

**SURVEY REPORT
OKLAHOMA DEPARTMENT OF WILDLIFE
CONSERVATION**



**FISH MANAGEMENT SURVEY AND
RECOMMENDATIONS
FOR
TENKILLER FERRY LAKE
2023**

SURVEY REPORT

State: Oklahoma

Project Title: Tenkiller Ferry Lake Fish Management Survey Report

Period Covered: 2024 - 2025.

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Tenkiller Ferry Lake

ABSTRACT

Tenkiller lake was surveyed by fall experimental gill netting in the fall of 2025 to continue long-term monitoring of pelagic fish species within the lake, including White Bass, Channel Catfish, and Walleye. Other fish species were also recorded, but management decisions will not be made for those species where catch rates were inadequate. White Bass catch rate in 2025 ($C/f = 9.53$) has increased from the 2022 sample ($C/f = 6.53$). Length frequencies for White bass show a bimodal distribution with over 59% of fish being greater than or equal to the Preferred size class, indicating the lake is a quality fishery for White Bass. Channel Catfish catch rate in 2025 ($C/f = 2.6$) is relatively consistent with the 2022 sample ($C/f = 1.8$), but still significantly lower than samples in 2010 ($C/f = 6.4$). Length frequencies for Channel Catfish have shifted to larger fish in 2025 from the sample in 2022. Walleye were last stocked in Tenkiller lake in 1998 and are infrequently documented gill nets. Eight fish were recorded in 2025 ($C/f = 0.6$) which is an increase from zero fish caught in 2022, indicating a remnant population persists within the lake.

Recommendations include refurbishing habitat sites in the next two years and conducting samples on a 3-year rotation for long term trend data. No regulation changes currently recommended.

INTRODUCTION

Tenkiller Ferry Dam was built by the U.S. Army Corps of Engineers (USACOE) on the Illinois River approximately 12 miles above its confluence with the Arkansas River in eastern Oklahoma. Construction was authorized by Congress under the Flood Control Act of 1938 and completed in 1952. Authorized purposes are flood control and hydropower. The 12,900-acre lake extends 26 miles along a north-south axis in Cherokee and Sequoyah counties (Figure 1), has 130 miles of shoreline with a watershed of 1,030,425 acres in Arkansas and Oklahoma. It has a mean depth of 51 feet and a maximum depth of 138 feet near the dam, making it one of the deeper lakes in Oklahoma. The water exchange rate is relatively low, only 1.7, compared to nearby lakes such as Webbers Falls which is 9.1 and Robert S. Kerr which is 4.7.

Tributaries that directly converge with the lake include Caney, Dry, Elk, Sixshooter, Terrapin, Chicken, Snake, Cato, Salt, Dogwood, Burnt Cabin, Sisemore and Pettit Creeks. Releases from Tenkiller are controlled by hydropower requirements, flows in the Arkansas River as part of the McClellan-Kerr Navigation System and to maintain the year-round trout fishery below the dam. Little habitat variation exists in Tenkiller. Very little standing timber remains due to the age of the reservoir, and the only riprap is located along the ½-mile long earth dam. Extreme annual changes in water level have resulted in the presence of little aquatic vegetation available as fisheries habitat. Native rock (chert or limestone) provides the vast majority of fish habitat. The most common substrate found in the feeder creeks is mud and gravel while native rock and gravel are most commonly found along the main lake shoreline. ODWC utilizes cedar trees to create habitat enhancement sites, these sites can be found in Appendix I.

Current regulations follow the statewide black bass regulation that has a daily aggregate creel of 6 largemouth and smallmouth bass per day with only one over 16". This regulation changed in the fall of 2022, before this Tenkiller had a 13-16" slot limit since 1987. A minimum length limit of 10 inches with a creel reduction to 15 per day was placed on the crappie population in 1995 to increase recruitment. This regulation change was well accepted by the fishing public. Statewide creel and length limits apply to all other species. Since 1990 threadfin shad, walleye, Tennessee strain smallmouth bass and certified Florida largemouth bass have been stocked. The stocking history since 1982 is contained in Appendix II.

RESULTS

Largemouth Bass

1. Largemouth Bass (LMB) were surveyed in the spring of 2023 by means of boat electrofishing. Overall LMB catch rates increased in the 2023 sample to a total of 112.8 LMB per hour (Table 1, Figure 1). The preferred size class dominated the sample with a catch rate of 53 bass per hour, followed by the quality size class at 31.8 (Table 2).
2. LMB body condition, measured as relative weight (W_r) was above minimum acceptable levels in all categories with a total W_r of 91.5 (Tables 1 and 2). The largest LMB collected in the sample measured 21.3 inches and weighed 5.4 lbs.
3. Length frequency histograms showed a shift towards larger fish with 57% of the 2023 sample ≥ 14 inches, this is a 22% increase from the 2018 sample (Figure 2). Proportional size distribution (PSD) reflects this shift in LMB size with an increase in both the quality and preferred size categories (Table 3). These PSD values fall above the suggested balanced values, however coupled with the body condition and apparent recruitment, they are not concerning.
4. A subset of LMB otoliths were collected for age and growth information. LMB growth was rapid early, slowing down at ages 3 & 4 and picking back up again. LMB reach 14 inches between 2-3 years but struggle to reach 16 inches by 4 years of age (Table 4). This could be due to resource competition between all the black basses found in Tenkiller.
5. With the new harvest-oriented regulation being implemented on Tenkiller, future monitoring should be done to see if growth rates in middle aged fish increase.

Spotted Bass

1. Spotted bass (SPB) were surveyed in the spring of 2023 via boat electrofishing. Overall SPB catch rates increased slightly to 20.8 bass/hr. (Table 5, Figure 3). The quality size class was the most represented class in the sample at 10.5 bass per hour followed by the stock size class (Table 6).
2. SPB body condition, measured as relative weight (W_r) was above minimum acceptable levels in all categories with a total W_r of 95.8 (Tables 5 and 6). The largest SPB collected in the sample measured 19 inches and weighed 3.5 lbs.
3. Length frequency histograms showed a shift towards larger fish with 25% of the 2023 sample ≥ 14 inches, this is an 11% increase from the 2018 sample (Figure 4). Proportional size distribution (PSD) reflects this shift in SPB size with an increase in both the quality and preferred size categories (Table 7). These PSD values fall above the suggested balanced values, however coupled with the body condition and apparent recruitment, they are not concerning.
4. A subset of SPB otoliths were collected for age and growth information. SPB growth was slow to moderate reaching 14 inches between 4-5 years (Table 8). This could be due to resource competition between all the black basses found in Tenkiller, however SPB are known to grow to shorter overall lengths than other black bass.
5. All Spotted bass creel and length limit regulations were removed in 1997 to increase harvest of SPB and free up resources for Largemouth and Smallmouth bass.

Smallmouth Bass

1. Smallmouth bass (SMB) were surveyed in the spring of 2023 via boat electrofishing. Overall SMB catch rates increased slightly to 19.3 bass/hr. (Table 9, Figure 5). The preferred size class was the most represented class in the sample at 6.8 bass per hour followed by the quality size class (Table 10).
2. SMB body condition, measured as relative weight (W_r) was below minimum acceptable levels in all categories with a total W_r of 85.2 (Tables 9 and 10). The largest SMB collected in the sample measured 20.8 inches and weighed 4.5 lbs.
3. Length frequency histograms showed a shift towards smaller fish with 38% of the 2023 sample ≥ 14 inches, this is a 9% decrease from the 2018 sample (Figure 6). Proportional size distribution (PSD) reflects this shift in SMB size with a decrease in both the preferred and memorable size categories (Table 11). These PSD values fall slightly above the suggested balanced values.
4. A subset of SMB otoliths was collected for age and growth information. SMB growth was slow to moderate reaching 14 inches between 3-4 years (Table 12). This could be due to resource competition between all the black basses found in Tenkiller.
5. With the new harvest-oriented regulation being implemented on Tenkiller, future monitoring should be done to see if growth rates of Smallmouth bass increase.

Crappie

1. Crappie were sampled in the fall of 2023 using shoreline trap netting. Tenkiller has populations of both Black and White crappies and since they are managed together with an aggregate bag, the data has been combined. Since fixed sites were used, catch rates are not used to quantify abundance but catch rates will still be provided. Crappie catch rates decreased from 7.2 to 4.9 with quality sized fish represented the most at 2.4 (Table 14).
2. Body condition, measured as relative weight (W_r), was well above the minimum acceptable level of 90 in all size categories (Tables 14 and 15).
3. Length frequencies show a majority of crappie, 94%, are ≤ 9 inches in length. While this shows strong recruitment, it could mean that currently catching a legal sized crappie might be difficult since there is a 10" minimum length limit on Tenkiller (Figure 9). Trap netting on Tenkiller has historically been difficult so the lack of legal sized fish could be due to gear bias in a deep, clear Ozark lake.
4. Age and growth of crappie show good early growth with fish reaching the 10" minimum between 1-2 years of age. Growth leveled off after age 3 and no 14" fish were sampled (Table 16). Age frequency shows that 1 year old fish dominated the sample, indicated a strong 2022 year-class and good crappie fishing for the next few years (Figure 10).

White Bass

1. White Bass were surveyed in the fall of 2025 via suspended gill nets. Overall relative abundance of White Bass increased from the 2022 sample but is still down overall from the 2010 sample (Table 17, Figure 11).
2. Body condition, measured as relative weight (W_r) was at or above the acceptable minimum of 90 in all size categories (Tables 17 and 18).
3. White Bass length frequencies still show a bimodal distribution with one group of fish ranging from eight to ten inches and the larger fish ranging from 12 to 16 inches (Figure 12). Fish ≥ 12

inches in length comprise 59.4% of the total sample of White Bass indicating a high-quality fishery in Tenkiller Lake.

4. Proportional size distribution also shows the shift towards larger individuals with a significantly higher PSD-Q and PSD-M, and PSD-P remaining the same from the previous sample in 2022 (Table 19).

Channel Catfish

1. Channel Catfish were surveyed in the fall of 2025 via suspended gill nets. Catch rates of Channel Catfish were slightly higher than the previous survey in 2022 with Stock and Quality sized fish comprising most of the sample (Tables 20 and 21, Figure 13).
2. Channel Catfish body conditions (W_t) were below the acceptable minimum of 90 for all size groups (Tables 20 and 21).
3. Channel Catfish length frequencies show that fish are largely represented in the 14–19-inch classes (Figure 14).
4. Proportional size distributions show that Tenkiller Channel Catfish are within balanced levels only in the Quality size category with no Memorable sized fish captured (Table 22).

Blue Catfish

1. Blue Catfish were surveyed in the fall of 2025 via suspended gill nets. Catch rates increased slightly for blue cats compared to the 2022 sample, however not enough blue catfish were captured to draw any conclusions (Table 23, figure 15).
2. Future Blue Catfish sampling would be needed to bolster numbers. Gillnet catch data and body condition can be seen in Tables 23 and 24.

Flathead Catfish

1. Flathead Catfish were surveyed in the fall of 2025 via suspended gill nets. Catch rates decreased slightly in the 2025 sample, however not enough Flathead Catfish were captured to draw any conclusions (Table 25, Figure 16). Future targeted sampling would be needed to bolster numbers.
2. Gillnet catch data and body condition can be seen in Tables 25 and 26.

Walleye

1. Walleye were surveyed in fall 2025 via suspended gill nets. Catch rates increased slightly in the 2025 sample, however not enough Walleye were captured to draw any conclusions (Table 27, Figure 17). Future targeted sampling would be needed to bolster numbers.
2. Gillnet catch data and body condition can be seen in Table 27.

Gizzard Shad

1. Gizzard Shad were surveyed in the fall of 2022 via floating gill nets. Catch rates remained relatively stable, showing a slight increase in the 2022 sample (Table 28).
2. All Gizzard Shad captured fell into the substock category, a size class that makes for ideal forage for most predator fish. Length frequency histograms show that a majority of Gizzard Shad captured were in the 2-inch length group, which was like the 2020 sample (Figure 18).

Threadfin Shad

1. Threadfin Shad were surveyed in the fall of 2022 via floating shad nets. Catch rates increased in the 2022 sample with a Catch per Unit of Effort (CPUE) of 77.3 (Table 29).
2. Threadfin Shad are not broken out into size categories since their maximum size is around 6 inches. The 3-inch category comprised 67% of the 2022 sample with the rest of the catch coming in the 4- & 5-inch groups (Figure 19).
3. Threadfin Shad thrive in Tenkiller Lake, finding thermal refuge in deep water during periods of extreme cold.

RECOMMENDATIONS

Fish Attractor Structures and Habitat

1. Current list of fish attractor habitat locations is included in Appendix I.
2. Locations for new fish attractors known as Shelbyville Cubes should be considered in 2026 or 2027 as materials become available.

Fish Stockings

1. Recent fish stockings are included in Appendix II.
2. No new fish stockings are currently recommended for Tenkiller Lake.

Fish Surveys

1. Spring boat electrofishing should be conducted in 2026 or 2027 for black basses as water levels and weather conditions allow to evaluate populations abundance and condition and maintain long-term datasets and trends.
2. Fall experimental gill netting be conducted in 2028 or 2029 for White Bass, Walleye, Crappie, and Catfishes as water levels and weather conditions allow to evaluate populations abundance and condition and maintain long-term datasets and trends.
3. Fall trap netting should be conducted in 2026 or 2027 for Crappie as water levels and weather conditions allow to evaluate age and growth for the populations.

Fishing Regulations

1. Current fishing regulations for Tenkiller Lake:
 - a. All Crappie: 15 combined per day, 10-inch minimum length limit.
 - b. Prohibited Methods: gigs and spears downstream of Horseshoe Bend boat ramp. Spear gunning is legal when used with scuba, except taking flathead catfish from June 15 through July 15 is prohibited.
2. No new regulations are currently recommended.

Table 1. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Largemouth Bass** collected by spring electrofishing from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r are ≥ 90.

Year	Total (≥40)		<8 inches (15-45)		8-13 inches (15-30)		≥12 inches (≥15)		13-16 inches (≥10)		≥16 inches	
	No.	C/f	C/f	W _r	C/f	W _r	C/f	W _r	C/f	W _r	C/f	W _r
1996	566	188.7	25.7	99	60.7	97	102.3	92	46.0	92	40.0	89
1997	585	130.0	14.0	101	33.3	92	82.7	90	29.8	90	29.8	91
1999	435	145.0	5.3	102	31.3	97	44.7	96	57.0	92	35.0	90
2001	302	109.8	28.7	83	22.5	87	58.5	88	23.6	88	19.6	87
2002	303	63.8	9.1	93	10.7	96	44.0	87	24.6	87	10.7	83
2003	523	77.5	16.0	88	34.7	90	26.8	93	12.0	94	11.9	90
2005	674	112.3	18.0	92	31.5	91	63.2	88	31.8	87	18.0	91
2006	432	69.1	8.2	96	12.6	99	48.6	86	26.1	86	14.9	85
2010	412	76.0	11.1	87	22.4	90	49.3	93	20.4	93	21.9	93
2012	370	92.5	12.3	115	36.3	93	53.3	95	26.0	94	18.0	95
2018	420	105.0	7.5	84	53.5	86	49.5	88	28.8	88	15.3	89
2023	451	112.8	8.5	81	28.8	88	84.5	92	45.5	91	30.0	94

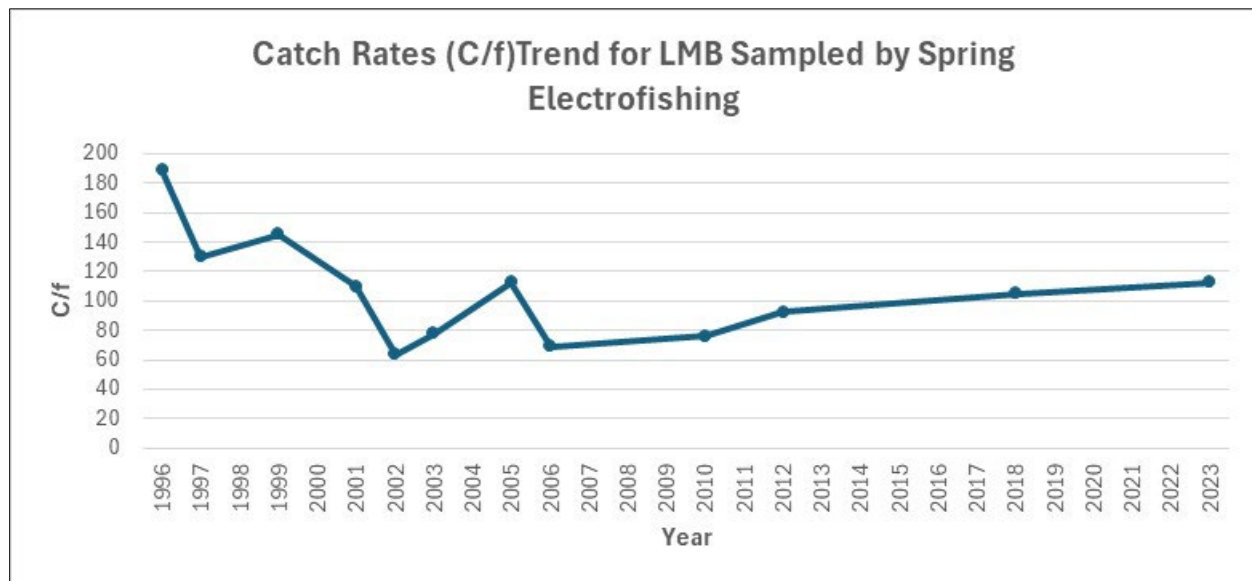


Figure 1. Catch rate trend for Largemouth Bass (LMB) sampled by spring electrofishing on Tenkiller Lake.

Table 2. Total number (No.), catch per unit of effort (CPUE), and relative weights (W_r) by **PSD** size groups of **Largemouth Bass** collected by spring electrofishing from Tenkiller Lake. Acceptable W_r values are ≥90 (OFAT analysis).

Year	No.	Total		Substock 0-7.8 in		Stock 7.9 in		Quality 11.8 in		Preferred 15 in		Memorable 20.1 in	
		CPUE	W _r	CPUE	W _r	CPUE	W _r	CPUE	W _r	CPUE	W _r	CPUE	W _r
2012	370	92.5	98.4	9.3	29	94.6	25.7	96.6	27.8	93.7	0.8	84.9	
2018	420	105	88.6	5.8	49.3	89.1	21	88.7	27	87.5	2	87.3	

2023	451	112.8	91.5	8	19.8	91	31.8	91	53	92.6	0.3	94.6
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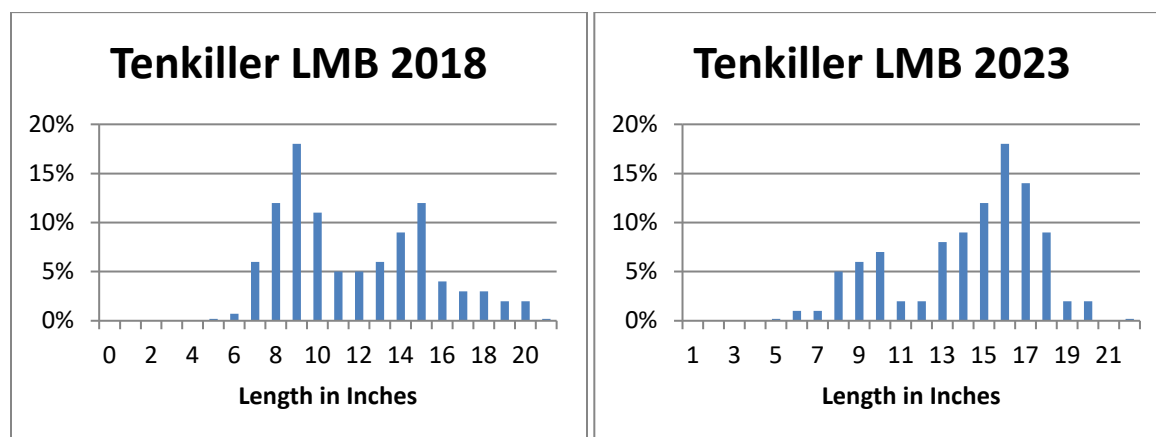


Figure 2. Largemouth Bass Length Frequencies for Tenkiller Lake 2018-2023.

Table 3. Proportional Size Distribution (PSD) of **Largemouth Bass**: Quality (PSD-Q), preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes (OFAT analysis).

Year	PSD-Q	PSD-P	PSD-M	Balanced PSD Values	
2012	65	34	1	PSD-Q	40-70
2018	50	29	2	PSD-P	10-40
2023	81	51	.	PSD-M	0-10

Table 4. Mean Total Length at age (inches) and for **Largemouth Bass** from Tenkiller Lake.

Year	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9
2018	9	11.6	14.8	16.7	17.5	18.8	19.5		
2023	8.1	12.5	15	15.9	18.4	16.7	20.1	19.3	17.7

Table 5. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Spotted Bass** collected by spring electrofishing from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r are ≥ 90 .

Year	Total (≥ 40)		<8 inches (15-45)		8-13 inches (15-30)		≥ 12 inches (≥ 15)		13-16 inches (≥ 10)		≥ 16 inches	
	No.	C/f	C/f	W_r	C/f	W_r	C/f	W_r	C/f	W_r	C/f	W_r
1996	38	12.7	1.0	-	7.0	92	4.7	90	3.3	92	-	-
1997	117	26.0	6.0	85	11.3	84	8.7	84	4.7	84	0.9	88
1999	67	22.3	2.7	153*	6.7	100	13.	93	6.7	89	-	-
2001	41	14.9	5.1	91	3.6	89	6.2	85	2.2	86	-	-
2002	193	40.6	7.2	95	27.6	92	5.9	87	2.5	81	-	-
2003	189	28.0	3.1	93	18.1	92	7.0	90	4.0	91	0.6	89
2005	221	36.8	8.8	97	19.5	91	8.5	90	3.5	90	0.2	91
2006	104	16.6	6.9	100	6.4	100	3.4	86	1.3	82	0.3	87
2010	150	22.4	1.5	94	12.3	95	14.7	95	8.0	95	0.4	96

2012	93	23.3	6.3	93	11.8	94	6.8	93	8.0	93	0.3	94
2018	62	15.5	2.5	95	9.0	92	6.3	88	4.0	87	-	-
2023	83	20.8	0.5	95	10.0	98	14.3	94	9.5	94	0.8	91

* W_r value is abnormally high for SPB in this sample and is a possible error.

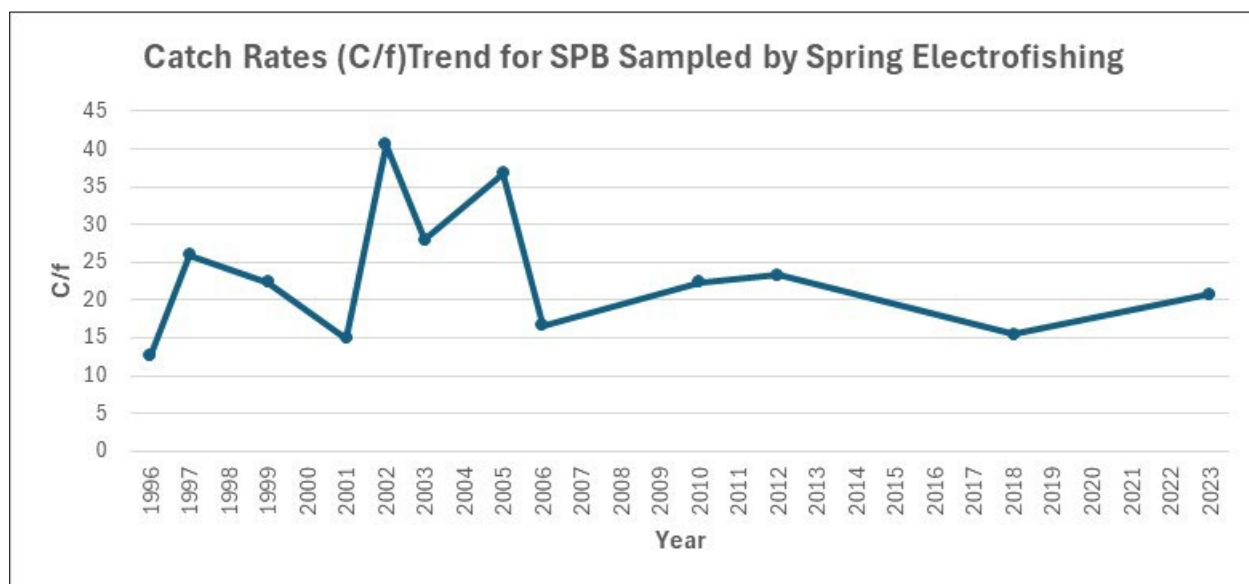


Figure 3. Catch rate trend for Spotted Bass (SPB) sampled by spring electrofishing on Tenkiller Lake.

Table 6. Total number (No.), catch per unit of effort (CPUE), and relative weights (W_r) by size PSD groups of **Spotted Bass** collected by spring electrofishing from Tenkiller Lake. Acceptable W_r values are ≥ 90 (OFAT analysis).

Year	No.	Total		Substock 0-7.8 in		Stock 7.9 in		Quality 11.8 in		Preferred 15 in		Memorable 20.1 in	
		CPUE	W_r	CPUE	W_r	CPUE	W_r	CPUE	W_r	CPUE	W_r	CPUE	W_r
2012	93	23.3	93.5	3	10.5	93.5	5.5	93.6	4	93.7	0.3	93.9	
2018	62	15.5	91	1.3	7.5	93.2	4.5	90.5	2.3	85.8	-	-	
2023	83	20.8	95.8	0.3	4.3	101.3	10.5	95.3	5.5	93.4	0.3	92.8	

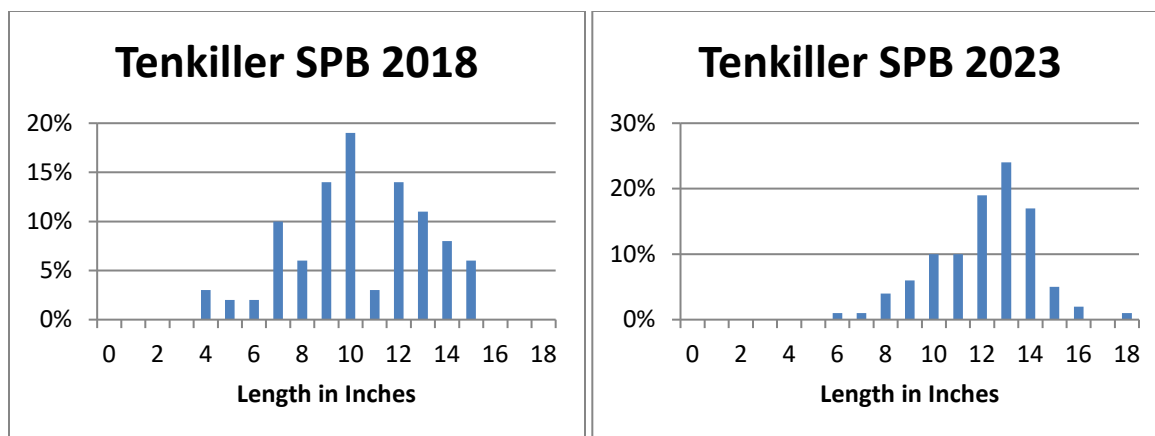


Figure 4. Spotted Bass Length Frequencies for Tenkiller lake 2018 & 2023.

Table 7. Proportional Size Distribution (PSD) of **Spotted Bass**: Quality (PSD-Q), preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes (OFAT analysis).

Year	PSD-Q	PSD-P	PSD-M	Balanced PSD Values	
2012	48	21	1	PSD-Q	40-70
2018	47	16	.	PSD-P	10-40
2023	79	28	1	PSD-M	0-10

Table 8. Mean Total Length at age (inches) and for **Spotted Bass** from Tenkiller Lake.

Year	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6
2018	8.5	11.9	14.3	.	.	.
2023	.	9.6	12.6	13.8	14.7	14.8

Table 9. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Smallmouth Bass** collected by **spring** electrofishing from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r are ≥ 90 .

Year	Total (≥ 40) No.	Total (≥ 40) C/f	<8 inches (15-45) C/f	<8 inches (15-45) W_r	8-13 inches (15-30) C/f	8-13 inches (15-30) W_r	≥ 12 inches (≥ 15) C/f	≥ 12 inches (≥ 15) W_r	13-16 inches (≥ 10) C/f	13-16 inches (≥ 10) W_r	≥ 16 inches C/f	≥ 16 inches W_r
1996	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-
1999	17	5.7	4.0	89	0.3	93	1.3	89	0.7	86	0.7	91
2001	6	2.2	1.5	87	0.7	80	-	-	-	-	-	-
2002	15	3.2	0.8	99	1.5	87	0.8	85	0.4	82	-	-
2003	10	1.5	0.9	84	0.4	83	0.1	90	0.1	90	-	-
2005	29	4.8	1.3	93	2.3	94	1.2	84	0.3	82	0.2	78
2006	26	4.2	0.8	97	2.9	96	0.5	88	0.3	81	-	-
2010	71	13.6	0.6	81	4.9	83	7.1	86	3.7	86	1.3	91
2012	41	10.3	2.0	88	5.3	91	3.5	84	1.8	87	1.3	77
2018	51	12.8	1.0	86	4.8	84	8.3	81	4.0	83	3.0	79
2023	77	19.3	0.8	95	6.8	84	13.8	86	8.8	85	3.0	87

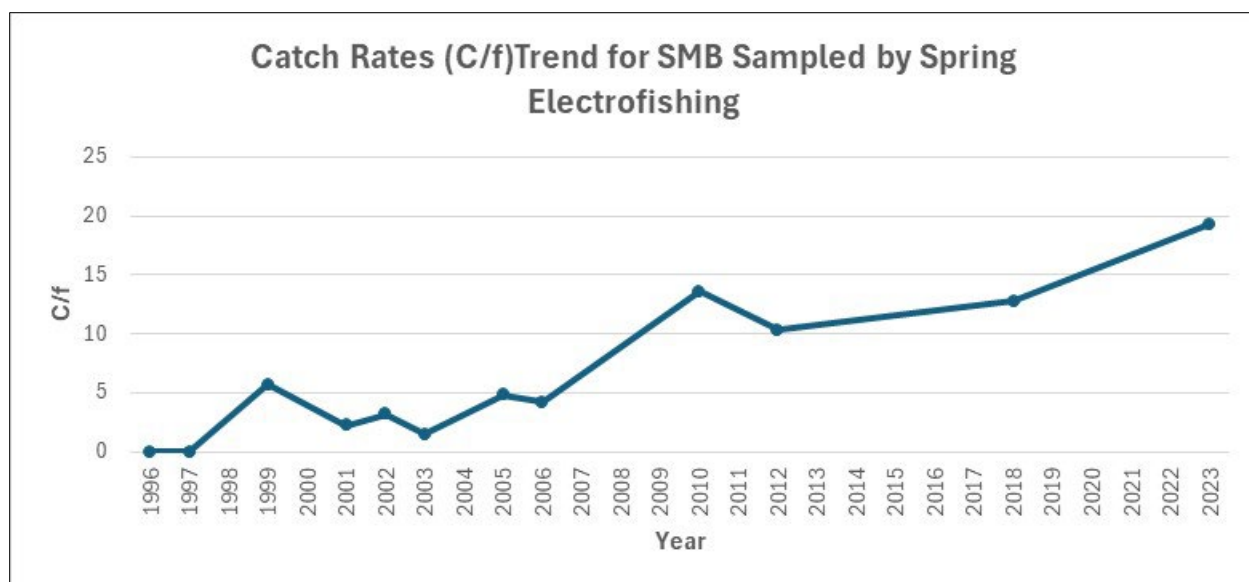


Figure 5. Catch rate trend for Smallmouth Bass (SMB) sampled by spring electrofishing on Tenkiller Lake.

Table 10. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by size groups of **Smallmouth Bass** collected by **spring** electrofishing from Tenkiller Lake. Acceptable Wr values are ≥ 90 (OFAT analysis).

Year	No.	Total		Stock 7.9 in		Quality 11.8 in		Preferred 15 in		Memorable 20.1 in		Trophy 24.8	
		CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr
2012	41	10.3	87.8	5.5	90.4	1	95.5	2	83.2	0.8	73.5	-	-
2018	51	12.8	82.4	4	83.8	2	85.5	4.8	80.6	1.8	78.3	-	-
2023	77	19.3	85.2	4.3	84.2	6.5	85.1	6.8	86	1.3	85.3	0.3	84

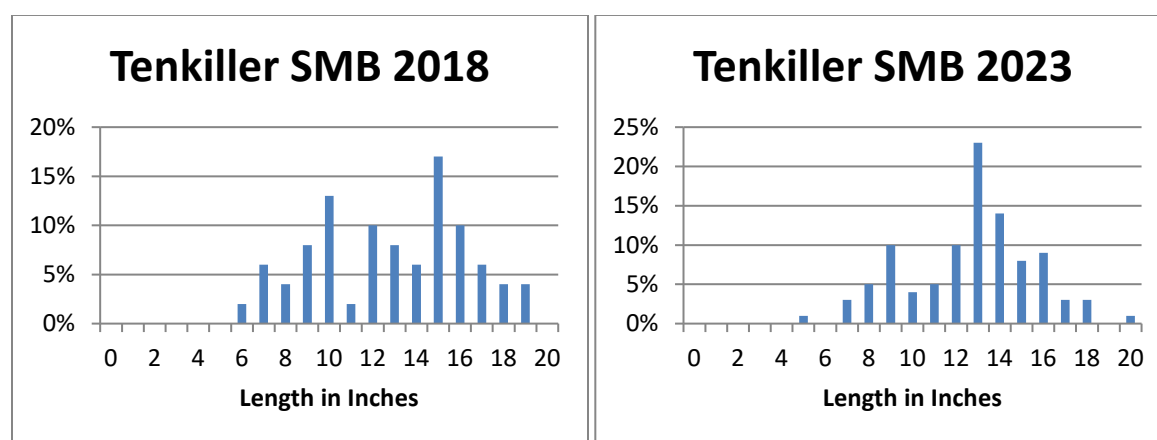


Figure 6. Smallmouth Bass Length Frequencies from spring electrofishing for Tenkiller lake, 2018 & 2023.

Table 11. Proportional Size Distribution (PSD) of **Smallmouth Bass**: Quality (PSD-Q), preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes (OFAT analysis).

Year	PSD-Q	PSD-P	PSD-M	Balanced PSD Values	
2012	41	30	8	PSD-Q	40-70
2018	68	52	14	PSD-P	10-40
2023	78	43	8	PSD-M	0-10

Table 12. Mean Total Length at age (inches) and for Smallmouth bass from Tenkiller Lake.

Year	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7
2018	8.8	11.7	15.1	17	-	18.1	18.2
2023	-	9.4	13.6	15.9	17	17.9	20.8

Table 13. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Smallmouth Bass** collected by **fall** electrofishing from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r are ≥ 90 .

Year	Total (≥ 40)		<8 inches (15-45)		8-13 inches (15-30)		≥ 12 inches (≥ 15)		13-16 inches (≥ 10)		≥ 16 inches	
	No.	C/f	C/f	W_r	C/f	W_r	C/f	W_r	C/f	W_r	C/f	W_r
2010	135	40.5	3.6	84	18.0	84	22.2	82	13.2	82	5.7	83
2014	320	80.0	37.3	84	3.7	82	10.0	80	3.3	81	2.5	79
2018	139	3.79	1.0	91	1.4	89	1.5	88	0.7	88	0.7	88
2021	256	76.8	11.1	86	49.8	86	19.8	85	10.5	84	5.4	85

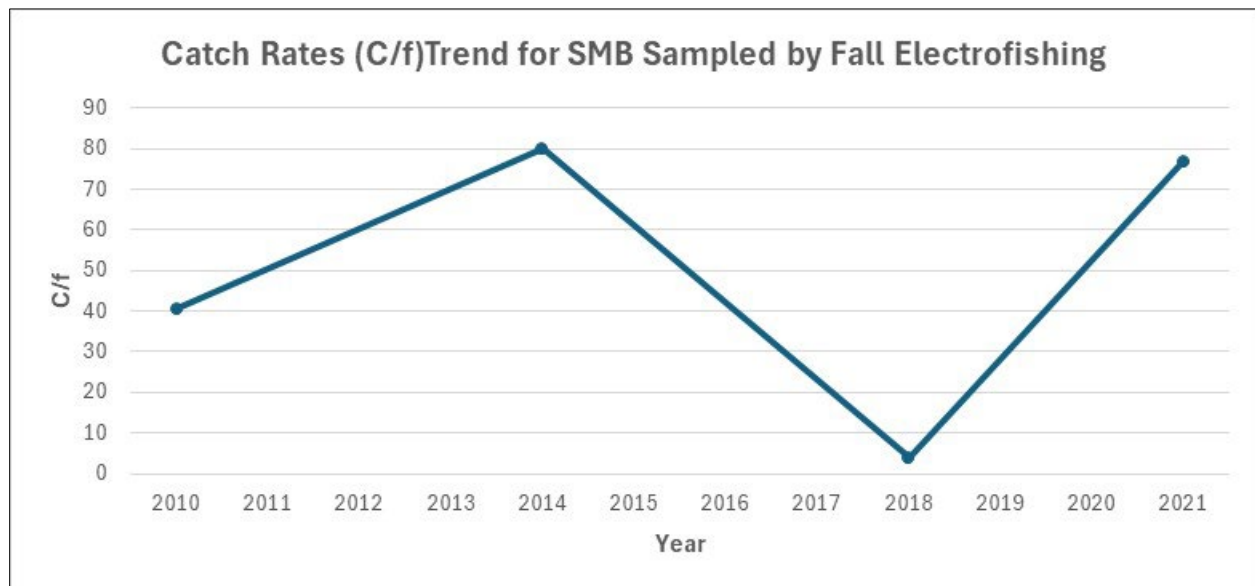


Figure 7. Catch rate trend for Smallmouth Bass (SMB) sampled by fall electrofishing on Tenkiller Lake.

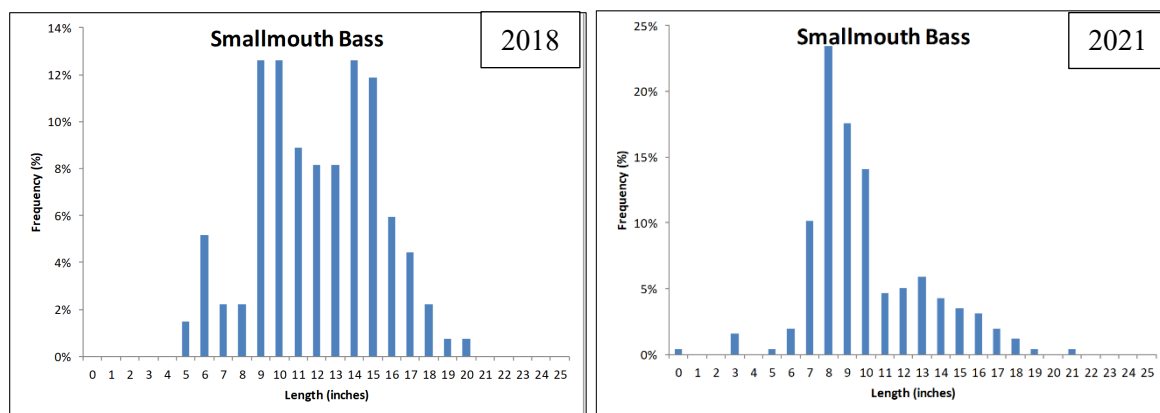


Figure 8. Smallmouth Bass Length Frequencies from **fall** electrofishing for Tenkiller lake, 2018 & 2021.

Table 14. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by size groups of **Crappie** collected by fall trap netting from Tenkiller Lake. Acceptable Wr values are ≥ 90 (OFAT analysis).

Year	Total		<8 inches		≥ 8 inches		≥ 10 inches		≥ 12 inches	
	No.	C/f	C/f	Wr	C/f	Wr	C/f	Wr	C/f	Wr
2010	71	4.4	2.51	95	1.86	93	1.02	93	0.19	84
2020	242	7.23	4.77	100	2.45	98	0.81	94	0.33	90
2023	94	4.9	2.09	95	2.82	95	0.52	96	0.05	103

Table 15. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by **PSD** size groups of **Crappie** collected by fall trap netting from Tenkiller Lake. Acceptable Wr values are ≥ 90 (OFAT analysis).

Year	No.	CPUE	Stock 5.1 in		Quality 7.9 in		Preferred 9.8 in		Memorable 11.8 in	
			CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr
2010	71	4.4	2.1	93.4	0.9	95.7	0.9	95.5	0.2	86.2
2020	242	7.23	3.9	99.9	2.2	100.4	0.4	96.5	0.4	89.9
2023	94	4.9	1.6	96	2.4	98	0.5	99.4	0.1	98.7

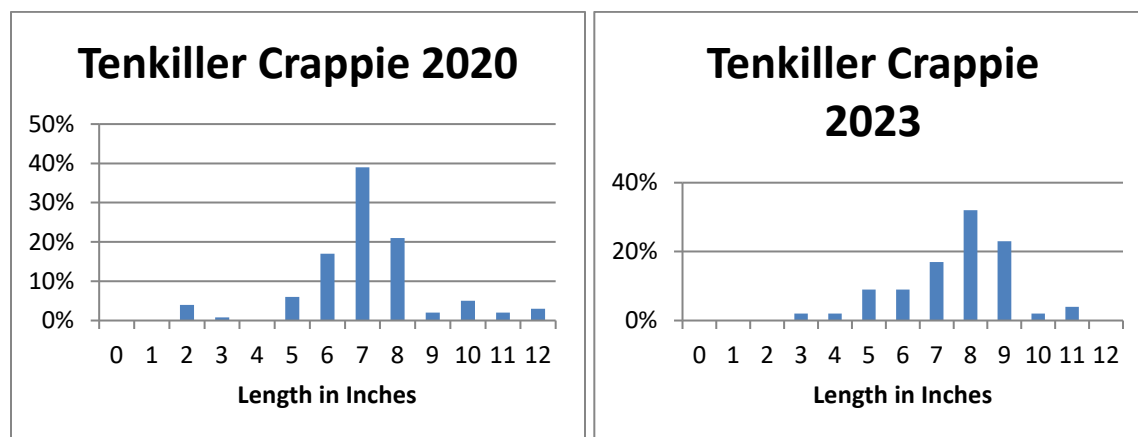


Figure 9. Length Frequency histograms for Tenkiller Crappie collected via trap netting.

Table 16. Mean Length at Age for Crappie collected by fall trap netting from Tenkiller Lake.

Year	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6
2020	7.7	11.9	11.9	12.4	13	.
2023	8.2	11.3	12.4	12.6	13.7	13.5

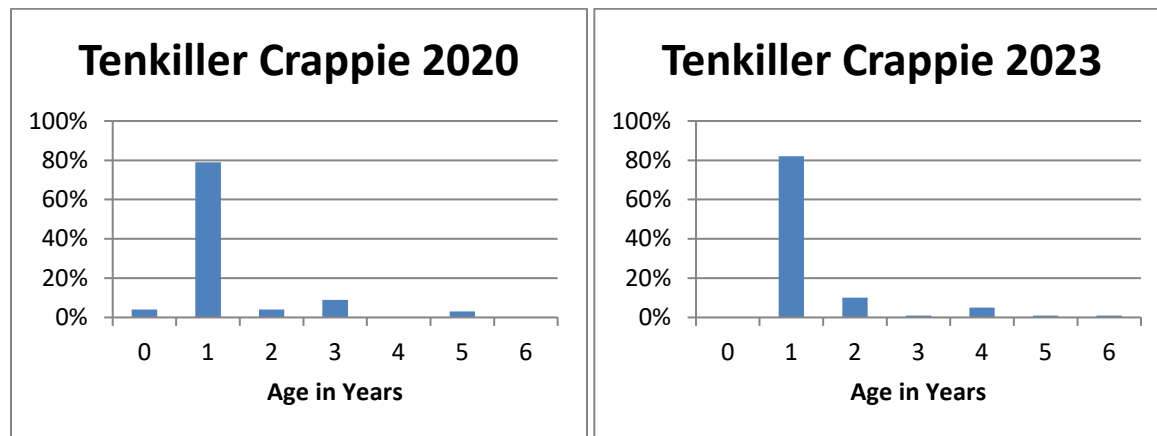


Figure 10. Crappie Age frequencies from trap netting 2020 & 2023.

Table 17. Total number (No.), catch per unit of effort (C/f), and relative weights (Wr) by size groups of **White bass** collected by fall experimental gill netting from Tenkiller Lake. Acceptable W_r values are ≥ 90 .

Year	No.	Total (≥ 4.8)	<8 inches (1.2-7.2)		8-12 inches (1.2-7.2)		≥ 12 inches (> 2.4)	
		C/f	C/f	W_r	C/f	W_r	C/f	W_r
1992	16	3.12	0.02	91	3.12	100	3.36	100
1996	275	24.48	0.48	92	7.2	100	16.8	106
1997	190	13.92	0.24	86	6.96	104	6.48	105
1999	167	12.24	0.22	101	9.36	103	2.64	99
2002	304	22.56	0.22	100	2.4	106	19.92	101
2006	146	9.36	-	-	2.64	103	6.72	105
2009	170	12.3	0.16	103	5.8	101	6.4	105
2010	262	19.7	2.66	92	13.0	91	4.0	92
2022	94	6.53	1.22	99	1.5	96	3.8	92
2025	133	9.53	0.07	101	3.77	98	5.69	99

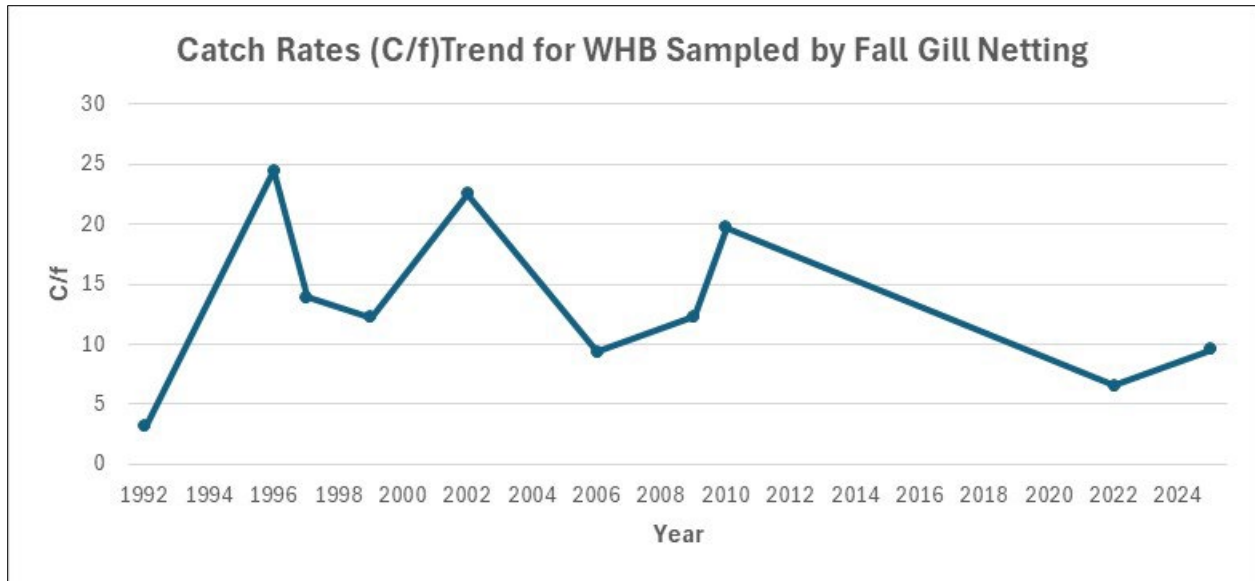


Figure 11. Catch rate trend for White Bass (WHB) sampled by fall experimental gill netting on Tenkiller Lake.

Table 18. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by **PSD** size groups of **White Bass** collected by fall experimental gill netting from Tenkiller Lake. Acceptable W_r values are ≥ 90 (OFAT analysis).

Year	No.	Total	Stock		Quality		Preferred		Memorable		Trophy	
		CPUE	5.9 in	Wr	9.1 in	Wr	11.8 in	Wr	15 in	Wr	18.1 in	Wr
2009	170	12.3	3.7	101	2.3	102	4.2	107	2	100	0.2	99
2010	262	19.7	8.7	91	6.9	92	3.3	93	0.7	85	-	-
2022	94	6.53	2.3	97	0.3	95	2.8	94	1.1	88	-	-
2025	133	9.53	1.6	99	2.2	98	3.3	101	2.4	96	-	-

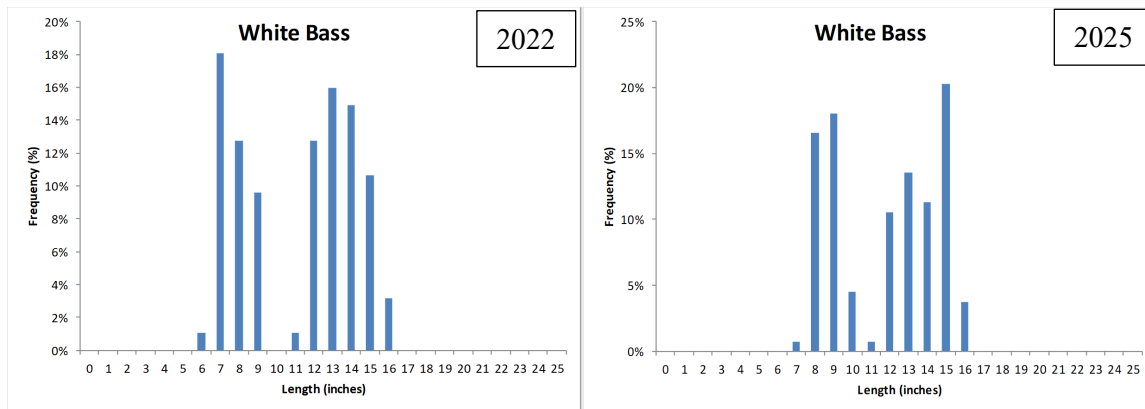


Figure 12. White Bass Gill Net Length Frequency Histogram for Tenkiller Lake 2022 & 2025.

Table 19. Proportional Size Distribution (PSD) of **White Bass**. Quality (PSD-Q), preferred (PSD-P), and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes (OFAT analysis).

<u>Year Surveyed</u>	<u>PSD-Q</u> <u>(9.1 in)</u>	<u>PSD-P</u> <u>(11.8 in)</u>	<u>PSD-M</u> <u>(15 in)</u>
2009	71	52	18
2010	57	21	4
2022	64	59	16
2025	83	59	25

Balanced PSD Values	
PSD-Q	40-70
PSD-P	10-40
PSD-M	0-10

Table 20. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Channel Catfish** collected by fall gill netting from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r values are ≥ 90 .

Year	No.	Total (≥ 4.8)	<12 inches (≥ 2.4)		≥ 12 inches (≥ 2.4)		≥ 16 inches (≥ 1.2)	
		C/f	C/f	W_r	C/f	W_r	C/f	W_r
1992	11	2.4	-	-	2.4	87	24.2*	87
1996	54	4.8	1.92	84	2.88	96	1.68	95
1997	43	3.12	0.22	73	2.88	93	1.92	97
1999	47	3.36	0.72	78	2.88	89	1.92	92
2002	211	15.6	7.92	105	7.2	95	3.12	103
2006	168	9.84	5.04	98	4.8	89	2.16	95
2009	35	2.5	0.64	86	1.9	91	1.5	94
2010	82	6.4	2.37	84	4.0	86	2.15	87
2022	26	1.8	0.43	83	1.4	81	0.8	85
2025	37	2.6	0.2	83	2.4	88	0.9	82

* Recorded catch rate is abnormally high and is possibly an error.

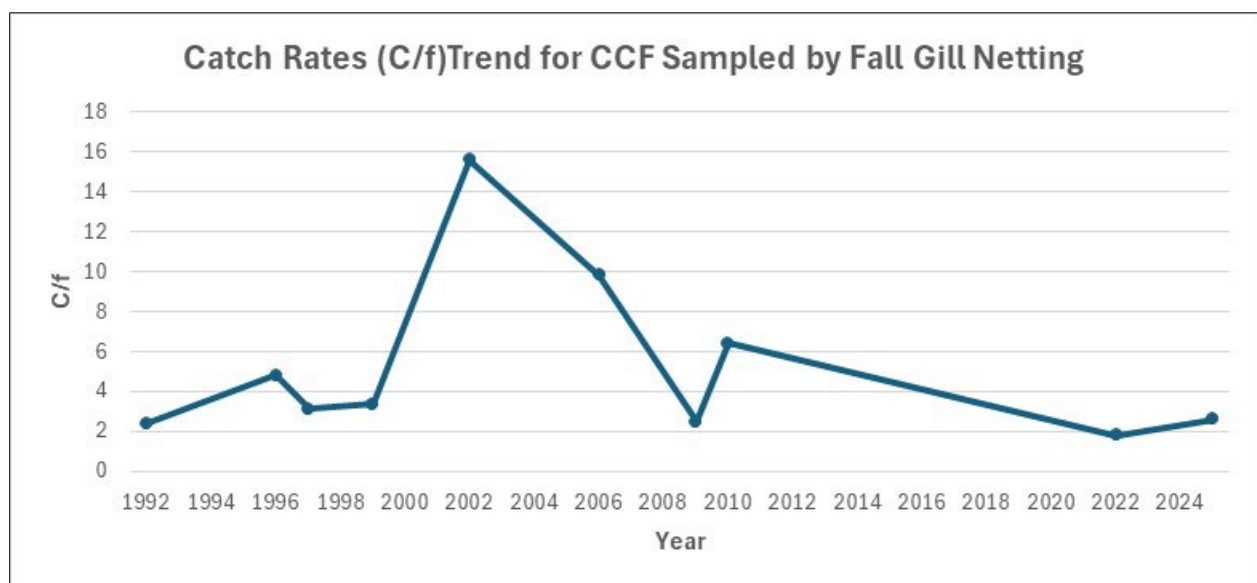


Figure 13. Catch rate trend for Channel Catfish (CCF) sampled by fall experimental gill netting on Tenkiller Lake.

Year	Catch Rate (C/f)
1992	0
1996	0
1997	0
1999	0
2002	0
2006	0
2009	0.1
2010	0.1
2022	1.8
2024	1.4

Table 24. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by **PSD** size groups of **Blue Catfish** collected by fall experimental gill netting from Tenkiller Lake. Acceptable Wr values are ≥ 90 (OFAT analysis).

Table 25. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Flathead Catfish** collected by fall gill netting from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r values are ≥ 90 .

[illegible]

Year	Catch Rate (C/f)
1992	0.0
1996	0.0
1997	0.0
1999	0.0
2002	0.0
2006	0.0
2009	0.1
2010	0.1
2022	1.8
2024	1.4

Table 26. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by PSD size groups of **Flathead Catfish** collected by fall experimental gill netting from Tenkiller Lake. Acceptable Wr values are ≥ 90 (OFAT analysis).

Table 27. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of **Walleye** collected by fall gill netting from Tenkiller Lake. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r values are ≥ 90 .

	Total	<12 inches	≥14 inches	≥16 inches	≥18 inches	≥20 inches
Year	No.	C/f	C/f W _r	C/f W _r	C/f W _r	C/f W _r
1992	-	-	- -	- -	- -	- -
1996	-	-	- -	- -	- -	- -
1997	-	-	- -	- -	- -	- -
1999	-	-	- -	- -	- -	- -
2002	-	-	- -	- -	- -	- -

2006	-	-	-	-	-	-	-	-	-	-	-	-
2009	7	0.5	-	-	0.5	93	0.5	93	0.2	95	-	-
2010	3	0.22	-	-	0.22	88	0.22	88	0.22	88	0.08	88
2022	-	-	-	-	-	-	-	-	-	-	-	-
2025	8	0.6	0.14	94	0.1	89	0.1	89	-	-	-	-

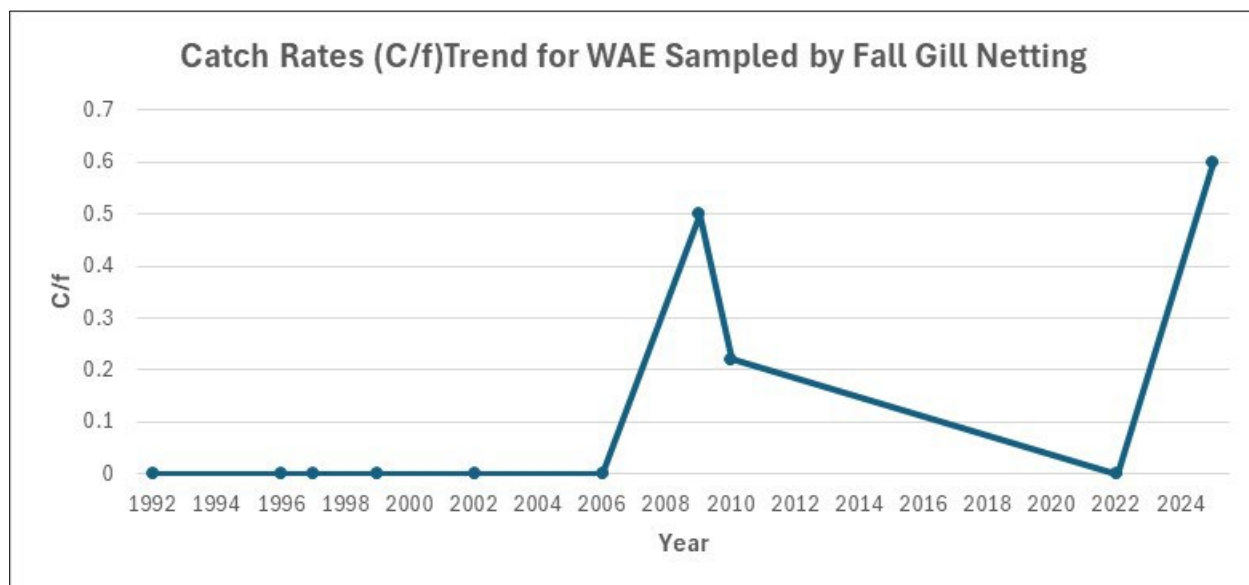


Figure 17. Catch rate trend for Walleye (WAE) sampled by fall experimental gill netting on Tenkiller Lake.

Table 28. Total number (No.) and catch per unit of effort (CPUE) by size groups of **Gizzard Shad** collected by fall floating gill netting from Tenkiller Lake.

Year	No.	Total CPUE	Substock (0-7 in)	Stock (7.1-10.9 in)	Quality (> 11 in)
2015	-	-	-	-	-
2020	194	14.1	14.1	-	-
2022	219	15.9	15.9	-	-

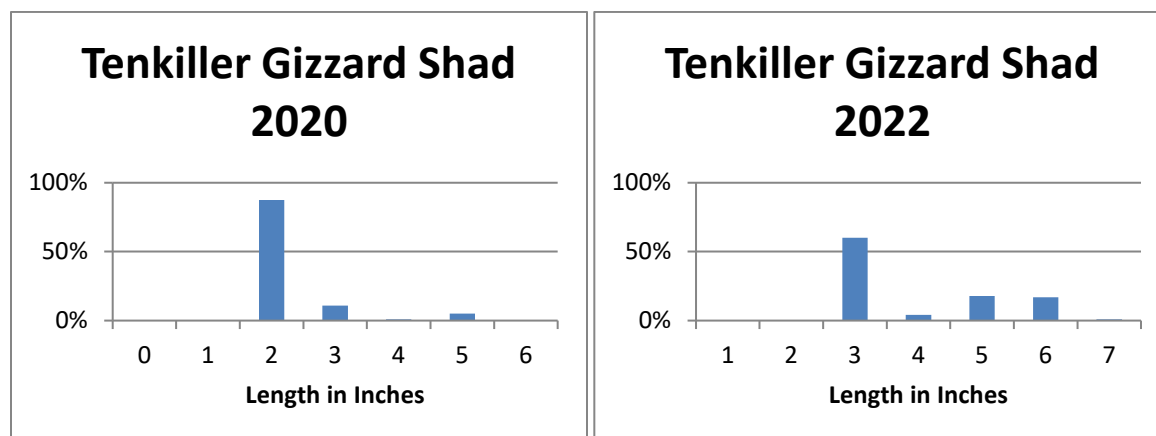


Figure 18. Gizzard Length Frequency Histogram from floating shad nets 2020 & 2022

Table 29. Total number (No.) and catch per unit of effort (CPUE) by size groups of **Threadfin Shad** collected by fall floating shad gill netting from Tenkiller Lake.

Year	No.	Total CPUE
2015	952	69.2
2020	883	63.7
2022	1077	77.3

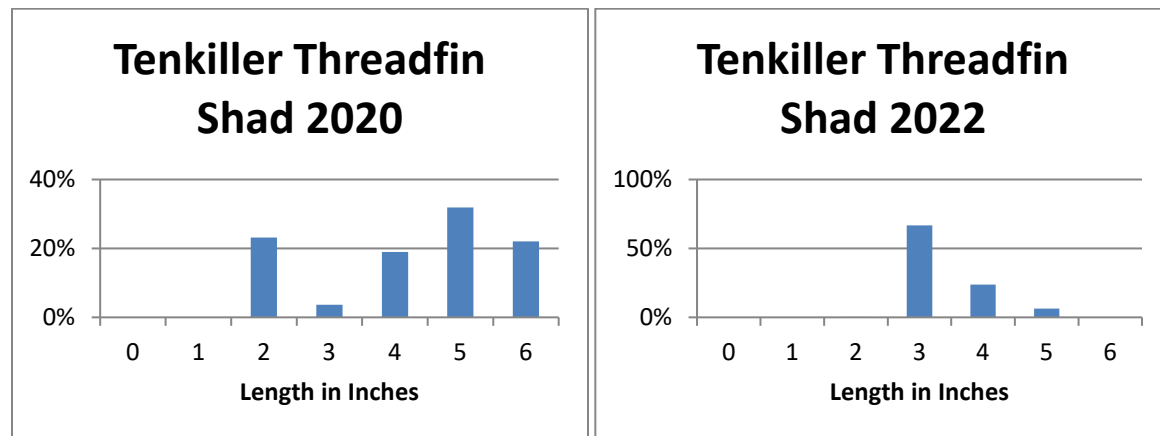


Figure 19. Threadfin Length Frequency Histogram from floating shad nets 2020 & 2022.

Appendix I. Tenkiller Habitat Enhancement Sites.

	TYPE	LAT	LONG	DATE
Tenkiller	5 large cedars	35.71765	94.95653	12/9/2020
Tenkiller	12 large cedars	35.71657	94.95117	12/9/2020
Tenkiller	5 large cedars	35.73263	94.94865	12/9/2020
Tenkiller	4 large cedars	35.73387	94.95933	12/9/2020
Tenkiller	3 Huge trees	35.73693	94.96017	12/9/2020
Tenkiller	5 large cedars	35.71928	94.94937	12/9/2020
Tenkiller	5 cedars	35.72332	94.96782	12/9/2020
Tenkiller	1 tree	35.76584	-94.922	12/14/2021
Tenkiller	1 large tree	35.76539	-94.9223	12/14/2021
Tenkiller	1 large tree	35.76449	-94.9284	12/14/2021
Tenkiller	1 tree	35.77158	-94.878	12/14/2021
Tenkiller	12 cedar trees	35.73759	-94.9237	12/20/2022
Tenkiller	6 cedar trees	35.74125	-94.9245	12/20/2022
Tenkiller	7 cedar trees	35.74658	-94.9306	12/20/2022
Tenkiller	7 cedar trees	35.75794	-94.9305	12/20/2022
Tenkiller	4 cedar trees	35.75437	-94.9256	12/20/2022
Tenkiller	6 cedar trees	35.75842	-94.9099	12/20/2022
Tenkiller	8 cedar trees	35.75551	-94.9112	12/20/2022
Tenkiller	9 cedar trees	35.76316	-94.9215	12/20/2022
Tenkiller	6 cedar trees	35.76149	-94.9109	12/20/2022
Tenkiller	7 cedar trees	35.63747	-94.9768	12/21/2022
Tenkiller	10 cedar trees	35.63941	-94.9738	12/21/2022
Tenkiller	7 cedar trees	35.64073	-94.9712	12/21/2022
Tenkiller	5 cedar trees	35.64825	-94.9831	12/21/2022
Tenkiller	7 cedar trees	35.64796	-94.9839	12/21/2022
Tenkiller	11 cedar trees	35.64968	-94.9858	12/21/2022
Tenkiller	7 cedar trees	35.65077	-94.9838	12/21/2022
Tenkiller	7 cedar trees	35.65618	-94.9781	12/21/2022
Tenkiller	6 cedar trees	35.65634	-94.9774	12/21/2022
Tenkiller	4 cedar trees	35.63978	-94.9753	12/21/2022

Appendix II. Tenkiller Recent Stocking History

Date	Species	Number	Size (inches)
1988	Threadfin Shad	10,344	3"-4"
1989	Threadfin Shad	3,790	3"-4"
1989	Walleye	129,000	Fingerling
1989	Florida LMB (Intergrade)	65,830	Fingerling
1990	Threadfin Shad	6,400	3"-4"
1990	Walleye	128,300	Fingerling
1990	Tenn. Strain SMB	32,900	Fry
1990	Tenn. Strain SMB	12,112	Fry
1991	Walleye	850,000	Fry
1994	Florida LMB (Certified)	20,000	Fingerling
1995	Florida LMB (Certified)	20,022	3"
1996	Walleye	53,500	1.25"
1997	Walleye	65,500	1.25"
1998	Walleye	42,000	1.25"