampled.

SAMPLING RESULTS: Cheney reservoir

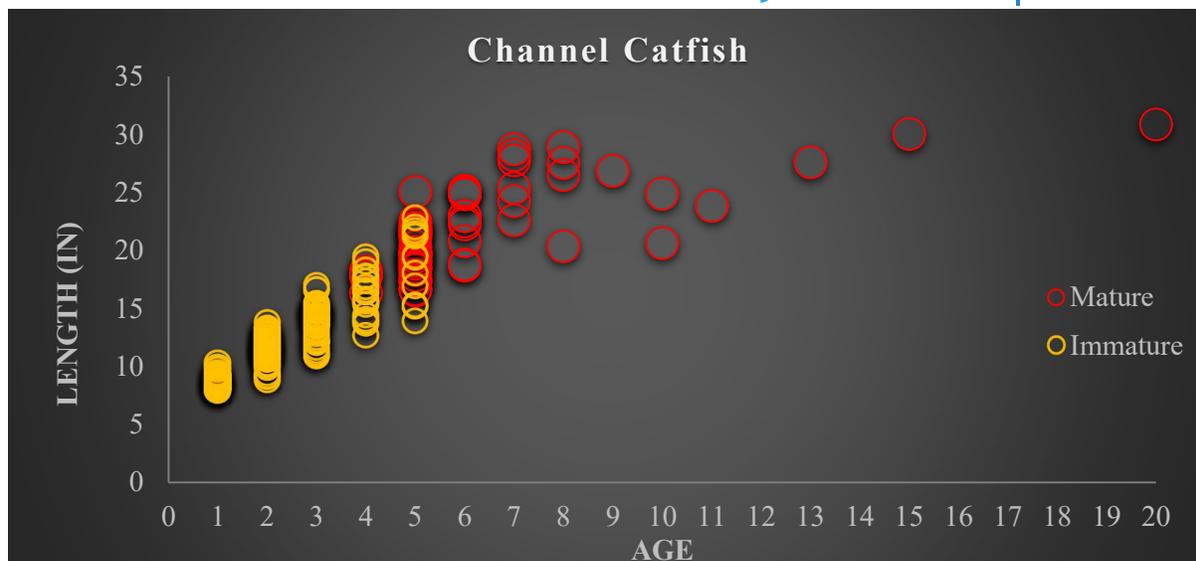


Figure 14. Length at age for Mature and Immature Channel Catfish collected at Cheney reservoir with hoop nets and gill nets in the Fall of 2020.

Age	# Mature	# Immature	% Mature	% Immature
1 to 3		146	0%	100%
4	4	18	18%	82%
5	29	14	67%	33%
6+	28		100%	0%

Channel Catfish

Channel Catfish are an abundant and popular species at Cheney reservoir. Lately we have seen large fish being caught some over 20lbs and even one over 30lbs! To take a better look at their age and growth, we collected age structures from fish sampled with baited hoop nets and gill nets. We use multiple gears because each gear is more efficient at sampling different sizes of Catfish. We were able to sample plenty of catfish under 25" but we did not sample as many fish over 25" as desired. We had planned on using jug lines to sample bigger fish but were unable to due to unforeseen circumstances. As a result, the largest fish we sampled was 31" and 10lbs. We found that Channel catfish growth can vary, but overall, growth is fast for the first 4-5 years. The table above shows the number and percentage of mature and immature fish at each age range. We see that by age 5, 67% of fish are mature and 100% by age 6. Once fish reach maturity, growth slows and becomes more variable. The largest fish at 31" was 20 years old while one of the fastest growing fish was 28" and age 7. Because of varying growth rates, it would be difficult to speculate the age of the 20lb+ fish in the lake. However, we may find that it takes these fish a long time to reach trophy size and more restrictive regulations on large fish may help improve/preserve larger fish. Further sampling of larger Channel Catfish will give us more insight on the Trophy potential in Cheney reservoir.

Cheney Habitat Project



Cheney brush piles

Thanks to the help of some dedicated Volunteers, we were able to sink trees at several locations dropping over 50 waypoints around the Southeast part of the lake. Many of which are just off the jetties and rocks around the marina. There were also several dropped in the main lake at depths of 15-30ft. These should provide habitat for fish and locations for anglers to find fish throughout the year. The brush piles near shore could provide excellent fishing during the Crappie spawn given the right conditions. The coordinates for each waypoint are listed below as well as a link to an online file of fish habitat locations. I want to thank Ted Webster, Trent Webster, Chad Webster, Adam Swisher, Kyle Altvader, Ethan Belden, Carl Erickson, and Jason Surface for volunteering their time and effort. It would not have been possible without them.

Brush pile coordinates:

N 37° 44.410	W 97° 46.546	N 37° 44.408	W 97° 46.778
N 37° 44.401	W 97° 47.300	N 37° 44.434	W 97° 46.723
N 37° 43.691	W 97° 47.451	N 37° 44.399	W 97° 46.772
N 37° 44.316	W 97° 46.981	N 37° 44.416	W 97° 46.810
N 37° 44.330	W 97° 46.962	N 37° 44.458	W 97° 46.678
N 37° 44.192	W 97° 47.534	N 37° 44.345	W 97° 46.933
N 37° 44.181	W 97° 47.509	N 37° 44.335	W 97° 46.952
N 37° 44.514	W 97° 47.116	N 37° 44.791	W 97° 46.755
N 37° 44.508	W 97° 47.115	N 37° 44.801	W 97° 46.774
N 37° 44.687	W 97° 46.869	N 37° 44.452	W 97° 46.791
N 37° 44.434	W 97° 47.267	N 37° 44.461	W 97° 46.645
N 37° 44.451	W 97° 47.253	N 37° 44.361	W 97° 47.151
N 37° 43.965	W 97° 47.290	N 37° 44.340	W 97° 47.148
N 37° 43.998	W 97° 47.316	N 37° 44.690	W 97° 47.102
N 37° 44.208	W 97° 47.871	N 37° 44.712	W 97° 47.103
N 37° 44.170	W 97° 47.869	N 37° 44.683	W 97° 47.169
N 37° 44.139	W 97° 47.863	N 37° 44.659	W 97° 47.174
N 37° 44.544	W 97° 47.869	N 37° 44.517	W 97° 46.672
N 37° 44.567	W 97° 47.865	N 37° 44.311	W 97° 47.386
N 37° 44.420	W 97° 46.777	N 37° 44.298	W 97° 47.391
N 37° 44.372	W 97° 46.803	N 37° 44.290	W 97° 47.393
N 37° 44.373	W 97° 46.641	N 37° 43.716	W 97° 47.519
N 37° 44.375	W 97° 46.605	N 37° 44.244	W 97° 47.146
N 37° 44.399	W 97° 46.613	N 37° 44.327	W 97° 47.982
N 37° 44.376	W 97° 46.582	N 37° 44.182	W 97° 47.558
N 37° 44.394	W 97° 46.535	N 37° 44.530	W 97° 46.668
N 37° 44.549	W 97° 46.639	N 37° 44.133	W 97° 47.559
N 37° 44.545	W 97° 46.659	N 37° 44.065	W 97° 47.493
		N 37° 44.041	W 97° 47.587

Link to online file of fish attractors:

<https://ksoutdoors.com/KDWPT-Info/Locations/Hunting-Fishing-Atlas/Fishing-Atlas/GPS-KML-Information-Files/Google-KMZ-file-of-Fish-Attractor-GPS>

Acknowledgements

I would like to thank Adam Urban, and Kane Thimmesch (my interns) for their help with sampling as well as everything behind the scenes that made sampling possible. I would like to thank Alan Stark, David Breth, Emily Davis, Erika Gurnsey, Lyndzee Rhine for their help with sampling this past Fall. I would also to thank Mitchell Schwartz, Ken Temaat, and Richard Rogers for their help sinking brush piles this past Winter.

Spread the word!

If you know someone who would be interested in receiving this newsletter, they can do so by clicking here: <https://ksoutdoors.com/KDWPT-Info/News/Newsletter-Request-Forms> and then selecting Cheney Fishing District. If you would no longer like to receive this newsletter, you can do so here: <https://ksoutdoors.com/KDWPT-Info/Contact-us> and put “unsubscribe Cheney District Fisheries Newsletter”. If you would like to see something different in future newsletters, please feel free to contact me.

Go rip some lip!

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... and FISH KANSAS!

