TENNESSEE RESERVOIR FISHERIES

23-06



STATEWIDE MANAGEMENT REPORT 2022

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TENNESSEE RESERVOIR FISHERIES MANAGEMENT REPORT 2022

TWRA Fisheries Report No. 23-06

By

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Jim Pipas, and Wm. Patrick Black

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Introduction

Fishing in reservoirs and lakes is a major source of recreation for Tennessee residents and visitors. The state contains 31 large reservoirs and 1 large natural lake representing about 500,000 surface acres of water. In 2011 anglers spent $1.1 billion on fishing related expenditures in Tennessee (U.S Department of the Interior, 2014)*. Proper management of fishery resources is vital to maintaining sustainability and the Tennessee Wildlife Resources Agency (TWRA) is mandated to see this is accomplished. Proper management techniques include monitoring through surveys, habitat enhancement, research, and supplemental fish stocking. Data collected in the TWRA reservoir program are maintained in a central database.

This report is a presentation of survey statistics and management summaries for reservoirs managed by TWRA. It is intended that the report be used by biologists, administrators, and anglers as a snapshot of the status of fisheries throughout the state. The reported summaries are organized by TWRA regions, individual reservoirs within the regions, and individual species within each reservoir. The data summaries are organized so that ten years of population statistics for a reservoir may be viewed in a single table for each species within a reservoir. This saves the need to refer back numerous years to view trends in population statistics or find the most recent survey for a given location.

Multiple summaries are presented for each species including population parameters (growth, recruitment, and mortality), size structure, condition, creel survey statistics (Black, 2023), and stocking summaries. Different sampling gears are used for different species, and these are listed in the tables along with parameters. In some cases, different gears and methods are used for different species and different population parameters. Gear differences also exist for the variety of reservoirs as some gears are not as effective of some water bodies. However, standardized gears and techniques were employed in data collection as much as possible to make meaningful comparisons among reservoirs.

Within each reservoir section, the TWRA Regional Biologists provide a written summary to highlight issues, positive outcomes, and recommendations for that reservoir. Any recommendations are a starting point for the discussion of needs, harvest restrictions, and stocking requests and should not be construed as “what will be done”. Recommendation related to allowable size and harvest limits are discussed extensively among TWRA staff and submitted for public review prior being voted on by the Tennessee Fish and Wildlife Commission in October of each year.

*Note: The most recent published version of the “National Survey, 2018”, did not collect data at the state level.

Figure 1 Distribution of major reservoirs (including Reelfoot Lake) in Tennessee.

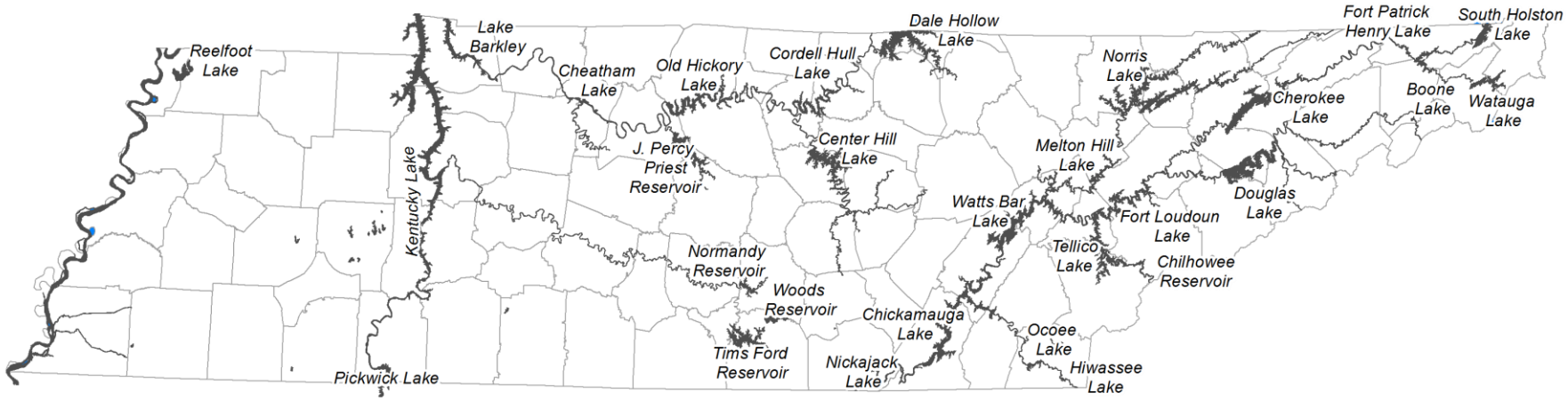


Table 1. Surface Acreage of Tennessee Reservoirs Greater Than 500 Acres. Reelfoot Lake is included.

Reservoir	Acreage in Tennessee	Total Acres	Data Source*
Barkley	18,300	57,420	3
Boone	4,520		1
Caulderwood	541		1
Center Hill	18,220		2
Cheatham	7,450		2
Cherokee	30,300		1
Chickamauga	34,500		1
Chilhowee	1,750		1
Cordell Hull	11,960		2
Dale Hollow	23,200	27,700	3
Douglas	30,600		1
Ft. Loudoun	14,600		1
Ft. Patrick Henry	872		1
Great Falls	3,080		1
Guntersville	1,156	67,900	3
John Sevier	786		3
J. Percy Priest	14,200		2
Kentucky	108,217	160,300	3
Melton Hill	5,690		1
Nickajack	10,370		1
Normandy	3,048		3
Norris	34,200		1
Old Hickory	22,500		2
Parksville	1,890		1
Pickwick	6,159	43,100	3
Reelfoot L.	10,427		3
South Holston	6,336	7,580	3
Tellico	16,056		3
Tims Ford	10,600		1
Watauga	6,430		1
Watts Bar	39,000		1
Woods	3,660		3
Total	500,618		

*1. TVA 1980
*2. U.S. Army Corps of Engineers 1978
*3. TWRA 2006

Methods

Fishery surveys were conducted using standard methods described in *Reservoir Fisheries Assessment Guidelines* (TWRA, 1998). Gears employed for surveys included boat-mounted electrofishers, trap nets, gill nets, and larval tow nets. Uses of various gear types to monitor sport fish recruitment, mortality, growth, and density were determined at the discretion of the management biologist and was based on the methods which historically have provided the best estimates for each parameter on a given water body. Efforts were made to distribute the sampling effort across the reservoir to provide a representative sample. Generally, black bass and adult crappie parameters were measured with electrofishing; young-of-year crappie abundance was measured with trap nets and larval tow nets; and *Percid* and *Morone* parameters were measured using gill nets. Water quality was monitored on select reservoirs where fish habitat has been limited historically during the summer months. Measurements were taken with dissolved oxygen / temperature probes at incremental depths throughout the water column.

Creel survey data were collected using the methods described in *Tennessee Statewide Creel Survey 2022 Results* (Black, 2023). Data were collected using roving surveys. Interviews were conducted on-site and face-to-face with full-time creel clerks. Standard question related to determining fishing effort, fishing success, catch rates, catch, harvest, expenditures, and sociological information were asked. Data were entered by IT staff at the TWRA central office and creel estimates and analysis were performed by the TWRA Fisheries Management Division in Nashville, TN.

Habitat enhancements were performed by regional staff and in partnership with the angling public. Fish attractors included submerged cedar and Christmas trees, stake beds, plastic fish attractors, and concrete reef balls. Shoreline stabilization was conducted largely with bald cypress plantings in fluctuation zones and on shoreline points. Aquatic macrophyte plantings and grass seeding in fluctuation zones also occurred at several reservoirs. Methods of plant establishment varied depending on location of objective in establishment.

Fishery data were recorded in the field on datasheets by hand. Data was entered into relational databases (TSAS) developed by the TWRA Fisheries Management and Information Technology divisions. Data were analyzed within TSAS to produce summaries, population parameters, and indices. Regional biologists analyzed these summaries to produce the tables within this document. Original TSAS outputs and summary reports were retained by the biologists and stored in regional files. All datasets were assimilated into the statewide TSAS database located on TWRA data servers.

Region 1

Barkley Reservoir - 2022

Description

Area (acres): **TN: 10,350; TOTAL: 57,290** **Mean Depth (feet): 15'** **Shoreline (miles): Total – 1,004**

Counties: Stewart, Montgomery, Cheatham **Reservoir Length: Total 118 miles**
Drainage: 2,343 sq. miles

TN: 72 miles

TN: 982 sq. miles

Total Fishing Effort (angler hours): 129,276 **Total Value by Anglers: $1,148,300**

Total Reservoir:
Summer Pool: 359 MSL - 57,290 acres **Winter Pool: 354 MSL - 45,210 acres**

Tennessee Only:
Summer Pool: 359 MSL - 20,851 acres **Winter Pool: 354 MSL – 16,276 acres**

Canal connecting Kentucky and Barkley Reservoirs located at CRM 32.8. Canal= 1.75 miles in length

Management Strategies:

***Striped Bass/Hybrid Striped Bass*:** 15" MLL, 2 fish – 1987
LMB: Creel limit reduced from 10 to 5 - 1997
15" MLL, 5 fish creel – 2001
Crappie: 10" MLL, 30 fish creel – 1997

***White Bass**:* 30 fish creel limit – 1989
Creel limit reduced to 15 - 2005

***Redear Sunfish*:** 20 fish creel – 2008
Sauger: 15" MLL, 15 fish creel – 1998
15" MLL, 10 fish creel – 2001

Habitat Enhancement and Monitoring

2019 – Established 8 new deep water fish attractor sites in the following creeks. Saline Creek, Neville Bay, Gatlin Point, Hickman Creek, Dyer Creek, Lick Creek, Guises Creek, and Yellow Creek. All 8 attractors consist of artificial materials, marked with a fish attractor buoy.

2020 – Added 2 deep water fish attractors to each site and replaced buoy in Yellow Creek. Monitored all 8 deep water fish attractor sites during spring and fall electrofishing surveys.

2021 – Added 320 shallow water fish attractors and 140 spawning structures. Structures were distributed equally in the 8 embayment's that are monitored twice a year.

2022 – Monitored all structures during spring and fall electrofishing and replaced one fish attractor buoy.

Angling Pressure (Angler Hours per Acre)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Angler Pressure	22.2	15	16	19.8	18.9	5.2	12.5	2.3*	12.1	12.5
	6.3	5.3	7.5	9.1	9.4	2.7	6.5	0.46*	5.2	4.9

Value of Fishery (Trip Expenditures in Thousands)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Black Bass	494.4	920.1	712	974.6	722.2	396.5	601.7	40.8*	549.3	436.3

NOTE: - In 2020 COVID-19 protocols prevented creel clerks from collecting catch, harvest, and economic data from April – December resulting in incomplete data analyses. These missing data will be identified with an asterisk in the tables. Complete creel surveys resumed in 2021.

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro hours	2	2	2	2	2	2	2	2	2	2
Fall Electro hours	3.7	5.18	3.8	2.8	4.75	3.49	2.8	3.47	3.26	3.34
Recruitment										
Age-1 CPUE	--	--	--	--	5.8	--	--	--	--	5
Substock CPUE (Spring)	11	17.5	7	3.5	4	11.5	8	2	14	5
Spring Density (n)	142	192	127	143	163	94	94	37	104	46
PSD	63	78	75	83	90	73	65	64	67	72
RSD Preferred	28	41	33	57	62	55	33	21	37	44
CPUE	71	96	63.5	71.5	81.5	47	47	18.5	52	23
CPUE ≥ Stock	60	78.5	56.5	68	77.5	35.5	39	16.5	39.5	22
CPUE ≥ MSL (15")	16.5	32	18.5	39	48	23.5	12	3.5	14	9
Fall Density (n)	307	352	299	158	217	238	138	177	317	325
Fall Total CPUE	80.9	66.7	80.4	59.2	49	67.3	47.8	54.5	95.3	106.6
Fall CPUE Substock	7.6	4.4	5.3	2.8	1.9	17.3	3.8	17	12.8	14.8
Fall CPUE>Stock	73.4	62.4	75.1	56.4	47.1	48.9	44	50.2	74.1	84.3
Growth										
Mean TL at Age-1	--	--	--	--	183	--	--	--	--	165
Mean TL at Age-3	--	--	--	--	330	--	--	--	--	364
Mortality						--	--	--	--	
Total Mortality	--	--	--	--	34% r2=0.7	--	--	--	--	23% r2=0.60
Relative Weight (Fall)										
Stock	89	107	95	97	97	101	97	96	100	107
Quality	91	91	97	102	101	105	96	96	100	109
Preferred	94	98	96	96	93	102	96	93	100	106
Memorable	102	91	--	102	97	97	99	99	100	104
Trophy	--	--	--	--	--	97	88	85	--	112
Fishing Success										
Catch Rate	1.03	0.94	0.82	0.82	0.91	0.68	0.57	--*	0.39	0.63
Harvest Rate	0.11	0.1	0.14	0.14	0.1	0.09	0.06	--*	0.04	0.06
% Released	91	90	85	84	90	87	91	--*	90	90
Mean Weight	3.39	2.85	2.88	2.97	NA	1.84	NA	--*	--	--

FISHERY FORECAST

Largemouth Bass substock CPUE in the spring decreased in 2022 and remains below the 10-year average. Decreased CPUE could be attributed to inconsistent water levels and weather patterns. Although substock CPUE decreased in 2022, PSD values increased from previous years and continued to maintain an acceptable level. RSD15 values continued to increase in 2022 and were higher than the previous three years. Although CPUE of substock fish has decreased in 2022, elevated PSD and RSD15 values indicated good recruitment of Largemouth Bass. Relative weights of Largemouth Bass increased in 2022 and were the highest recorded from previous years. Fall substock recruitment levels by section remained similar in section one and increased in Section 2 above historic levels; section 3 was poor but were similar to historic data. Section 3 was more riverine, and habitat may impact largemouth bass densities. (Table 1.)

Table 1. Sectional CPUE substock Largemouth Bass determined from Fall electrofishing surveys.

	2015	2016	2017	2018	2019	2020	2021	2022
Section 1	2.7	1.3	6.7	26.0	3.9	29.6	19.8	19.7
Section 2	6.7	4.0	4.0	10.4	5.4	5.3	4.7	10.5
Section 3	14.0	6.0	0.0	0.0	2.0	15.5	0.0	0.0

Sectional catch rates during Spring electrofishing decreased in all three sections and fell below the acceptable range of 60 LMB/hour. Decreased CPUE could be attributed to inconsistent water levels and weather patterns. (Table 2).

Table 2. Total sectional CPUE of Largemouth Bass determined from Spring electrofishing surveys.

	2015	2016	2017	2018	2019	2020	2021	2022
Section 1	81.3	62.7	92.0	78.6	66.6	42.7	74.6	18.6
Section 2	57.3	82.7	90.7	42.6	37.3	5.3	49.3	42.6
Section 3	46.0	68.0	52.0	6.0	8.0	2.0	22.0	0.0

The density of Largemouth Bass over the minimum size limit (>15”) has declined since 2016 and may be impacted by poor age 1 Spring densities in five of six years from 2015 - 2020. In 2022, the spring sample indicated an increase in Largemouth Bass over 15” and the fall sample remained similar to 2021 data.

Table 3. Percent Largemouth Bass ≥ 15-inches collected during Spring and Fall electrofishing surveys.

	2015	2016	2017	2018	2019	2020	2021	2022
Spring	23	57	48	35	28	15	19	30
Fall	26	50	20	19	38	32	17	14

In 2022, anglers spent $8.56 per hour ($7.23 per hour in 2021) seeking Black Bass and were willing to spend an additional 30% (70% in 2021) to fish for Black Bass on Barkley Reservoir. The total value of the Black Bass fishery was estimated at $620,460 ($549,320 in 2021).

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit with a five fish per day creel limit.

Establish spawning structures and additional shallow water fish attractors to improve habitat**.**

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro hours	2	2	2	2	2	2	2	2	2	2
Fall Electro hours	3.7	5.18	3.8	2.8	4.75	3.49	2.8	3.47	3.26	3.34
Recruitment										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	2.5	0	1	0.5	0	0.5	2.5	1	3	4
Density										
Spring Density (n)	43	27	40	63	14	19	23	29	35	59
PSD	58	56	100	76	71	72	78	81	66	61
RSD Preferred	13	11	100	24	7	44	--	19	10	12
CPUE	21.5	13.5	20	31.5	7	9.5	11.5	14.5	17.5	29.5
CPUE ≥ Stock	19	13.5	19	31	7	9	9	13.5	14.5	18.5
CPUE ≥ Preferred	2.5	1.5	4.5	7.5	0.5	4	--	2.5	1.5	0.5
Fall Density (n)	52	31	45	16	19	34	14	47	27	21
Fall Total CPUE	14.7	9.3	10.6	7.1	5.3	8.9	4.7	11.4	7.8	6.6
Fall CPUE Substock	0.2	2.6	2.2	2.8	1.1	3	0.3	4.9	0.7	1.5
Fall CPUE ≥ Stock	14.5	6.7	8.4	4.3	4.2	6.2	4.4	7.25	7.1	6.8
Fall CPUE ≥ Preferred	0.1	0.2	0.9	0.8	0.5	0.4	0.3	--	0.3	--
Relative Weight										
Stock	93	100	107	99	94	108	99	111	103	112
Quality	92	92	93	107	93	107	119	112	102	113
Preferred	83	95	93	95	92	115	91	104	107	111
Memorable	--	--	--	--	--	--	--	--	100	--
Trophy	--	--	--	--	--	--	--	--	--	--
Fishing Success (Spotted bass only)										
Relative Catch Rate	0.06	0.15	0.14	0.18	0.11	0.17	0.17	--*	0.23	0.24
Relative Harvest Rate	0	0	0	0	0	0	0.02	--*	0.01	0
% Released	94	99	98	98.6	100	100	87.8	--*	96.9	97.6
Mean Weight	1.81	--	1.16	2.46	NA	--	3.33	--*	--	1.65

Fishery Forecast:

Spotted Bass densities increased in the Spring but decreased in the Fall in 2022. Substock CPUE during fall electrofishing increased in 2022 and was the highest observed over the last 10 years. Total CPUE of Spotted Bass during fall electrofishing surveys decreased in 2022. PSD and RSD values remained similar when compared to 2021. Relative weights increased overall for Spotted Bass as well as stock, quality, and preferred size classes. These trends were also recognized with Largemouth Bass and Crappie.

Alabama Bass have become a primary concern in Tennessee due to hybridization with Spotted and Smallmouth Bass. Genetic analysis of Smallmouth and Spotted Bass were conducted on Barkley Reservoir to determine if hybridization has occurred. Fin clips were collected and were currently being evaluated from 50 Spotted Bass to determine their genetic integrity and determine if Spotted Bass pose a threat to the black bass fishery in Barkley.

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey)										
Age-0 CPUE	--	--	--	--	1.7	--	--	--	--	1.5
Substock CPUE	5.6	7.9	6.6	2.2	1.7	16.9	14.8	5.2	9.8	4.7
Total CPUE	6.7	9.3	10.1	6	3.6	18.5	18.8	8.8	12.9	7.1
Net Nights	32	32	32	32	32	32	32	32	32	32
n	215	298	322	192	111	594	585	284	415	230
Fall Density (Electrofishing Survey)										
PSD	99	98	93	99	99	96	95	89	96	98
RSD Preferred	85	86	74	60	87	78	77	59	78	78
CPUE	17.8	39.1	24.3	22.5	17	9.1	19.1	28.7	49.7	38.5
CPUE ≥ Stock	17.8	39.1	23.9	22.5	16.9	9.1	19.1	28.1	49.1	77.1
CPUE ≥ MSL (10")	14.3	33.3	10.6	13.1	16.6	6.8	15	16.3	38.4	31.7
n	93	199	97	75	111	27	61	114	247	174
Fall Hours	3.7	5.18	3.8	2.8	4.75	3.49	2.8	3.47	3.26	3.34
Growth (Fall)										
Mean TL at Age-0	--	--	--	--	90	--	--	--	--	80
Mean TL at Age-2 Fall	--	--	--	--	264	--	--	--	--	294
Mortality						--	--	--	--	
Total Mortality	--	--	--	--	45% r2=0.65	--	--	--	--	65% R2=0.83
Relative Weight (Fall)										
Stock	99	122	90	108	94	104	102	100	103	107
Quality	91	99	110	99	92	96	121	100	103	118
Preferred	96	101	102	102	94	110	94	105	115	110
Memorable	94	99	96	100	95	109	105	100	103	108
Trophy	--	--	--	--	--	101	101	91	98	104
Angling Pressure (Angler Hours per Acre)										
All Crappie	3.32	1.8	3.06	3.33	3.87	0.79	1.7	--*	2.3	2.2
Fishing Success										
Crappie Catch Rate	1.87	2.02	2.2	1.32	2.18	2	1.04	--*	0.91	1.68
Crappie Harvest Rate	1.07	1.12	0.92	0.49	0.89	0.91	0.55	--*	0.5	0.81
WC % Released	50	40	64	67	64	55	51	--*	47	56
WC Mean Weight	0.76	0.78	0.78	0.78	0.76	0.69	0.73	--*	0.73	0.76
Value of Fishery (Trip Expenditures in Thousands)										
All Crappie	153.5	98.8	154.9	207.1	106.2	50.1	49.4	--*	62.3	105.3

FISHERY FORECAST:

White Crappie populations experienced above average year class strength in 2018, 2019, and 2021 but decreased in 2022. Although total CPUE has decreased in 2022, it is still above previous years and remains acceptable. PSD and RSD10 values remained similar in 2022. Relative weights remained high for White Crappie in 2022. Catch rates and harvest rates increased in 2022 from the previous years along with the total economic value of the fishery.

Table 4. Sectional CPUE young-of-year White Crappie determined from trap net surveys.								
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Section 1	2.1	0.1	0.2	1.8	11.3	7.7	11.4	2.8
Section 2	4.4	0.2	3.4	8.2	18.6	2.8	8.0	6.5

CPUE of YOY White Crappie decreased in 2022 but remained above previous years (Table 4). Although YOY catch rates decreased in each section, CPUE of stock size White Crappie increased in 2022.

Table 5. Percentage of Crappie ≥ 10 inches collected during Fall electrofishing surveys.										
	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
White Crappie	80	85	43	58	97	75	70	45	65	61
Black Crappie	80	40	39	60	87	67	49	34	31	44

Percentage of MSL Crappie remained similar to 2021 data (Table 5). Black Crappie percentages increased within Barkley Reservoir in 2022.

Anglers spent $4.66 per hour seeking Crappie in 2022, ($2.56 in 2021) and were willing to spend an additional 31% (60%* in 2021) to fish for Crappie on Barkley Reservoir. The total value of the Crappie fishery was estimated at $153,180 ($104,220 in 2021).

MANAGEMENT RECOMMENDATIONS:

Add additional deep water fish attractors to existing sites to improve habitat. Maintain 10” minimum size limit.

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey)										
Age-0 CPUE	--	--	--	--	0.7	--	--	--	--	0.8
Substock CPUE	5.8	1.5	3.7	1.2	0.7	3	3	1	0.6	1.2
Total CPUE	7	4	7.7	5.3	3.3	6.3	3.8	2.8	2.8	2.1
Net Nights	32	32	32	32	32	32	32	32	32	32
n	225	128	247	171	101	202	119	91	90	67
Fall Density (Electrofishing Survey)										
PSD	99	64	86	91	86	87	90	79	83	88
RSD Preferred	81	49	39	59	38	61	76	55	58	63
CPUE	17.4	30.7	54.9	34.1	18.7	40.4	32.9	32.5	28.5	31.9
CPUE ≥ Stock	17.4	30.2	54.3	34.1	18.7	38.9	32.7	32.2	27.9	30.9
CPUE ≥ MSL (10")	13.9	12.4	21.2	20.4	16.3	26.9	24.1	18	17.1	19.4
n	80	157	237	112	108	147	105	119	124	103
Fall Hours	3.7	5.18	3.8	2.8	4.8	3.49	2.8	3.47	3.26	3.35
% Black Crappie	46	44	71	60	49	84	63	51	33	59
Growth (Fall)										
Mean TL at Age-0 Fall	--	--	--	--	85	--	--	--	--	77
Mean TL at Age-2 Fall	--	--	--	--	220	--	--	--	--	249
Mortality						--	--	--	--	
Total Mortality	--	--	--	--	52% r2=0.52	--	--	--	--	55% r2=0.75
Relative Weight (Fall)										
Stock	101	100	92	103	92	101	98	103	98	105
Quality	97	105	94	100	94	100	106	121	95	100
Preferred	91	89	101	94	93	109	95	103	103	105
Memorable	97	88	91	94	90	101	98	99	99	107

FISHERY FORECAST

CPUE of Black Crappie during trap net surveys increased in 2022 but remain lower than the 10-year average. Total CPUE during fall electrofishing increased and remained at acceptable levels. PSD and RSD10 increased in 2022 and were similar to historical values. Relative weight increased for all size classes of Black Crappie in 2022.

Table 6. Total sectional CPUE of Black Crappie determined from Fall electrofishing surveys.

	2015	2016	2017	2018	2019	2020	2021	2022
Section 1	52.0	23.3	12.0	28.9	32.7	46.1	14.7	33.0
Section 2	86.0	60.3	20.5	49.5	49.6	22.5	35.0	37.0
Section 3	27.0	27/5	26.5	--	16.5	27.4	--	--

Total CPUE during Fall electrofishing increased in 2022 (Table 6). The CPUE of Black Crappie in section one was above average and remained close to historical averages in section two.

MANAGEMENT RECOMMENDATIONS

Maintain current 10” size limit and 20 fish/day creel limit. Additional deep water fish attractors would be beneficial.

Redear Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap net)										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	0.03	0.5	0.3	2.4	0.4	12.9	2.9	--	2.3	4
Total CPUE	0.4	1.6	0.5	3.8	1.3	17.1	6.3	3.8	4	5.5
Net Nights	32	32	32	32	32	32	32	32	32	32
n	13	52	17	122	40	548	194	122	129	175
Spring Density (Electro Survey)										
PSD	43	59	29	63	43	29	45	39	37	73
RSD Preferred	7	9	5	10	7	12	--	17	--	11
CPUE	23	18.5	32	34.5	50	38.5	6	12	10.5	12.5
CPUE ≥ Stock	22	17	10.5	29.5	50	34.5	5.5	11.5	9.5	11.1
CPUE ≥ Preferred	1.5	1.5	0.5	3	3.5	5	--	2	--	2
n	46	37	64	69	100	77	12	24	21	48
Spring Hours	2	2	2	2	2	2	2	2	2	2
Angling Pressure (Angler Hours per Acre)										
Sunfish	0.6	0.47	0.18	0.66	0.2	0.06	0.15	NA*	0.08	0.1
Fishing Success (Redear Sunfish only)										
Relative Catch Rate	0.26	0.05	0.16	0.15	0.57	NA	0.29	--*	0	0.07
Relative Harvest Rate	0.13	0.02	0.12	0.13	0.46	NA	0.36	--*	0	0.08
Redear Mean Weight	0.5	--	0.42	0.55	0.52	NA	0.4	--*	--	0.53
Redear % Released	56	55	34	14	25	NA	0	--*	0	0
Value of Fishery (Trip Expenditures in Thousands)										
Sunfish	13.8	13	11.8	34.9	4.4	5	3	--*	10.1	25.4

FISHERY FORECAST

Redear Sunfish substock CPUE and total CPUE increased during fall trap netting in 2022. CPUE during Fall electrofishing surveys remained similar to previous years. PSD values nearly doubled in 2022 and RSD values remained similar to previous years data. Relative catch rates and harvest rates remained low compared to historical data.

MANAGEMENT RECOMMENDATIONS:

Continue with the 20 fish creel limit implemented in 2008.

Bluegill

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net)										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	0.6	3.3	2.1	3.4	3.5	3	10.1	9.4	--	--
Total CPUE	4.8	10.4	7.9	11.5	11	27.3	21.1	14.8	11.2	10.1
Net Nights	32	32	32	32	32	32	32	32	32	32
n	152	332	252	367	342	874	655	473	360	322
Density (Spring Electrofishing Survey)										
PSD	31	27	35	18	29	44	44	29	31	28
RSD Preferred	2	1	2	0	1	1	1	--	1	--
CPUE	154	138	105	195.5	174.5	136	56	79.5	105	84.9
CPUE ≥ Stock	144.5	130	98	183.5	158.5	133	54	78	66.5	73.6
CPUE ≥ Preferred	3	1.5	1.5	0	2.4	1	0.5	--	0.5	21.1
n	308	276	210	391	349	272	112	159	210	365
Spring Hours	2	2	2	2	2	2	2	2	2	2
Angling Pressure (Angler Hours per Acre)										
Sunfish	0.6	0.47	0.18	0.66	0.2	0.06	0.15	--	0.08	0.56
Fishing Success (Bluegill only)										
Relative Catch Rate	1.85	2.05	5.89	3.38	5.71	2.89	4.74	--*	2.1	2.82
Relative Harvest Rate	0.9	0.79	2.25	2.08	3.13	2.18	3.38	--*	1.5	1.65
Bluegill Mean Weight	0.4	0.35	0.37	0.3	0.39	0.36	0.37	--*	0.27	0.41
Bluegill % Released	64	65	72	45	57	51	44.2	--*	67.2	47.9
Value of Fishery (Trip Expenditures in Thousands)										
Sunfish	NA	13.8	13	11.8	34.9	5	3	--*	10.1	25.4

FISHERY FORECAST

Bluegill CPUE decreased during fall trap netting surveys and fall electrofishing in 2022, but spring electrofishing CPUE of stock and preferred Bluegill increased. PSD decreased in 2022 but remained similar to historical data.

Angling pressure increased in 2022 and relative catch rates and harvest rates remain similar to historical data. The value of the sunfish fishery in Barkley Reservoir increased in 2022 and is above average when compared to previous years.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Sauger

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	11.6	No Sample	7.3	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	10.1
n	37		38							6
Recruitment (Gillnet Survey)										
Age-1 CPUE	1.3		--							0
Substock CPUE	0		0							0
PSD	62		61							100
RSD Preferred	32		45							50
CPUE	3.9		0.1							0.01
CPUE ≥ Stock	3.9		0.1							0.01
CPUE ≥ MSL (15")	1.3		0.03							0.005
Growth										
Mean TL at Age-1	292									--
Mean TL at Age-3	410									418
Relative Weight										
Stock	NA		NA							NA
105Quality	NA		NA							NA
Preferred	NA		NA							NA
Memorable	NA		NA							NA
Trophy	NA		NA							NA
Mortality										
Total Mortality										
Stocking										
Total No.	126,508	51,339	92,698							

2009, 2011, 2012, 2013, 2015, 2017, 2018, 2019, 2020 and 2021– No sample due to high water and high discharge during sampling period.

Angling Pressure (Angler Hours per Acre)	2016	2017	2018	2019	2020	2021	2022
Sauger	0.31	0.71	0.06	NA	--*	0.74	0.72
Fishing Success							
Catch Rate	NA	0.62	NA	--	-- *	--	0.78
Harvest Rate	NA	0.29	NA	--	--*	--	0.31
Mean Weight	NA	1.45	1.5	--	--*	1.31	1.36
% Released	NA	61	48	--	--*	59	61.3
Value of Fishery (Trip Expenditures in Thousands)							
Sauger	17.9	26.4	7.9	--	--*	28.9	41.6

FISHERY FORECAST:

Sauger gill netting CPUE was low in 2022. Low catch rates can be attributed to high water conditions and decreased netting areas. Although catch rates were low, PSD and RSD values increased in 2022 from historical values. Angling pressure remained similar to 2021 but the value of the fishery increased in 2022.

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit and the 10 fish creel limit.

Channel Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	No Sample	11.6	No Sample	7.3	No Sample	No Sample	No Sample	No Sample	No Sample	10.1
n		2		42						0
Recruitment (Gillnet Survey)										
Age-1 CPUE		--		--						
Substock CPUE		--		0.05						0
Total CPUE		--		0.1						0
Density										
PSD										
RSD Preferred										
CPUE										
CPUE ≥ Stock										
CPUE > Quality										
CPUE ≥ MSL (34")										
Angling Pressure (Angler Hours per Acre)										
Catfish		3.77	35.8	5.2	3.2	1.4	--	--*	3.35	2.93
Fishing Success										
Catch Rate	0.99	0.96	1.42	0.38	1.64	1.88	--	--*	1.26	0.45
Harvest Rate	0.68	0.59	0.94	0.25	1.14	1.43	--	--*	0.97	0.16
% Released	32	63	36	46.6	43.9	66.5	--	--*	66.1	64.6
Mean Weight	2.39	1.9	1.99	1.7	2.23	2.33	--	--*	2.54	2.11
Value of Fishery (Trip Expenditures in Thousands)										
Catfish	266.2	139.1	118.7	258.4	93.8	119.4	--	--*	108.8	158.1

2009, 2011, 2012, 2013, 2015, 2017, 2018, 2019, 2020, and 2021– No sample due to high water and high discharge during sampling period.

FISHERY FORECAST:

Gill netting was conducted at Cheatham Dam in 2022. Channel catfish were not captured in gill net samples. In addition, angler catch and harvest rate declined to the lowest level in ten years. This data will continue to be monitored to determine future trends.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Gizzard Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fall Electro Hours	3.7	5.18	3.8	2.8	4.75	3.49	2.8	3.47	3.26	3.34
Recruitment										
CPUE < 150 mm	44.1	46	24.5	55.5	8.4	34.1	45	26.2	44.1	23.9
CPUE ≥ 275 mm	0.5	0.2	2.9	0.6	0.4	0.8	1.4	3.7	2.9	4.5
Density										
Fall total CPUE	58.4	120.4	85.9	109.3	51	74.1	96.4	59	84.1	34.3
Fall CPUE Substock	29.4	69.2	31.9	53.8	17.5	34.1	49.7	25.4	44.1	18.7
Fall CPUE ≥ Stock	29	51.3	54	55.5	33.4	40.8	46.7	33.7	39.9	15.6
Fall total collected (n)	317	419	318	299	286	246	252	211	249	145
Relative Weight (Fall)										
Stock	91	102	95	95	86	84	89	96	92	91
Quality	92	102	95	95	85	84	90		93	94

Discussion

Catch rates of Gizzard Shad less than 150mm decreased in 2022 but catch rates of fish above 275mm increased although CPUE during fall electrofishing surveys decreased in 2022. Relative weights remained similar to historical data. CPUE decreased in each section in 2022 but percentage of substock Gizzard Shad in Section 3 increased in 2022 (Table 7). Relative weights remained similar to historical data.

Table 7. Historical Sectional Gizzard Shad Data

Total sectional CPUE of Gizzard Shad determined from Fall electrofishing surveys.

	2016	2017	2018	2019	2020	2021	2022
Section 1	112.7	68.0	68.9	107.8	62.4	91.4	21.2
Section 2	112.4	72.8	78.4	66.8	48.4	90.2	26.6
Section 3	103.9	58.1	--	108.8	69.8	50.4	--

% abundance of Substock Gizzard Shad by section determined by Fall electrofishing surveys.

	2016	2017	2018	2019	2020	2021	2022
Section 1	54%	0%	38%	49%	12%	51%	20%
Section 2	87%	20%	51%	59%	11%	33%	7%
Section 3	43%	26%	--	43%	42%	2%	74%

Stock size Gizzard Shad sectional relative weight determined from Fall electrofishing surveys

	2016	2017	2018	2019	2020	2021	2022
Section 1	110.0	92.0	82.0	88.0	96.0	95.1	95.3
Section 2	79.0	89.0	86.0	98.0	93.0	97.4	93.9
Section 3	84.0	81.0	--	87.0	100.0	84.7	--

Threadfin Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Density										
Fall CPUE ≤ 75 mm	90	60.2	7.4	0	16.4	111.1	3.6	84.9	--	49.7
Fall Total CPUE	102.1	67	39.9	51.9	29.8	142.8	4.6	84.9	23.5	49.7
Fall Total collected (n)	583	319	141	120	137	442	13	302	46	124

Discussion:

Total CPUE of Threadfin Shad increased in 2022. CPUE of Threadfin Shad in section 1 increased but decreased in section 2 (Table 8).

Table 8. Historical Sectional Threadfin Shad Data

CPUE Threadfin Shad by Section determined from Fall electrofishing surveys.

	2016	2017	2018	2019	2020	2021	2022
Section 1	129.3	0.0	90.5	5.5	88.8	41.9	91.7
Section 2	13.7	83.1	184.5	5.4	79.9	7.5	1.2
Section 3	0.0	4.2	--	0.0	86.8	--	--

MANAGEMENT RECOMMENDATIONS:

No recommendations were necessary.

Invasive Carp

	627 2019	2020	2021	2022
Net Hours	576.7	532.7	522.0	515
Number Collected				
Silver Carp	47	39	59	113
Grass Carp	9	4	6	9
Bighead Carp	2	0	1	3
Black Carp	0	0	0	0
Silver Carp Collected (mm)				
≤ 250	0	0	0	0
➢ 251 – 475	0	0.02 (1)	0.002 (1)	0
➢ 476 - 650	0.01 (4)	0.05 (2)	0	0
➢ 651	0.08 (43)	0.92 (36)	0.11 (58)	113
Shock Hours	NA	NA	*NA	4.2
Number Collected				
Silver Carp	NA	NA	NA	91
Grass Carp	NA	NA	NA	0
Bighead Carp	NA	NA	NA	0
Black Carp	NA	NA	NA	0
Silver Carp Collected (mm)				
< 250	NA	NA	NA	0
➢ 251 – 475	NA	NA	NA	0
➢ 476 - 650	NA	NA	NA	1
➢ 651	NA	NA	NA	90

*Boat electrofishing was replaced by dozer trawl samples in 2021. A total of 50 5-min electrified trawls were conducted on Barkley Reservoir.

Discussion:

Adult Bighead, Grass, Black, and Silver Carps have been documented in Barkley Reservoir. Agency electrified dozer trawl (10-12 Amps, 300-500 Volts, 120 pulses per second) and standardized gill net surveys have been employed to determine Invasive Carp fingerling/adult presence and/or abundance within Barkley Reservoir. These efforts along with collaborative efforts with U. S. Fish and Wildlife Service, U. S. Geological Survey, Tennessee Valley Authority, U. S. Army Corp of Engineers, and Kentucky Department of Fish and Wildlife Resources have been utilized to accomplish a basin wide management strategy for the Cumberland River System. Larval sampling, larval light traps, and mini-fyke nets have also been utilized during an intern project since 2017, to document natural reproduction.

These sampling surveys have not revealed natural reproduction since 2015. Additional data associated with the intern project will be available in a separate report.

Gill net standardized sampling was initiated in Spring 2019 with gill net sampling conducted in three embayments (Neville, Gatlin Point and Dyer creek; 12 individual net sites using 91-meter gill nets; each net comprising 30.5-meter sections of 76-, 102-, and 127 – mm mesh). The 102-mm mesh was most effective. Overall CPUE increased from 2021 with summer net sets accounting for the majority of fish caught in both 2021 and 2022.

Electrified dozer trawl samples (n=25) were completed in summer and fall 2022 on Barkley Reservoir. Dozer trawls were conducted with a 7.3 meter Clark boat, 225 Mercury 4-stroke outboard with a 3.7 meter trawl attached to a 2.1 x 0.9 meter frame which was located off the bow. The trawl frame was connected via aluminum arms which were raised and lowered by a Warn winch located under the front deck. The dozer trawl was electrified by an MLES Infinity electrofishing box with a curtain array located in front of the trawl frame. A total of 91 Silver Carp were captured with summer catch rates (CPUE=2.44) being higher than fall catch rates (CPUE=1.2). The dozer trawl was most effective in Barkley Reservoir due to the riverine nature of the system.

OTHER DATA

White Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	No Sample	11.6	No Sample	7.3	No Sample	No Sample	No Sample	No Sample	No Sample	10.1
n		11		26						0
Recruitment (Gillnet Survey)										
Age-1 CPUE		--		--						
Substock CPUE		0		0						0
Total CPUE		1		0.06						0

2009, 2011, 2012, 2013, 2017, 2018, 2019, 2020, and 2021 – No sample due to high water and high discharge during sampling period.

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	No Sample	0	No Sample	7.3	No Sample	No Sample	No Sample	No Sample	No Sample	10.1
n		11.6		1						1
Recruitment (Gillnet Survey)										
Age-1 CPUE		0		0						0
Substock CPUE		0		0						0
Total CPUE		0		0.002						0.001

2009, 2011, 2012, 2013, 2017, 2018, 2019, 2020, and 2021– No sample due to high water and high discharge during sampling period.

Table 9. Other Species Collected

Species	Collected
Channel Catfish	1
Freshwater Drum	6
Gizzard Shad	298
Longear Sunfish	149
Orangespotted sunfish	1
Spotted Bass	93
Spotted Sucker	21
Threadfin Shad	181
Warmouth	8
White Bass	1
Yellow Bass	120

Very few Silver Carp were seen during Spring and Fall sampling efforts.

2022 Water Quality Monitoring

In 2022, summer air and water temperatures were average when compared to historical records and rain fall amounts were average. Daily water quality measurements were taken from US Army Corp of Engineers on Lake Barkley and indicated average water quality parameters.

Sampling Stations – Multiple stations between RM 75.5 and RM 133.1 (Personal Communication, Mark Campbell, USCOE).

Literature Cited

Alfermann, T, M. Clark, J. Hammonds, M. Jolley, J. Pipas, and W. Black. 2023. Tennessee reservoir fisheries management report 2022. Tennessee Wildlife Resources Agency. Nashville, Tennessee.

Kentucky Reservoir - 2022

Description

Area (acres): TOTAL:160,300 TN: 108,217 Mean depth (feet) – 20' Shoreline (miles): 2,380

Counties: Stewart, Henry, Benton, Houston, Humphreys, Decatur, Perry, Wayne, Hardin

Total Fishing Effort 2022 (angler hours): 728,396 Total Value by Anglers 2022: $7,072,220

1.75-mile-long canal connecting Kentucky and Barkley Reservoirs located at TRM 25.3

Summer Pool: 359 MSL Winter Pool: 354 MSL Drainage area: 40,200 sq. miles

Management Strategies:

Striped Bass/Hybrid Striped Bass – 15" MLL, 2 fish - 1987

***LMB/SMB*:**
Creel limit reduced from 10 fish to 5 fish in 1997.
13" MLL lakewide – 1998
14" MLL north of TNRM 111.1 and
13" MLL south of that point - 2000.
14" MLL reservoir-wide -2001.
15" MLL lakewide – 2003

White Bass: 30 fish creel limit - 1989
Creel limit reduced to 15 - 2005

Sauger: 14" MLL with 15 fish creel - 1992
14" MLL with 10 fish creel – 2001
15" MLL with 10 fish creel - 2014

Crappie: 10" MLL with 30 fish creel – 1997
10" MLL with 20 fish creel – 2017

Redear Sunfish: 30 fish creel limit - 2008
20 fish creel limit - 2013

Habitat Enhancement and Monitoring

Monitoring of existing habitat was conducted during spring and fall sport fish electrofishing.
Agency new/refurbished shallow water structures – Completed southern section of reservoir with approximately 150 sites with multiple attractors at each site.
Deep water structures = 4 of 29 sites were refurbished.
Cypress Tree Plantings – Maintained potted saplings for future plantings
Work arrangements have been modified to build, maintain, and monitor habitat in the future.

Total Angling Pressure (Angler Hours per Acre)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Angler Pressure (hrs/acre)	12.5	10.3	11.5	9.8	10.9	6.3	5.9	8.4	7.6	6.7

Black Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure (Angler Hours per Acre)										
All Black Bass	3.8	3.6	4.29	3.84	4.39	2.35	2.44	--*	2.4	2.6
Smallmouth	0.3	--	0.3	--	--	--	--	--	--	--
Fishery Value (Trip Expenditures in Thousands**)**										
	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Black Bass	2,948.00	4,248	5,865.50	3,472.20	4,274.50	1,810.60	2,009.00	--*	1,952.10	2,268.90
Smallmouth	16.1	--	13.2	--	--	--	--	--	--	--

NOTE: - In 2020 COVID-19 protocols prevented creel clerks from collecting catch, harvest, and economic data from April – December resulting in incomplete data analyses. These missing data will be identified with an asterisk in the tables. Complete creel surveys resumed in 2021.

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro hours	6	6	6	6	6	6	6	6	6	6
Fall Electro hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Recruitment										
Age-1 CPUE	--	--	--	9.3	--	--	--	--	11.2	--
Substock CPUE	10.5	11.2	7.3	6.5	16	3.4	5.3	4.5	11.8	7.5
Spring Density (n)	388	531	404	281	415	234	152	174	278	194
PSD	68	64	84	85	68	68	71	83	74	78
RSD Preferred	44	37	28	50	43	47	28	50	43	40
CPUE	64.7	88.5	67.3	46.8	69.2	37.4	25.3	29	46.3	32.3
CPUE ≥ Stock	54.2	77.3	60	40.3	53.2	34.1	20	24.5	34.5	24.8
CPUE ≥ MSL (15")	23.8	28.5	17	20.2	23	16	7.8	12.3	14.8	9.8
Fall Density (n)	433	345	298	600	434	254	173	372	255	309
Fall Total CPUE	71	57.3	50.2	76.6	51.9	33.1	30.9	42.5	36	42.1
Fall CPUE Substock	9.3	4.2	4.1	34.7	7.2	5	5	16.3	6.6	7.3
Fall CPUE>Stock	61.8	53.1	46.1	41.8	44.8	25.4	25.8	26.2	29.4	34.8
Stocking (FLMB – 1,162 Acres)										
# per Acre	--	--	189.5	123.2	86.4	205.2	131.1	165.8	146	158.9
Total No.	--	--	220,198	143,163	100,388	238,476	152,334	192,637	169,609	184,622
Growth										
Mean TL at Age-1	--	--	--	179	--	--	--	--	169	--
Mean TL at Age-3	--	--	--	334	--	--	--	--	360	--
Relative Weight										
Stock	88	93	104	95	87	101	94	98	92	101
Quality	86	88	93	95	87	91	89	95	89	100
Preferred	90	86	100	92	84	88	93	98	94	94
Memorable	90	82	92	96	90	91	99	103	100	110
Trophy	--	--	--	--	--	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	25% R2=60	--	--	--	--	29% R2=87	--
Fishing Success										
Catch Rate	1.61	1.06	0.85	0.91	1.16	0.65	0.6	--*	0.52	0.65
Harvest Rate	0.1	0.13	0.09	0.07	0.12	0.07	0.07	--*	0.04	0.05
% Released	94	90	90	93	90	90	89	--*	92	93
Mean Weight	2.63	2.59	2.53	3.04	2.75	2.94	3.16	--*	3.22	--

FISHERY FORECAST:

Recruitment decreased in 2022 and recruitment has been fair to good in four of the last ten years. Spring catch rates with electrofishing gear were below 60 fish/hour again in 2022. Spring catch rates have been below the 10-year average six of the last seven years. 2022 catch rates decreased from 2021. Densities of memorable size fish decreased slightly in 2022 and remain below the 10-year average for the last five years. The declines were attributed to the low recruitment rates in six of the last eight years. Also, RSD15 decreased slightly from 2021, and is below the 10-year average.

Wr's have been acceptable the last eight years and increased slightly in 2022 and remains around the 10-year averages. YOY LMB CPUE decreased and fell below the 10-year average. Fall sampling and data analysis trends increased from 2021, but most indices fell below the 10-year average for the fifth year in a

row. Fall CPUE YOY LMB increased in 2022 but remained below the 10-year average. These variances have been attributed to normal cyclic patterns which have historically been observed within Kentucky Reservoir. These data will continue to be closely monitored.

Electrofishing catch rates varied in each section of the reservoir:

	Section I		Section II		Section III	
Relative Value	Spring	Fall	Spring	Fall	Spring	Fall
CPUE	50.5	84.9	40.0	44.9	6.5	22.5
CPUE YOY	8.5	9.3	11.5	11.9	2.5	4.4
CPUE RSD15	13.5	11.2	13.5	8.7	2.5	2.3

Sixty-seven Largemouth Bass genetic samples were collected from electrofishing surveys in 2020 from the three stocked embayments. Eight, two, and two of the fish collected were pure FLMB, pure Northern LMB, and an FI Hybrid Bass, respectively. The pure FLMB bass were collected in all three embayments, the pure Northern LMB were collected in Eagle Creek, and F1 Hybrid Bass were collected in Blue Creek. All three embayments have been stocked with pure FLMB since 2015. No genetic samples were taken in 2022. The following table indicated the percentage of Largemouth Bass in Harmon, Eagle, and Blue creeks that had FLMB alleles present in years when genetic testing occurred.

	2016	2018	2020
Harmon	31	38	73
Blue	17	18	50
Eagle	20	22	44

The following table summarized Florida LMB stockings since 2015. Florida LMB were also stocked in Harmon Creek from 1998 – 2004. Those stockings were discontinued due to fish availability and to focus efforts on Chickamauga Reservoir, Region III.

	2015	2016	2017	2018	2019	2020	2021	2022
Harmon	17,115	53,048	50,559	50,624	51,004	87,096	63,729	51,408
Eagle	116,716	50,413	51,235	96,283	50,693	55,325	53,395	66,496
Blue	81,364	39,702	51,562	91,564	50,187	50,216	52,485	60,718
Total	215,198	143,163	153,356	232,471	151,884	192,637	169,609	184,622

Harmon Creek: 500 acres; Eagle Creek: 435 acres; Blue Creek: 227 acres. Beech River also received FLMB stocking with 48,011 fingerlings.

Largemouth Bass continues to be one of the most sought species by anglers. Fishing pressure and catch rates by anglers have increased from 2021. Creel data showed the fishing pressure continued to be higher in the northern section in 2022 by 22%. Catch rates for black bass were higher in the northern section (0.74 (northern) to 0.27 (southern) per hour catch rate), for 2022. Anglers continued to release approximately 99% of Largemouth Bass caught.

Anglers seeking Black Bass spent $8.10 ($7.67 in 2021) per hour and were willing to spend an additional 55% (61% in 2021) to fish for Black Bass on Kentucky Reservoir. The total value of the Black Bass fishery was $3,512,860 ($3,148,050 in 2021).

MANAGEMENT RECOMMENDATIONS: Continue with the 15-inch minimum size limit and the 5 fish per day aggregate creel limit.

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro Hours	6	6	6	6	6	6	6	6	6	6
Fall Electro Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Recruitment										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	0.2	1.3	0.8	0.7	1.5	1.3	1.7	1.8	4	1.7
Spring Density (n)	3	24	11	10	19	12	19	28	61	36
PSD	80	44	50	50	40	50	56	59	65	69
RSD Preferred	--	38	33	50	10	25	11	29	35	46
CPUE	0.5	4	1.8	1.7	3.2	1.9	3.2	4.7	10.2	6
CPUE ≥ Stock	0.3	2.7	1	1	1.7	0.6	1.5	2.8	6.2	4.3
CPUE ≥ Preferred	0	1.7	0.3	0.5	0.2	0.2	0.2	0.8	2.2	2
Fall Density (n)	17	12	6	10	41	30	8	51	39	11
Fall Total CPUE	1.7	1.8	--	1.8	3	5.3	1.7	5.2	5.2	1.2
Fall CPUE Substock	0.4	1	--	0.7	2.2	3.5	0.4	1.9	0.7	0.6
Fall CPUE>Stock	1.3	0.8	--	1.1	0.7	1.8	0.4	3.3	4.5	0.7
Fall CPUE > P	0.1	0.2	--	0.5	0.3	0.3	--	1	1.6	0.2
Relative Weight (Fall)										
Stock	83	86	--	--	77	92	94	90	88	89
Quality	68	80	--	--	85	77	79	87	82	96
Preferred	72	--	--	--	--	75	--	81	83	85
Memorable	--	70	--	--	70	85	--	68	79	79
Trophy	--	--	--	--	--	--	--	--	--	--
Fishing Success (Smallmouth only)										
Catch Rate	0.13	0.02	0.1	0.03	0.02	0.02	0.05	--*	0.08	0.07
Harvest Rate	0	0	0.02	0	0	0	0.01	--*	0	0
% Released	90	85	99	94.8	99	91.5	81	--*	98.3	95.7
Mean Weight	3.96	4.29	3.34	2.7	0	3.52	2.02	--*	--	--

FISHERY FORECAST:

The density of Smallmouth Bass remained low but has shown an increase in Kentucky Reservoir through 2021 with a decline in 2022, and quality fish have been caught during tournaments. In 2022 collections decreased to 36 and 11 (61 and 39 in 2021) Smallmouth Bass collected during Spring and Fall sampling, respectively.

Smallmouth Bass electrofishing catch rates have been historically low on Kentucky Reservoir, but 2020 and 2021 samples increased catch rates above the 10-year average. 2022 collections decreased from 2021 but remained above the 10-year average. 2022 creel data shows Smallmouth Bass harvest to be 0.07 fish/hour and catch and release remains less than 0.01 fish/hour. Percent effort (those anglers seeking smallmouth bass) has consistently been below 2%. These data reflect a low-density Smallmouth Bass population and a Black Bass population dominated by Largemouth Bass.

MANAGEMENT RECOMMENDATIONS:

No recommendations.

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro Hours	6	6	6	6	6	6	6	6	6	6
Fall Electro Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Recruitment										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	0	0.1	0.3	0.3	1.2	0.2	1.2	1	1.3	0.3
Spring Density (n)	5	43	25	24	28	2	29	12	33	23
PSD	80	33	74	86	43	--	64	17	64	38
RSD Preferred	0	3	4	9	19	--	9	0	16	5
CPUE	0.8	7.2	4.2	4	4.7	0.3	4.8	2	5.5	3.8
CPUE ≥ Stock	0.8	6.7	3.8	3.7	3.5	0.2	4.3	1	4.2	3.5
CPUE ≥ Preferred	0	0.2	0.2	0.3	0.7	0.2	0.3	0.4	0.7	0.2
Fall Density (n)	17	8	22	31	28	65	51	77	26	28
Fall total CPUE	2.6	1.2	4.7	3.6	3.3	6.5	8.6	9	2.9	6.5
Fall CPUE Substock	0.4	0.5	0.8	3	0.6	3.8	3.7	2	0.6	2.8
Fall CPUE ≥ Stock	2.3	0.7	3.9	0.9	2.7	2.8	4.9	7	2.2	3.7
Fall CPUE > P	0	0	0.4	0.1	0.3	0.2	0	0.3	0.1	0
Relative Weight (Fall)										
Stock	94	148	97	96	88	137	112	106	96	111
Quality	73	99	91	95	91	93	118	99	95	105
Preferred	--	--	106	87	85	91	91	94	90	105
Memorable	--	--	--	--	--	--	--	102	116	104
Trophy	--	--	--	--	--	--	--	--	--	--
Fishing Success (Spotted bass only)										
Relative Catch Rate	0.06	0.05	0.06	0.05	0.06	0.03	0.09	--*	0.09	0.08
Relative Harvest Rate	0	0	0	0.01	0	0	0.01	--*	0	0
% Released	89	88	92	85	96.6	100	88	--*	95	98
Mean Weight	0.94	1.1	0.94	1.48	1.26	--	1.07	--*	1.01	--

FISHERY FORECAST:

Spotted Bass have been inconsistent in electrofishing catch rates. Recruitment has been inconsistent over the last ten years and these data have impacted fish recruiting to adult sizes. Alabama Spotted Bass have impacted Largemouth and Spotted Bass densities in Parksville Reservoir, East Tennessee (Mike Jolley, personal communication). Genetic evaluations found the Alabama allele was present in none of the thirty-nine Spotted Bass submitted for analyses in 2022 (hybrid between Alabama, Smallmouth, and Spotted bass) on Kentucky Reservoir. Alabama Bass alleles have been consistently detected in Spotted Bass since 2018 in Pickwick Reservoir, just upstream of Kentucky Reservoir. Genetic samples are currently being taken on Spotted Bass and all potential hybrid Bass on all Tennessee River impoundments.

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey)										
Age-0 CPUE	--	--	--	0.6	--	--	--	--	16.8	--
Substock CPUE	7.4	13.3	16.1	0.6	2.5	6.2	7.7	5.5	17.1	18.7
Total CPUE	8.7	14.5	23.7	1.8	5.1	6.8	8.8	6.6	18.5	21
Net Nights	112	112	110	112	112	112	105	111	112	112
n	971	1,625	2,603	206	515	732	920	741	2070	2346
Fall Density (Electrofishing Survey)										
PSD	95	95	84	78	91	82	88	80	84	81
RSD-P	77	72	65	58	47	62	76	58	65	45
CPUE	63.3	40.5	45.3	16.7	28.7	6.1	12	23.5	9.8	41.6
CPUE ≥ Stock	63	40.5	41.9	16.5	27.9	5.3	10.5	18.4	9.3	32.9
CPUE ≥ MSL (10")	48.2	28.7	27.1	9.4	12.8	3.1	8.2	8.5	6	13.1
n	971	304	291	152	226	71	75	272	92	284
Fall Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Growth (Fall)										
Mean TL at Age-0	--	--	--	87	--	--	--	--	75	--
Mean TL at Age-2	--	--	--	241	--	--	--	--	265	--
Mortality										
Total Mortality	--	--	--	41% r2=0.76	--	--	--	--	46% r2=0.45	--
Relative Weight (Fall)										
Stock	120	113	97	101	90	106	112	106	96	108
Quality	103	106	105	106	101	99	102	103	92	104
Preferred	101	97	99	104	90	95	91	101	99	103
Memorable	95	96	100	99	87	96	96	99	97	102
Trophy	--	--	--	--	--	--	--	--	--	--
Angling Pressure (Angler Hours per Acre)										
All Crappie	4.56	3.58	3.59	2.93	3.79	1.87	2	--*	2.5	2.1
Fishing Success										
Crappie Catch Rate	2.02	1.95	1.95	1.53	3.22	1.39	1.43	--*	1.23	1.7
Crappie Harvest	1.02	0.92	0.79	0.55	1.07	0.43	0.61	--*	0.68	0.64
WC % Released	49	53	60	67	69	73	60	--*	42	59
WC Mean Weight	0.78	0.8	0.81	0.8	0.76	0.71	0.76	--*	0.78	0.81
Value of Fishery (Trip Expenditures in Thousands)										
All Crappie	3,080.10	1,804	1,947.20	1,189.30	1,496.20	964.3	974.4	--*	1,087.70	1,203.60

FISHERY FORECAST:

White Crappie have experienced erratic recruitment since 2000. The White Crappie population quality declined in 2017 but has rebounded to above 10-year averages in 2022. Preferred fish CPUE increased in 2022 but remained below the 10-year average. The previous decline in adult Crappie was attributed to reduced recruitment from 2016–2017, and the current increase is due to successful recruitment in 2019-2020. White Crappie have experienced above average reproductive success in 2021-2022.

Acceptable YOY/NN levels in sections I, II, and III were 2.0, 5.0, and 10.0, respectively. CPUE of YOY White Crappie in trap net surveys were shown in Table 1 below.

Table 1. CPUE young of year White Crappie by section collected in trap nets.

	2015	2016	2017	2018	2019	2020	2021	2022
Section 1	2.1	0.1	0.2	1.8	2.4	0.8	6.5	5.6
Section 2	4.4	0.2	3.4	8.2	11	6.7	15.9	14.0
Section 3	48.9	1.6	5	9.3	10.6	9.7	31.7	41.2

The percentage of White and Black Crappie ≥ 10 inches collected during electrofishing surveys were shown in Table 2.

Table 2. Percentage of Crappie ≥ 10 inches collected during electrofishing surveys.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
White Crappie	76.1	70.9	59.8	56.3	44.6	50.8	68.3	50.4	48.9	28.9
Black Crappie	45	35.1	20.7	33.1	30.6	55.2	40.9	31.1	26.8	24.4

Black Crappie densities have been comparable to White Crappie trap net densities since 2000 and densities have historically been highest in the most northern section (Section 1). Sectional percentage of Black Crappie was shown in Table 3.

Table 3. Percent Black Crappie densities by section determined from trap net surveys, 2013- 2022.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Section I	74	59	59	73	65	72	57	66	63	46
Section II	40	36	21	74	30	16	6	12	3	5
Section III	22	10	7	15	16	9	13	13	6	5

In comparison, Black Crappie comprised 71, 27, and 26% of crappie collected during 2022 fall electrofishing surveys in sections 1, 2 and 3, respectively. Black Crappie comprised 26% (11% in 2021) of the Crappie caught and 23% (9% in 2021) of the Crappie harvested by angler's reservoir wide.

Crappie were the second most sought species on Kentucky Reservoir in 2022. Catch rates by anglers have only been above 2.0 fish/hour in 2 of the last 10 years and was 1.70 Crappie/hour in 2022. In 2022, harvest rates (0.64/hr.) were down from 2021, and mean weights of Crappie (0.81 lbs.) remained the same. The poor recruitment and fishing pressure in the most Northern section (< 2.0 YOY/net night in four of the last seven years) will negatively impact angler harvest rates in the Big Sandy area; however 2021and 2022 had an above average catch rate of YOY Crappie in all three sections.

Sampling surveys showed the catch rate of Crappie $\geq$ 10-inches has increased but has remained below the 10-year average since 2016. Historical trap netting surveys showed over-all average recruitment of young-of-year White Crappie has been acceptable since 2012 with 2016 and 2017 less than acceptable levels. The 2018 and 2019 recruitment increased to the 10-year average and was a positive trend for the fishery. The 2021and 2022 recruitment increased and was above the 10-year average.

Relative weights (Wr) for White Crappie were indicative of a fishery with abundant prey and were at or above acceptable levels since 2018. Wr's were comparable to the 10-year average in most size classes. Black Crappie Wr's increased from 2021 and increased near the 10-year averages in most size classes. Sectional analysis of White Crappie ≥ 10 inches from fall electrofishing results were shown in Table 4.

Table 4. Sectional CPUE of White Crappie ≥10 inches from Fall electrofishing surveys.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Section 1	5.3	12.1	34.3	2.1	10.7	0.3	14.3	3.9	3.0	10.3
Section 2	42.2	57.3	40.5	12.8	5.4	1.3	0.7	6.3	7.1	12.5
Section 3	106	33.7	76.7	4.2	19.3	7.5	7.3	13.7	8.7	14.5

Black Crappie densities have appeared to remain consistent with relative catch rates (0.60/hr.), harvest rates (0.19/hr.), and mean length not measurable in 2022 due to lack of fish creeled. The majority of the fishing pressure for Crappie was in the Northern section at 95% (84% in 2021) and lake wide fishing pressure decreased in 2022 when compared to 2021 by 17%.

Anglers fishing for Crappie spent $5.34 per hour ($4.03 in 2021) fishing and were willing to spend an additional 34% (59% in 2021) to fish for Crappie on Kentucky Reservoir. The total value of the fishery was estimated at $1,822,840 ($1,725,940 in 2021). Anglers seeking Crappie in the Northern and the Southern section of the reservoir spent $5.35 ($3.55 in 2021) and $5.23 ($6.60 in 2021) per hour fishing for Crappie, respectively.

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey)										
Age-0 CPUE	--	--	--	0.3	--	--	--	--	2.9	--
Substock CPUE	1.9	3.4	2.4	0.3	0.2	1.6	1	0.7	3.2	1.4
Total CPUE	5	5.8	4.8	2.5	2.7	3.2	2.8	2	5.4	3
Net Nights	112	112	110	112	112	112	105	111	112	112
n	556	651	531	275	269	341	294	220	599	340
Fall Density (Electrofishing Survey)										
PSD	92	68	70	69	89	80	82	62	78	73
RSD Preferred	44	36	21	36	33	54	38	34	47	43
CPUE	29.8	58.4	64.9	16	23.2	13.6	16.4	17.3	12.9	20.1
CPUE ≥ Stock	27.5	58.1	56.9	15.5	23.2	13.2	17.9	15.6	11.1	18.5
CPUE ≥ MSL (10")	13.4	20.5	13.4	5.3	7.1	7.5	6.7	5.9	5.7	6.5
n	246	334	420	146	214	108	110	283	123	168
Fall Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
% BC	38	52	59	49	49	60	60	51	57	37
vs. WC										
Growth (Fall)										
Mean TL at Age-1	--	--	--	161	--	--	--	--	145	--
Mean TL at Age-2	--	--	--	220	--	--	--	--	208	--
Mortality										
Total Mortality		--	--	41% r2=0.84	--	--	--	--	42% r2=0.57	--
Relative Weight (Fall)										
Stock	91	111	97	95	88	102	107	104	89	94
Quality	93	93	90	103	93	97	89	100	89	100
Preferred	91	91	91	91	88	96	87	97	93	101
Memorable	96	88	77	93	88	97	84	96	92	97
Trophy	--	--	--	--	--	--	--	--	--	--
Fishing Success (Black Crappie only)										
Relative Catch Rate	0.42	0.54	0.56	0.62	0.85	0.45	0.56	--*	0.14	0.6
Relative Harvest	0.23	0.26	0.2	0.21	0.3	0.14	0.25	--*	0.07	0.19
BC % Harvested	41	50	65	68.8	66.8	72.1	58.4	--*	50.9	24
BC Mn Wt	0.77	0.78	0.78	0.78	0.73	0.67	0.73	--*	0.81	0.8
Value of Fishery (Trip Expenditures in Thousands)										
All Crappie	3,080.10	1,804.60	1,947.20	1,189.30	1,496.20	964.3	974.4	--**	1087.7	1,203.60

Redear Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net)										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	2.7	18.5	9.1	0.2	1.6	1.8	1.2	0.5	1	4.1
Total CPUE	3.3	19.2	10	0.8	1.9	2	1.5	1	1.4	4.8
Net Nights	112	112	110	112	112	112	105	111	112	112
n	367	2,151	1,094	92	196	212	154	106	161	541
Spring Density (Electrofishing Survey)										
PSD	91	87	81	73	39	89	90	74	48	51
RSD Preferred	48	42	37	39	6	51	74	59	25	44
CPUE	9.8	50.2	20.8	73.3	39	27.4	24.2	17	10.3	11.5
CPUE ≥ Stock	9.7	43.7	17.7	66.8	38.8	27.2	23.8	16.5	10	10.5
CPUE ≥ Preferred	4.7	21.2	6.5	26.2	2.5	14	18.5	10	2.5	4.7
n	59	301	125	440	234	171	145	102	62	69
Spring Hours	6	6	6	6	6	6	6	6	6	6
Growth										
Mean TL at Age-1	--	--	--	--	--	--	--	--	--	--
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	--	--	--	--	--	--	--
Angling Pressure (Angler Hours per Acre)										
Sunfish	0,69	0.42	0.69	0.61	0.63	0.28	0.24	--*	0.4	0.3
Fishing Success (Redear Sunfish only) * Catch rate for anglers seeking redear sunfish										
Relative Catch Rate	0.27	0.41	0.86*	0.24*	0.22	0.39	0.15	--*	0.5	0.12
Relative Harvest Rate	0.23	0.3	0.61*	0.12*	0.16	0.23	0.11	--*	0.2	0.07
Redear Mean Weight	0.48	0.41	0.5	0.4	0.57	0.44	0.57	--*	0.59	0.5
Redear % Released	27	35	29	49	33	49	28	--*	54	40
Value of Fishery (Trip Expenditures in Thousands)										
Sunfish	212.3	193	379	9.2	3.4	69.6	114	--*	310.8	232.1

FISHERY FORECAST

Angler Redear Sunfish catch rates (0.12/hr.) and harvest rates (0.07/hr.) have been inconsistent from year to year on Kentucky Reservoir. This inconsistent trend along with inconsistent Sunfish fishing pressure since 1999 and variances in CPUE through electrofishing surveys have resulted in management concerns for Redear Sunfish. Redear Sunfish have the potential to be over-harvested due to concentration of their spawning areas. Once these areas have been located anglers tend to harvest most of the fish caught which can negatively impact populations in specific areas. Since Redear Sunfish populations were not multiple spawners, the species has been prone to over-harvest.

Redear Sunfish densities increased in 2022 but continue to be below historic data and sub-stock CPUE increased but remains below the 10-year average since 2016. The CPUE of preferred fish had increased from 2017-2019 and was above the 10-year average but declined below the 10-year average in 2020-2022. Overall electrofishing and trap net catch rates increased slightly in 2022. Table 5 showed historic sectional electrofishing catch rates and RSD9 results.

Table 5. Sectional CPUE and RSD9, Redear Sunfish from Spring electrofishing surveys.											
CPUE (Fish/hr.)	**2018**	**2019**	**2020**	**2021**	**2022**	**RSD9**	**2018**	**2019**	**2020**	**2021**	**2022**
Section 1	7.5	19.5	19	11	19		87	92	54	25	24
Section 2	39.7	21	24	11	10		69	98	73	45	95
Section 3	34	32	8	9	5.5		21	48	25	0	0

Trip expenditure was shown in the Bluegill section below and included all Sunfish species.

MANAGEMENT RECOMMENDATIONS: Provide Redear Sunfish information to the angler and media to increase opportunity for this species. The 30 fish creel limit for Redear Sunfish implemented in 2008 was reduced to a 20 fish creel limit in 2013.

Bluegill

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net)										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	11.4	11.8	12.6	4.9	4.4	2	8.7	4	2.4	13.3
Total CPUE	15.9	20.7	16.9	11.6	7	9.4	12	6.7	10.8	16.6
Net Nights	112	112	110	112	112	112	105	111	112	112
n	1,775	2,318	1,863	1,298	711	1,007	1,261	749	1206	1860
Spring Density (Electrofishing Survey)										
PSD	53	47	47	36	21	37	48	28	26	26
RSD Preferred	11	5	2	2	1	1	4	0	0	5
CPUE	40.3	113.5	86.3	237.2	107.8	57.7	30.7	100	71.2	28.2
CPUE ≥ Stock	38	109.8	70	207.3	99	55.8	29.3	96.5	55.2	25.3
CPUE ≥ Preferred	4	5.5	1.7	5.2	1.3	0.8	1	0.2	0.2	1.2
n	242	681	518	1,423	647	361	184	600	427	169
Spring Hours	6	6	6	6	6	6	6	6	6	6
Angling Pressure (Angler Hours per Acre)										
Sunfish	0.69	0.42	0.69	0.61	0.63	0.28	0.24	--*	0.4	0.3
Fishing Success (Bluegill only)										
Relative Catch Rate	2.75	3.57	3.97	3.54	3.22	3.87	2.16	--*	2.78	2.77
Relative Harvest Rate	2.07	1.83	2.43	2.02	2.02	2.63	1.42	--*	1.46	1.66
Mean Weight	0.43	0.44	0.38	0.3	0.39	0.38	0.4	--*	0.3	0.38
Percent Released	40	58	60	49	50	42	46	--*	45	49
Value of Fishery (Trip Expenditures in Thousands)										
Sunfish	212.3	193	379	244.2	223.5	69.6	114	--*	310.8	232.1

FISHERY FORECAST:

Historically the Bluegill fishery has been typical of Bluegill fisheries seen in other west Tennessee reservoirs. CPUE decreased in 2021 and 2022 and decreased below the 10-year average, showing yearly volatility in species success. Sampling in 2022 was negatively impacted by weather patterns and water level fluctuations. Electrofishing PSD and RSD8 values were consistent in 2022 and remains below the 10-year average. Trap net CPUE and total number increased from 2021 and increased to or above the 10-year average. CPUE for Bluegill has been inconsistent with electrofishing gear over the last 10 years with a decline seen in 2021and 2022 and remains below the 10-year average. Trap net CPUE increased to the 10-year average and continued the trend in 2022 with an increase in CPUE. This fishery will continue to be monitored.

Anglers spent $7.08 ($7.21 in 2021) per hour fishing for Sunfish and were willing to spend an additional 40% (33% in 2021) fishing for Sunfish on Kentucky Reservoir. The total value of the Sunfish fishery was estimated at $383,980 ($412,360 in 2021).

MANAGEMENT RECOMMENDATIONS:

Sauger

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment(Gillnet) **PW/Duck**										
Age-1 CPUE	1.52	26.6	--	0.08	--	--	--	--	--	8.7
Substock CPUE	0	0	0	0	0	0	--	--	0	0
Net Hours	5.25	5.1	18.4	7.8	37.2	43.5	--	--	10.5	7.7
n	40	191	165	116	82	79	--	--	168	176
Density										
PSD	-	40	--	34	57	87	--	--	92	61
RSD Preferred	--	22	--	20	11	48	--	--	27	15
CPUE	9.4	37.6	9	8.3	1.8	1.7	--	--	2.8	2.9
CPUE ≥ Stock	9.4	37.6	9	8.3	1.8	1.7	--	--	2.8	1.8
CPUE ≥ MSL-14" 15" 2014	1.9	5.2	3.9	1.6	2.4	0.8	--	--	0.8	0.4
Growth										
Mean TL at Age-1	295	281	--	278	--	--	--	--	--	286
Mean TL at Age-3	381	366	--	415	--	--	--	--	--	422
Mean TL at Age 5	--	--	--	--	--	--	--	--	--	--
Mortality										
Total Mortality	--	70% R2=0.96	--	72% r2=0.99	--	--	--	--	--	--
Wr (Winter)										
Stock	--	--	130	87	86	94	--	--	84	--
Quality	--	--	96	86	84	94	--	--	89	--
Preferred	--	--	95	100	86	96	--	--	92	--
Memorable										
Trophy										
Angling Pressure (Angler Hours/Acre)										
Sauger	0.11	0.24	0.1	0.16	0.12	0.05	0.01	--*	0.17	
Fishing Success										
Catch Rate	0.57	0.58	0.62	0.81	0.8	1.01	--	--*	0.87	
Harvest Rate	0.2	0.18	0.3	0.27	0.26	0.36	--	--*	0.18	
Mean Weight	1.65	1.46	1.74	1.49	1.39	1.32	--	--*	--	
% Released	68	71	58	70	73	65	--	--*	77	
Value of Fishery (Trip Expenditures in Thousands)										
Sauger	171.8	286.6	62.9	82.4	54.7	40.1	2.5	--*	68.2	

FISHERY FORECAST:

The Sauger fishery provided winter fishing opportunity for anglers and the population continued to persevere, regardless of fishing pressure, discharge, or water levels. Fishing pressure appeared to be low, however the majority of that fishing pressure occurred in the area below the dam. In addition, a large percentage of the Sauger population migrated below the dam to spawn. The fact high fishing pressure and the Sauger population occurred in the same area resulted in high total mortality rates seen with this population (average 72% in the last 10 years). Recruitment to catchable size increased in 2014 and 2015 and exceeded the 10-year average - possibly due to stocking Sauger in 2013 (120,000) and 2014 (205,197) but fell below the 10-year average in 2016, 2017 and 2018. This reduction may be attributed to no stocking taking place after 2015. The CPUE of stock size fish and catch rates of fish ≥ 15 inches fell below 10-year averages.

Sauger creel data was significantly impacted by rainfall and discharge amounts through Pickwick and

Kentucky Dams, and COVID-19 restrictions therefore, the following data was unavailable for 2019-2020. (Percentage of Sauger harvested larger than 400 mm – 0% in 2022; 0% in 2021; 0% in 2020; 0% in 2019; 88% in 2018; 57% in 2017; 71% in 2016).

Most fishing pressure occurred in the southern section. Historical data revealed harvest rates were higher in the Southern section and percent effort was greater in the Southern section. During the last several years, discharge through the gates has limited Sauger fishing below Pickwick Dam.

Genetic analysis was conducted on Kentucky Reservoir in 2006 to determine if genetic differences existed between the Sauger population at Pickwick and the Sauger population at Duck River. Creel data has shown that Sauger harvested at Duck River were larger than those harvested at Pickwick. Electrophoretic results showed very little variation between the two populations. In fact, there was little variation between the Sauger populations sampled in other Tennessee reservoirs. The size differences harvested by anglers were attributed to lower fishing pressure and increased numbers of larger Sauger in the Duck River area.

2022 Sauger collection efforts produced 176 individual fish with average relative weights and small size structure indicating impacts of high angling pressure. Creel results are consistent with past years and were slightly above the 10-year average for catch rate 1.27/hr. (0.87/hr. in 2021) and harvest rate 0.24/hr. (0.18/hr. in 2021).

Anglers spent $6.68 ($3.82 in 2021) per hour fishing for Sauger and were willing to spend an additional 64% (72% in 2021) to fish for Sauger on Kentucky Reservoir. The total value of the Sauger fishery was estimated at $146,940 ($117,410 in 2021).

MANAGEMENT RECOMMENDATIONS:

Sauger fishing has been poor over the last several years with low recruitment and low densities of adult fish. However, the angler viewpoint of the Sauger fishery was still positive as indicated by the willingness to spend an additional 80% to fish for Sauger.

A 15-inch minimum size limit with a 10 fish per day creel limit was implemented on March 1, 2014. Increasing the size limit will increase the protection of spawning females from 14% at 14” to 31% at 15”. The increased protection for adult females may help improve survival and recruitment of age 1 fish into the population. In addition, 45,000, 128,426, 0, 120,956, 205,197, and 133,294 Sauger were stocked below Pickwick Dam in 2010, 2011, 2012, 2013, 2014, and 2015 respectively. However, without a minimum size limit, the Sauger fishery would be non-existent in Kentucky Reservoir.

Stock Walleye below Pickwick Dam in 2023 at a rate of 40,000/year. Walleye stocking recommendation began in 2020 but was not initiated due to hatchery production issues. Statewide regulations would remain in effect. This addition will supplement the Sauger fishery.

Blue Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Gillnet Survey) PW/Duck										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	--	--	--	--	--	--	--	--	<0.1	--
Net Hours	--	5.1	18.4	7.8	37.2	43.5	--	--	10.5	7.7
n	--	0	1	3	62	0	--	--	3	--
Angling Pressure (Angler Hours per Acre)										
Catfish	2.86	2.07	2.63	1.91	1.8	1.65	1.14	--*	1.97	1.5
Fishing Success										
Catch Rate	1.52	1.04	1.27	0.75	1.08	1.43	0.7	--*	0.57	0.86
Harvest Rate	1.13	0.8	0.93	0.62	0.93	1.17	0.51	--*	0.46	0.66
% Released	24	24	25	20	18	18	32	--*	14	26
Mean Weight	2.3	2.01	2.9	1.92	2.21	2.97	2.92	--*	2.59	2.55
Value of Fishery (Trip Expenditures in Thousands)										
Catfish	2,177.80	974.5	1,288.60	647.9	695.1	549.7	451.6	--*	785.3	708.9

FISHERY FORECAST:

The forecast for the catfish fishery remained consistent. Angler pressure decreased but catch rates increased from 2021 and were below the 10-year average. Over 61% (50% in 2021) of the Catfish caught were Blue Catfish, followed by Channel Catfish at 39% (49% in 2021) and Flathead Catfish (<1%). The majority of the Catfish pressure was in the Northern section at 63% in 2022, which is a significant change from past years where the Southern section has been more heavily fished (66% in 2021 Southern Section).

Anglers spent $4.38 ($3.69 in 2021) per hour fishing for Catfish and were willing to spend an additional 36% (75% in 2021) to fish for Catfish on Kentucky Reservoir. The total value of the Catfish fishery was estimated at $1,115,420 ($1,373,070 in 2021). Trip expenditures for the Northern section and the Southern section were $5.12 ($3.06 in 2021) and $3.11 ($4.01 in 2021) per hour, respectively.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	5.25	5.1	18.4	7.8	37.2	43.5	--	--	10.5	7.7
n	1	2	2	3	0	3	--	--	0	0
Angling Pressure (Angler Hours per Acre)										
Striped Bass	0.2	<0.1	0.03	0.06	<0.1	<0.1	<0.1	--*	0.05	0.12
Fishing Success (Striped Bass only)										
Catch Rate	0.02	0.27	0.33	0.32	--	--	--	--*	--	0.59
Harvest Rate	0	0.04	0.11	0.22	--	--	--	--*	--	0
Mean Weight	5.05	2.96	15.44	7.29	--	--	--	--*	--	--
Percent released	80	80	77	27.5	--	--	--	--*	74	100
Value of Fishery (Trip Expenditures in Thousands)										
Striped Bass	14.4	16.6	29.9	63.9	--	--	4	--*	28.7	48.4

Hybrid Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	5.25	5.1	18.4	7.8	37.2	43.5	--	--	10.5	7.7
n	1	0	1	5	6	6	--	--	0	0
Angling Pressure (Angler Hours per Acre)										
Hybrid Striped Bass	--	--	--	--	--	--	--	--*	--	--
Fishing Success (Hybrid Striped Bass only)										
Catch Rate	0	0	--	--	--	--	--	--*	--	--
Harvest Rate	0	0	--	--	--	--	--	--*	--	--
Mean Weight	2.45	--	--	--	--	--	--	--*	--	--
Percent released	33	--	--	--	--	--	--	--*	--	--

FISHERY FORECAST:

The fishery for Striped Bass and Hybrid Striped Bass were dependent upon either natural reproduction or migration from other waters stocked with these species. Striped Bass or Cherokee Bass have not been stocked in Kentucky Reservoir since the late 1980's.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

White Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Hours	5.25	5.1	18.4	7.8	37.2	43.5	--	--	10.5	7.7
n	46	7	30	66	29	79	--	--	103	61
Recruitment (Gillnet Survey)										
Substock CPUE	0	0	0	0	0	0	0	0	0	0
PSD	100	71	100	97	93	97	--	--	100	100
RSD Preferred	65	57	87	90	69	56	--	--	91	70
CPUE	8.1	1.4	1.6	3.9	0.7	1.9	--	--	1.7	1
CPUE ≥ Stock	8.1	1.4	1.6	3.9	0.7	1.9	--	--	1.7	1
CPUE ≥ Preferred	4.9	0.8	1.4	3.5	0.5	1	--	--	1.5	0.7
Growth										
Mean TL at Age-2	--	--	--	--	--	--	--	--	--	--
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--
Relative Weight										
Stock	--	--	--	96	--	92	--	--	96	--
Quality	--	--	--	80	--	87	--	--	97	--
Preferred	--	--	--	101	--	92	--	--	96	--
Memorable	--	--	--	98	--	83	--	--	103	--
Trophy	--	--	--	--	--	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	--	--	--	--	--	--	--
Angling Pressure (Angler Hours per Acre)										
White Bass	0.13	0.19	0.17	0.29	0.18	0.07	0.04	--*	0.12	0.02
Fishing Success (White Bass only)										
Catch Rate	2.11	2.67	2.39	1.37	2.1	0.65	1.98	--*	1.55	1.96
Harvest Rate	1.12	1.59	1.54	0.86	0.65	0.38	1.3	--*	0.73	1.02
Mean Weight	1.11	0.99	1.2	1.31	1.11	1.07	0.56	--*	--	1.04
Percent Released	65	53	63	59.7	88.7	87	78	--*	60	95
Value of Fishery (Trip Expenditures in Thousands)										
White Bass	200.8	169.3	119.8	125.7	63.9	37.3	45.1	--*	54.2	13.1

FISHERY FORECAST:

The White Bass fishery was dependent on discharge and water levels at the spawning areas (usually below dams). Anglers seeking this species experienced a boom-bust type fishery and recruitment to older ages was limited. In 2016, total CPUE exceeded historic data and preferred size fish appeared to be abundant but declined in 2017. Catch rates increased in 2018 and declined again in 2019 to show volatility in the population. 2020 catch rates are undetermined due to incomplete data analyses because of COVID-19 restrictions. 2022 catch rates and harvest rates were comparable to the 10-year average. Historically, fishing pressure for White Bass occurred in the Southern section with >99% (>99% in 2021) according to anglers interviewed.

Anglers seeking this species spent $7.69 ($4.03 in 2021) per hour fishing for this species and were willing to spend an additional 54% (59% in 2021) to fish for the True Basses on Kentucky Reservoir. The total value of the fishery was estimated at $28,570 ($86,190 in 2021).

MANAGEMENT RECOMMENDATIONS:

The creel limit was reduced to 15 in 2005. Work with the Tennessee Valley Authority to identify critical spawning periods of White Bass and identify discharge rates and water levels necessary for successful white bass spawning and recruitment. Continue with the 15 fish creel limit for White Bass.

Yellow Perch

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment										
Substock CPUE	--	--	--	--	--	--	--	--	--	--
Spring Density (n)	0	0	4	6	9	6	1	0	4	0
PSD	--	--	--	100	--	50	--	--	--	--
RSD Preferred	--	--	--	100	--	50	--	--	--	--
CPUE	--	--	--	1	1.5	1	0.2	--	0.7	--
CPUE ≥ Stock	--	--	--	1	1.5	1	0.2	--	0.7	--

FISHERY FORECAST:

Reports have been received that Yellow Perch were sought by a small percentage of anglers and larger fish were being caught in the mouth of major creeks. Reports have been received that fish up to one pound have been harvested. However, the fishery is nearly non-existent in the reservoir and most of the fish collected during electrofishing surveys were less than 10-inches.

Gizzard Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fall Electro Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Recruitment										
CPUE < 150 mm	17.9	9.7	45.6	5.3	5.5	7.3	9	7.1	6	6
CPUE ≥ 280 mm	50.4	6	4.3	0.5	2	8.7	4.3	2.6	2.8	3.6
Density										
Fall total CPUE	74.4	53.2	99.7	35.8	50.6	48.6	34	47.3	32	26.5
Fall CPUE Substock	24	6.4	58.1	18.2	6.9	8.4	11.8	13.5	10.7	8.9
Fall CPUE ≥ Stock	50.4	46.8	41.6	22.6	43.6	40.2	22.5	33.8	21.3	17.6
Fall total collected (n)	615	318	702	299	428	351	198	359	218	181

Discussion:

CPUE of adult and YOY Gizzard Shad has fluctuated in the 21st century with apparent higher densities in 2015. Approximately 0, 24, and 44% (15, 26, and 79 % in 2021) of the Gizzard Shad collected in sections 1, 2 and 3, respectively were substock. Since Invasive Carp densities have increased and compete with Shad for food, relative weight has been collected during fall surveys for Gizzard Shad. Sectional Wr values for Gizzard Shad were shown in Table 6.

Table 6. Sectional analysis of Wr values for Gizzard Shad from fall electrofishing surveys.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Section 1	91	75	80	92	98	96	101	103		
Section 2	89	81	80	93	92	94	99	89		
Section 3	85	100	87	92	89	96	101	94		

Sectional analysis was emphasized for both Shad species from 2014 through 2022 with targeted samples showing greater catch rates. Targeted samples were defined as effort directed toward Shad. Once 100 to 120 individuals have been collected, time recorded, and catch rate determined from that time period for the targeted sample. Table 7 depicted the targeted and non-targeted CPUE for both Gizzard and Threadfin Shad.

Table 7. Sectional CPUE and Targeted CPUE for gizzard and threadfin shad.

Year	Species	Section 1 (Total CPUE)	Section 2 (Total CPUE)	Section 3 (Total CPUE)	Section 1 (Targeted CPUE)	Section 2 (Targeted CPUE)	Section 3 (Targeted CPUE)
2022	Gizzard	34.8 (1.9 hrs.)	37.0 (2.4 hrs.)	18.5 (2.2 hrs.)	47.8 (0.7 hrs.)	13.9 (1.3 hrs.)	27.3 (0.4 hrs.)
	Threadfin	53.6 (1.9 hrs.)	32.8 (2.4 hrs.)	8.7 (2.2 hrs.)	100.0 (0.7 hrs.)	83.9 (1.3 hrs.)	115.9 (0.4 hrs.)
2021	Gizzard	29.7 (3.3 hrs.)	16.9 (2.7 hrs.)	44.8 (1.8 hrs.)	37.2 (1.8 hrs.)	21.2 (1.7 hrs.)	66.0 (1.0 hrs.)
	Threadfin	25.6 (3.3 hrs.)	30.2 (2.7 hrs.)	23.7 (1.8 hrs.)	180.4 (0.56 hrs.)	120.8 (1.2 hrs.)	143.6 (0.39 hrs.)
2020	Gizzard	38.3 (4.75 hrs.)	28.9 (3.74 hrs.)	65.5 (3.21 hrs.)	35.1 (2.08 hrs.)	62.8 (0.78 hrs.)	130.7 (0.75 hrs.)
	Threadfin	32.2 (4.75 hrs.)	38.5 (3.74 hrs.)	28.0 (3.21 hrs.)	193.5 (0.46 hrs.)	66.9 (1.6 hrs.)	184.0 (0.25 hrs.)
2019	Gizzard	29.1 (2.1 hrs.)	30.0 (1.5 hrs.)	39.3 (2.6 hrs.)	44.2 (0.8 hrs.)	28.5 (1.3 hrs.)	75.8 (1.2 hrs.)
	Threadfin	30.0 (2.1 hrs.)	71.2 (1.5 hrs.)	26.1 (2.6 hrs.)	130.0 (0.3 hrs.)	95.4 (1.3 hrs.)	56.7 (1.2 hrs.)
2018	Gizzard	57.2 (2.6 hrs.)	48.0 (1.0 hrs.)	43.4 (3.6 hrs.)	112.1 (1.9 hrs.)	63.6 (1.1 hrs.)	52.7 (2.6 hrs.)
	Threadfin	96.1 (2.6 hrs.)	326.0 (1.0 hrs.)	125.4 (3.6 hrs.)	716.7 (1.8 hrs.)	1,000+(1.0 hrs.)	130.4 (2.7 hrs.)
2017	Gizzard	60.4 (3.16 hrs.)	26.7 (4.21 hrs.)	83.7 (1.75 hrs.)	121.8 (1.65 hrs.)	56.5 (1.61 hrs.)	87.3 (1.5 hrs.)
	Threadfin	92.2 (3.16 hrs.)	15.3 (4.21 hrs.)	157.3 (1.75 hrs.)	188.8 (1.66 hrs.)	157.5 (1.35 hrs.)	296 (1.0 hrs.)
2016	Gizzard	37.6 (2.28 hrs.)	61.2 (1.78 hrs.)	47.2 (3.5 hrs.)	76.4 (1.1 hrs.)	123.9 (0.88 hrs.)	70.7 (1.5 hrs.)
	Threadfin	89.8 (2.28 hrs.)	72.3 (1.78 hrs.)	18.3 (3.5 hrs.)	266.7 (0.72 hrs.)	138.6 (0.88 hrs.)	66.9 (1.3 hrs.)
2015	Gizzard	144.9 (2.46 hrs.)	55.3 (3.27 hrs.)	98 (1.0 hrs.)	264.7 (1.5 hrs.)	68.1 (2.6 hrs.)	202 (0.5 hrs.)
	Threadfin	18.3 (2.46 hrs.)	30.7 (3.27 hrs.)	76 (1.0 hrs.)	54.7 (0.95 hrs.)	93.3 (0.89 hrs.)	228 (0.5 hrs.)
2014	Gizzard	46 (2.89 hrs.)	87.1 (1.26 hrs.)	26.9 (2.25 hrs)	62 (1.5 hrs.)	80 (1.3 hrs.)	80.7 (1.5 hrs.)
	Threadfin	45.7 (2.89 hrs.)	100.6 (1.26 hrs.)	22.7 (2.25 hrs.)	94.5 (1.1 hrs.)	119.4 (0.98 hrs.)	68 (1.5 hrs.)

Threadfin Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fall Electro Hours	7.3	6.79	6.73	7.56	9.13	8.2	6.1	11.7	7.8	6.48
Density										
Fall CPUE < 75 mm	47.3	46.2	30.3	40	44.8	84.3	37.8	21.2	7.7	24.7
Fall Total CPUE	108.2	55.7	34.8	35.3	73.3	124.9	36.4	31.9	30	42.9
Fall Total collected (n)	671	325	252	401	680	975	241	327	302	278

Discussion:

CPUE of Threadfin Shad has shown to be inconsistent between sections and collections from year to year. Size distributions were similar between sections and Threadfin Shad were collected at preferred sizes for predators. The over-all density of Threadfin Shad was above the 10-year average. In 2022, densities increased but total CPUE remained below the 10-year average. The forage fish populations remained an important aspect in the management of Kentucky Reservoir.

Invasive Carp

	627 2019	2020	2021	2022
Net Hours	1504.3	1029.3	1065.2	1065.2
Number collected				
Silver Carp	237	59	137	154
Grass Carp	26	17	4	11
Bighead Carp	7	2	12	3
Black Carp	0	0	0	0
Silver Carp Collected (mm)				
≤ 250	0	0	0	0
251 – 475	0	0	0	0
476 - 650	0.13 (195)	0.01 (10)	0.003 (3)	0.002 (2)
≥ 651	0.03 (42)	0.05 (49)	0.13 (134)	0.14 (152)
Shock Hours		12	19.8*	19.8
Number collected				
Silver Carp		139	31	43
Grass Carp		5	0	0
Bighead Carp		0	0	0
Black Carp		0	0	0
Silver Carp Collected (mm)				
≤ 250		0	0	0
251 – 475		0	0	0
476 - 650		1.33 (16)	0.10 (2)	0.10 (2)
≥ 651		10.25 (123)	1.46 (29)	2.07 (41)

*Boat electrofishing was replaced by dozer trawls in 2021.

Discussion:

Adult Bighead, Grass, Black, and Silver Carps (invasive carp) have been documented in Kentucky Reservoir. Experimental gill nets and dozer trawls were utilized in Summer and Fall of 2022. These efforts along with collaborative efforts with U. S. Fish and Wildlife Service, Tennessee Valley Authority, U. S. Army Corp of Engineers, US Geological Survey, Kentucky Department of Fish and Wildlife Resources, Mississippi Department of Wildlife, Fisheries, and Parks, and Alabama Wildlife, and Freshwater Fisheries Division have been utilized to accomplish a basin wide management strategy for the Tennessee River System. Larval sampling, larval light traps, and mini-fyke nets have also been utilized during an intern project since 2017, to document natural reproduction. These sampling surveys have not revealed natural reproduction since 2015. Additional data associated with the intern project will be available in the Invasive Carp Report.

Gill net standardized sampling was initiated in spring 2018 and continued in 2022 with gill net sampling conducted in five embayments (24 individual net sites using 91-meter gill nets; each net comprising 30.5-meter sections of 76, 102, and 127 mm mesh). Overall CPUE was 66 and 88 Silver Carp collected in July and October, respectively. 83% of Silver Carp collected were collected in the 102 mm mesh size.

Dozer trawls were utilized in Summer and Fall of 2022 to replace standardized electrofishing. Dozer trawls consisted of 125 (5-minute/sample) samples conducted throughout the reservoir. A total of 43 Silver Carp were captured with a CPUE of 0.32 SVCP/5-min trawl. During the summer, catch rates increased in upstream sections compared to downstream sections. During the fall, catch rates were dispersed throughout the reservoir with catch rates increasing in upstream sections compared to summer. Surface area and depth are limiting factors to the success of the dozer trawl.

Other Species Collected During Sampling, 2022

Species	Number Collected Standardized Sampling
Black Crappie	42
Blue Catfish	1
Bluegill	18
Channel Catfish	4
Flathead Catfish	1
Freshwater Drum	10
Gizzard Shad	165
Largemouth Bass	35
Logperch	2
Longear Sunfish	1390
Orangespotted Sunfish	79
Redbreast Sunfish	1
Redear Sunfish	7
Sauger	1
Shortnose Gar	1
Smallmouth Redhorse	21
Spotted Bass	17
Spotted Gar	9
Spotted Sucker	7
Threadfin Shad	889
Warmouth	75
White Crappie	49
Yellow Bass	99

2022 Water Quality Monitoring

In 2022, summer air, water temperatures, and rain fall were average when compared to historical records. Daily water quality measurements are taken by Tennessee Valley Authority on Kentucky Reservoir and indicated average water quality parameters.

Sampling Stations – DR 26.0 and BR 17.7

Pickwick Reservoir - 2022

Description

Area (acres): **TN: 6,159; TOTAL: 43,100 Mean Depth (feet): 21' Shoreline (miles): Total - 496**

Counties: Hardin Reservoir Length: TN – 6 miles; Total: 52 miles Drainage Area: 32,820 sq.mile

Total Fishing Effort (angler hours): 65,114 Total Value by Anglers: $900,930

Summer Pool: 414.0 MSL Winter Pool: 408.0 MSL Impounded: 1938

Management Strategies:

***Striped Bass/Hybrid Striped Bass*:** 15" MLL, 2 fish – 1987

***Crappie*:** 10 fish creel limit – 1989
9" MLL, 30 fish creel – 1997

LMB: Creel limit reduced from 10 to 5 - 1997
15" MLL, 5 fish creel – 2004

White Bass: 30 fish creel limit - 1989
Creel limit reduced to 15 - 2005

Redear Sunfish: 20 fish creel limit - 2008

SMB: 15" MLL - 2003 – 2007
18" MLL – 2008
15" MLL – 2013

Sauger: 15" MLL, 15 fish creel – 1998
15" MLL, 10 fish creel - 2001

Angling Pressure (Angler Hours per Acre)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Angler Pressure	14.7	18	14.7	13.5	14.7	14.2	10	*	9.4	10.6
Black Bass (LMB,SPB)	7.5	13	11.7	10.5	11.4	11	8.4	*	6.2	8.3
Smallmouth	NA	0.04	--	--	--	--	--	*	--	--

Total Value of Fishery (Thousands)

Black Bass (LMB, SPB)	1,176	769.7	796.2	736.8	811.6	1,207.60	648.5	*	518.3	824.4
Smallmouth	NA	2	--	--	--	--	--	*	--	--

NOTE: - In 2020 COVID-19 protocols prevented creel clerks from collecting catch, harvest, and economic data from April – December resulting in incomplete data analyses. These missing data will be identified with an asterisk in the tables. Complete creel surveys resumed in 2021.

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Fall Electro Hours	1.69	2.53	2.62	2.27	1.82	1.6	1.6	2.4	2.6	2.9
Recruitment										
Age-1 CPUE	--	--	--	65.9	--	**--**	--	--	--	--
Substock CPUE	19.3	27.3	11.3	8.7	9.1	6	6	2	7.3	1.3
Spring Density (n)	173	171	141	85	186	164	114	88	116	78
PSD	74	74	78	83	64	64	85	88	96	89
RSD Preferred	27	28	27	35	13	26	25	29	56	59
CPUE	115.3	114	94	56.7	88.5	109.3	76	58.7	77.3	52
CPUE ≥ Stock	96	86.7	82.7	48	79.3	103.3	70	56.7	70	50.7
CPUE ≥ MSL (15")	26	40	22	16.7	10	27.3	8.7	16.7	39.3	30
Fall Density (n)	178	303	95	130	186	84	109	90	90	94
Fall Total CPUE	157.2	112.9	40.9	48.6	88.5	50.1	54.5	42.5	25.1	25
Fall CPUE Substock	33.7	12.2	11.3	10	9.1	12.4	2.7	10.8	2.5	3.4
Fall CPUE>Stock	123.6	100.7	29.5	48.7	79.3	38.3	51.7	31.7	22.6	21.7
Growth										
Mean TL at Age-1 (mm)	--	--	--	194	--	--	--	--	168	--
Mean TL at Age-3 (mm)	--	--	--	351	--	--	--	--	345	--
Relative Weight										
Stock	97	106	85	99	97	94	94	94	95	99
Quality	91	94	86	103	100	93	98	94	82	88
Preferred	89	81	85	96	96	99	92	94	94	97
Memorable	94	94	84	88	91	103	91	94	90	86
Trophy	--	--	--	--	--	**--**	--	--	--	--
Mortality										
Total Mortality	--	--	--	23% r2=78	--	--	--	--	23% r2=48	--
Fishing Success										
Catch Rate	1.71	1.2	0.97	0.84	1.25	1	0.95	*	0.63	0.42
Harvest Rate	0.07	0.1	0.08	0.06	0.07	0.03	0.06	*	0.04	0.02
% Released	94	89	89.7	93.2	94.5	97.1	93.7	*	93.6	95.3
Mean Weight	2.37	2.48	2.71	2.99	2.55	3.03	2.53	*	--	2.44

FISHERY FORECAST

The forecast for Largemouth Bass on Pickwick Reservoir remained good. Recruitment to stock sizes decreased over the past year and recruitment to larger sizes decreased as well, but remained above the 10 year average. RSD15 in 2022 increased from the overall average within the past 10 years and has shown an increase since 2020. CPUE of Largemouth Bass in the spring decreased compared to the previous year and catch rates of substock fish fell below the ten-year average. Fall CPUE in all length categories has been on a decline since 2019 but this may be attributed to sampling conditions. These data will continue to be monitored. Wr values remained within the acceptable range. During 2022, Largemouth Bass comprised 59% of the fish caught by anglers (Table 1).

Table 1. The percentage of fish reported caught by anglers that were Largemouth Bass over the past ten years.										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
% Largemouth Bass	45	53	61	51	54	74	60	52*	41	59

Anglers spent $9.50 per hour fishing for Black Bass and were willing to expend an additional 59% to participate in Black Bass fishing at Pickwick Reservoir. The total value of the Black Bass fishery was $824,410.

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit for largemouth bass (implemented in 2004).

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Fall Electro Hours	1.69	2.53	2.62	2.27	1.82	1.6	1.6	2.4	2.6	2.9
Recruitment										
Age-1 CPUE	--	--	--	--	--		--	--	--	--
Substock CPUE	4	8	1.34	2.7	1.3	7.3	7.3	2	4.7	3.3
Spring Density (n)	18	57	17	29	24	39	27	15	33	17
PSD	67	69	75	76	73	68	75	83	75	83
RSD Preferred	42	18	50	64	50	43	50	42	50	42
CPUE	12	38	11.3	19.3	16	26	18	10	20.7	11.3
CPUE ≥ Stock	8	30	8	16.7	14.7	18.6	10.7	8	16	8
CPUE ≥ Preferred	3.3	5.3	4	10.7	7.3	8	5.3	3.3	8	3.3
CPUE ≥ MSL (15" 2001-2007, 2013; 2008-2012 18";)	3.3	5.3	4	10.7	4.4	3.9	0.7	2.7	5.3	2.7
Fall Density (n)	13	16	28	38	13	14	10	62	33	47
Fall Total CPUE	6.7	6.6	9.8	12	6.4	9.6	7.4	26.5	15.2	16.4
Fall CPUE Substock	2.4	0.9	1.3	4.5	0.6	5	2.5	16	9.2	3.3
Fall CPUE ≥ Stock	4.3	5.7	8.5	7.5	5.7	4.6	4.8	10.4	6	13.1
Fall CPUE ≥ Preferred	1	2.7	2.1	0.4	3.3	2.7	0	2.8	1.2	1.8
Growth										
Mean TL at Age-1	--	--	--	--	--	--	--	--	--	--
Mean TL at Age-3	--	--	--	--	--	--	--	--	--	--
Relative Weight										
Stock	95	83	83	90	79	80.9	85.4	96	87	87
Quality	79	81	86	91	90	80.4	92.6	104	91	80
Preferred	79	78	73	89	72	81.1	73	89	82	79
Memorable	--	78	87	82	45	--	87	85	74	75
Trophy	--	--	--	--	--	--	--	99	96	--
Fishing Success										
Hours/Acre	NA	0.04	--	--	--	--	--	--	--	--
Catch Rate	0.21	0.25	- -	--	0.19	0.06	0.09	*	0.08	0.03
Harvest Rate	0	0	- -	--	0.02	0.01	0	*	0	0
% Released	99	90	93.3	93.4	88.2	88.7	97	*	98.9	96.5
Mean Weight	1.03	2.97	2.3	1.9	NA	3.2	NA	*	--	2.4

FISHERY FORECAST

Smallmouth Bass have historically produced good year classes. The success of Smallmouth Bass recruiting to larger sizes was unknown due to the difficulty in obtaining adequate samples. However, anglers reported catches of memorable size fish. Spring catch rates decreased over 2021 and 2022 but were similar to historic levels. Length distributions remained within historic ranges.

MANAGEMENT RECOMMENDATIONS:

In 2012, Alabama approved a 15-inch minimum size limit for Smallmouth Bass (implemented in 2013) Mississippi implemented a 15-inch minimum size limit for both Largemouth Bass and Smallmouth Bass in 2013. Based on the decisions made by Mississippi and Alabama, recommendations were made to leave the Largemouth Bass size limit at 15-inches. The Smallmouth Bass size limit was lowered from 18-inches to 15-inches in March 2013 to establish similar regulations between the three states.

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring electro Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Fall Electro Hours	1.69	2.53	2.6	2.27	1.82	1.6	1.6	2.4	2.6	2.9
Recruitment										
Age-1 CPUE	--	--	--	--	--	--	--	--	--	--
Substock CPUE	--	0	0	0	--	0.7	0.7	--	--	--
Spring Density (n)	1	7	3	6	3	8	4	2	1	4
PSD	--	--	100	100	67	71.4	66.7	50	--	100
RSD Preferred	--	--	100	17	33	29	33	50	--	25
CPUE	--	4.7	2	1	2	5.3	2.7	1.3	0.7	2.7
CPUE ≥ Stock	--	4.7	2	4	2	4.7	2	1.3	0	2.7
Fall Density (n)	--	1	0	3	2	1	1	1	3	7
Fall Total CPUE	--	0.3	0	1.6	0.7	0.5	0.6	0.6	1.2	1.8
Fall CPUE Substock	--	0	0	1.2	--	0.5	0	0.6	--	--
Fall CPUE ≥ Stock	--	0.3	0	0.4	0.7	--	0.6	--	0.2	1.8
Fall CPUE ≥ Preferred	--	0.3	0	0.4	0.3	--	--	--	0.5	0.5

FISHERY FORECAST

Recruitment has been almost non-existent since 2011 and these data have impacted recruiting to adult sizes. Alabama Bass have impacted genetics in Spotted Bass densities in Pickwick Reservoir according to genetic samples collected over the last few years. Genetic evaluations found the Alabama allele was present in Spotted Bass at consistent levels. Seven of the Spotted Bass collected in 2018 were a hybrid between Spotted Bass and Alabama Spotted Bass, and one collected was a hybrid between Spotted, Smallmouth, and Alabama Spotted Bass. In 2019, four additional Spotted Bass were collected, and the Alabama Spotted bass contributed 17% of the genetic make-up. In addition, one fish collected was a hybrid between Spotted, Smallmouth, and Alabama Spotted bass. Additional genetic analyses are being conducted on all impoundments along the Tennessee River system to determine Alabama Bass genetic impacts on other Black Bass species.

White Crappie and Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure (Angler Hours per Acre)										
All Crappie	0.7	1.7	0.6	1	2.04	2.9	2.2	--*	0.1	0.1
Fishing Success										
Crappie Catch Rate	1.54	0.48	0.75	0.44	0.36	0.29	0.87	*	0.27	--
Crappie Harvest Rate	1	0.44	0.68	0.31	0.33	0.27	0.12	*	0.06	--
WC % Released	52	14	13	65	NA	12.5	92.2	*	26.1	--
WC Mean Weight	1.03	1.1	1.1	1.46	NA	0.96	1.69	*	2.04	--
Total Value of Fishery (Thousands)										
All Crappie	67.4	69.4	30	49.2	16.7	11.8	34.8	*	8.7	10.5

FISHERY FORECAST:

Crappie were not collected at sufficient densities to evaluate the crappie fishery. Creel survey data collected in 2022 showed only 1.2% of the angling effort was for Crappie, and 0 Crappie were recorded during the creel survey. The Crappie fishery in the Tennessee portion of Pickwick Reservoir remained limited. Anglers seeking crappie spent $4.00 per hour seeking Crappie and were willing to spend an additional 29% to fish for Crappie on Pickwick Reservoir. However, these data represented only 1 interview.

MANAGEMENT RECOMMENDATIONS:

Continue with the 9-inch minimum size limit and 30 fish creel limit.

Redear Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Density (Electro Survey)										
PSD	100	75	50	67	80	89	100	93	80	92
RSD Preferred	88	44	50	58	20	64	93	80	40	58
CPUE	17.3	10.7	6	8	3.3	24	9.3	10	6.7	17.3
Substock CPUE	0	0	0.67	0	--	--	--	--	--	--
CPUE ≥ Stock	17.3	10.7	5.3	8	3.3	23.3	9.3	10	1.3	1.3
CPUE ≥ Preferred	15.3	4.7	2.67	4.7	0.6	14.6	4	8	2.7	10
N	26	16	6	12	5	36	14	15	10	26
Spring Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Angling Pressure (Angler Hours per Acre)										
Sunfish	NA	0.7	0.7	0.3	0.2	0.4	0.3	*	0.1	0.2
Fishing Success										
Relative Catch Rate	NA	0.02	0.31	0.1	0	0	0.24	*	0	0.5
Relative Harvest	NA	0.01	0.28	0.1	0	0	0.23	*	0	0.5
Redear Mean Weight	NA	0.38	0.6	0.42	--	--	0.69	*	0	0
Redear %Released	NA	56	6	18	--	--	7.4	*	0	0
Total Value of Fishery (Thousands)										
Sunfish	NA	13.2	27.4	13.9	7.8	16.3	12.8	*	5.8	12.1

MANAGEMENT RECOMMENDATIONS:

A 20 fish creel limit was implemented for Redear Sunfish in 2008.

Bluegill

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Density (Electrofishing Survey)										
PSD	58	53	79	40	45	67	28	56	80	60
RSD Preferred	1	1	10	4	3	2	2	3	1	3
CPUE	148.7	58.7	127.3	178	163.3	130.7	84	100.7	106	66
Substock CPUE	2	0.7	2.67	6.7	35.3	16	0	0.7	18	0
CPUE ≥ Stock	146.7	58	124.67	171.3	128	114.7	84	100	88	66
CPUE ≥ Preferred	2	0.7	12.67	11.3	4	2	2	2.7	0.7	2
N	223	88	191	267	245	196	126	151	159	99
Spring Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Angling Pressure (Angler Hours per Acre)										
Sunfish	0.7	0.7	0.3	0.2	0.4	0.3	0.4	*	0.1	0.2
Fishing Success (Bluegill only)										
Relative Catch Rate	4.75	4.15	2.67	7.79	2.53	1.74	7.29	*	0.3	3.4
Relative Harvest	3.04	1.81	0.98	5.38	1.63	1.35	2.88	*	0	2.6
Bluegill Mean Weight	0.35	0.33	0.34	0.33	0.34	0.35	0.32	*	NA	0
Bluegill % Released	42	51	72	53	61	41	54	*	81	38.8
Total Value of Fishery (Thousands)										
Sunfish	13.2	27.4	13.9	7.8	16.3	12.8	21.6	*	5.8	12.1

FISHERY FORECAST

Bluegill substock has fluctuated since 2013 but substock Bluegill do not recruit well to the electrofishing gear. Adult densities have remained acceptable since 2013 and CPUE preferred catch rates were similar to other Region I reservoirs.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Gizzard Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment										
CPUE < 150 mm	21.9	60	53.2	48.6	0.5	0	2.5	3.7	0	0
CPUE ≥ 280 mm	26.2	6.3	29.3	14.3	39	20.6	27.5	20.8	42	110
Fall Density										
Fall total CPUE	117.8	127	60.9	50.7	99.6	41.8	32.8	45.3	26.6	16
Fall CPUE Substock (≤180 mm)	20.8	63.8	7.7	2.1	0.9	0.6	2.1	3.3	0	0
Fall CPUE ≥ Stock (≥181 mm)	97	63.2	53.2	34.3	98.6	40.2	30.8	42	58	16
Fall total collected	212	304	161	157	203	67	54	120	58	42
Fall Electro Hours	1.69	2.53	2.6	2.27	1.82	1.6	1.6	2.4	2.6	2.9

Threadfin Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fall Density										
Fall percent ≤ 75 mm	100	100	79	79	97	69	91	157.4	125	0
Fall Total CPUE	205.3	63.6	39.9	97.2	163.5	85.6	120.4	163.1	110.1	0
Fall Total collected	287	161	118	230	259	133	244	380	246	0
Fall Electro Hours	1.69	2.53	2.6	2.27	1.82	1.6	1.6	2.4	2.6	2.9

FISHERY FORECAST:

Gizzard Shad collected were greater than or equal to 200 mm. Total CPUE decreased in 2022 and remained below the 10-year average but preferred sizes were abundant for predators. Since invasive carp have been reported by commercial fishers on Pickwick Reservoir, Wr's were calculated for gizzard shad and have improved since 2016 (Table 2).

Table 2. Relative weight values for gizzard shad.

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Stock	105	89	84	88	86	97	102	100	103
S-Q	118	89	86	92	89	109	124	93	--

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Invasive Carp

	2020	2021	2022
Net Hours	168.2	171.8	192.7
Number collected			
Silver Carp	11	6	4
Grass Carp	0	3	2
Bighead Carp	0	0	0
Black Carp	0	0	0
Silver Carp Collected (mm)			
≤ 250	0	0	0
251 – 475	0	0	0
476 - 650	0	0	0
≥ 651	11	0.03(6)	4
Electrofishing Hours	3.9	NA*	4.2
Number collected		NA	
Silver Carp	4	NA	0
Grass Carp	0	NA	0
Bighead Carp	0	NA	0
Black Carp	0	NA	0
Silver Carp Collected (mm)		NA	
< 250	0	NA	0
251 – 475	0	NA	0
476 - 650	0	NA	0
≥ 651	4	NA	0

*Boat electrofishing was replaced by dozer trawl samples in 2021. Dozer trawls were not completed on Pickwick in 2021 due to equipment failure.

Discussion

Adult Bighead, Silver, and Grass Carps (Invasive Carp) have been documented in Pickwick Reservoir. Gill netting and dozer trawls were utilized to sample Invasive Carps in 2022.

Gill net standardized sampling was continued with sampling occurring in Dry Creek embayment (4 individual net sites) using 91-meter gill nets; each net comprising 30.5-meter sections of 76-, 102-, and 127 – mm mesh). A total of 192.74 gill netting hours were completed on Barkley Reservoir with a total catch of 4 Silver Carp, 2 Grass Carp, and 0 Bighead Carp. Catch rates were higher in the summer, with respective CPUE's of 0.75 Silver Carp/net in the summer and 0.25 in the fall. Total CPUE/hr was 0.02 fish/net hr on Pickwick Reservoir. The 102-mm mesh and 127-mm mesh was equally effective, catching 50% of the total fish captured respectively.

Dozer trawls were utilized in Summer and Fall of 2022 to replace standardized electrofishing. Dozer trawls consisted of 50 (5-minute/sample) samples conducted throughout the reservoir. A total of 0 Silver Carp were captured in the summer and fall. The dozer trawl is not conducive in Pickwick Reservoir due to embayments being too deep.

Other Species Collected During Sampling, 2022

Species	Number Collected Standardized Sampling
Yellow Perch	1
Sauger	3

2022 Water Quality Monitoring

In 2022, summer air, water temperatures, and rain fall were average when compared to historical records. Daily water quality measurements are taken by Tennessee Valley Authority and indicated average water quality parameters.

Sampling Stations – TRM 207.3 and 230.0.

Reelfoot Lake - 2022

Description

Area (acres): **10,427** **Mean Depth (feet): 5.2** **Shoreline (miles):**

Counties: Lake, Obion **Lake Length: 12 miles** **Drainage area: 240 sq. miles**

Total Fishing Effort 2022 (angler hours): 318,503 **Total Value by Anglers 2022: $3,010,420**

Summer Pool: 282.2 Winter Pool: 283.3 **Formed in 1811-1812 by earthquake**

Management Strategies:

LMB: 15” MLL, 3 fish – 1992

15” MLL, 5 fish – 1996

Crappie: 30 fish creel limit – 2002
Commercial Crappie Season Closed – 2001

Habitat Enhancement and Monitoring - 2022

Deep water fish attractors - 0
Shallow water fish attractors – 0
Spawning Structures – 48 artificial spawning structures were installed to help with sport fish reproductive success 2021. Monitoring of these structures was conducted by a robotic camera (ROV) used for retrieval efforts in water related accidents in late winter of 2023.

Angling Pressure (Angler Hours per Acre)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Angler Pressure	36.8	22.6	24.9	25.7	32.2	20.7	29.9	25.1	39.3	30.6
All Black Bass	3.4	2	2.4	2.8	2.7	1.6	1.7	--*	2.8	2.3

Value of Fishery (Trip Expenditures in Thousands)

Black Bass	88.4	83.9	92.9	105.3	76.8	68.3	33.2	--*	84.1	73.4

NOTE: - In 2020 COVID-19 protocols prevented creel clerks from collecting catch, harvest, and economic data from April – December resulting in incomplete data analyses. These missing data will be identified with an asterisk in the tables. Complete creel surveys resumed in 2021.

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring Electro hours	3.75	3.75	3.75	3.75	2.5	3.25	3.5	3.75	3.75	3.75
Fall Electro hours	3.9	4.31	2.56	5.27	4.75	4.77	3.38	5	4.6	3.21
Recruitment										
Age-1 CPUE	--	--	--	--	1.6	--	--	--	--	--
Substock CPUE	0.8	15.7	2.1	5.1	0.8	1.5	0.5	12.8	6.4	2.9
Spring Density (n)	45	144	109	80	55	19	29	62	78	54
PSD	71	79	59	89	94	100	96	71	48	84
RSD Preferred	95	51	36	38	68	79	74	43	22	47
CPUE	12	38.4	29.1	21.3	22	5.9	7.3	16.5	20.8	14.4
CPUE ≥ Stock	11.2	22.7	26.9	16.3	21.2	4.3	6.8	3.7	14.4	11.5
CPUE ≥ MSL (15")	8	11.4	16	14.4	20	3.4	5	1.6	3.2	5.3
CPUE/seine haul	5.9	2.9	9.6	9.1	6.8	11.3	1.9	5.4	4.1	2.5
Fall Density (n)	145	217	104	87	67	23	32	51	29	23
Fall Total CPUE	35.9	47.6	43.7	19	13.3	3.6	9.6	12	6.7	7.5
Fall CPUE Substock	19.3	5.4	14.6	5.5	4.2	1.1	5.5	5.6	1.7	0.6
Fall CPUE>Stock	16.6	42.2	21.2	9.1	7.2	2.5	4.1	6.4	5	6.9
Growth										
Mean TL at Age-1(mm)	--	--	--	--	167	--	--	--	--	--
Mean TL at Age-3 (mm)	--	--	--	--	359	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	--	31% R2=0.52	--	--	--	--	--
Relative Weight (Fall)										
Stock	111	111	111	101	106	109	107	115	103	107
Quality	103	101	101	103	79	108	114	114	100	112
Preferred	118	98	98	101	107	123	102	126	107	107
Memorable	98	88	88	102	104	104	105	107	102	104
Trophy		--	--	66	--	--	--	--	--	--
Fishing Success										
Catch Rate	0.42	0.53	0.51	0.54	0.55	0.59	0.34	--*	0.56	0.5
Harvest Rate	0.01	0	0.01	0.03	0.02	0.01	0	--*	0	0
% Released	98	100	97	95	98	97	97	--*	100	99
Mean Weight	3.87	--	3.53	2.64	2.55	2.19	2.45	--*	--	2.35

FISHERY FORECAST:

CPUE during Spring electrofishing surveys decreased and fell below the 10-year average in 2022. CPUE has been < 30 fish/hour in nine of the last ten years and this is attributed to poor recruitment in six of the last ten years (good recruitment: ≥ 5.0 YOY LMB/hour). However, sampling conditions in 2008 – 2011 may partially explain reduced catch rates during that period (low water levels associated with drought conditions and construction of a new spillway). In 2022, spring weather was inconsistent as it has been five of the last six years with wind and water condition impacting surveys Recruitment has been inconsistent over the last 10 years with good recruitment in 2010, 2012, 2014, 2020, and 2021. CPUE was below the 10-year average for 2022, and PSD and RSD15 increased above historic levels in 2022. Densities of fish >8 remained below historic levels in 2022 for the fifth year in a row, but fish densities >15-inches increased in 2022 but remain below historic levels. Recruitment has decreased the last two years and fishing pressure of Largemouth Bass decreased in 2022; both remain below the 10-year average. The percentage of fish released was not measurable due to the lack of anglers interviewed

during creel surveys and habitat loss continues to be a growing concern.

Length frequency showed reduced distribution of substock size Largemouth Bass. Although within acceptable ranges and increased in 2022. relative stock indices remained below the 10-year average for the third year in a row. Catch rates over the last five years have been indicative of a population with consistently low recruitment, and 2022 results indicated an inconsistent population. Spring CPUE of YOY decreased below the 10-year average after two acceptable years.

Electrofishing catch rates were variable in all four basins, and historically Buck Basin has appeared to have the highest quality bass population when compared to the three other basins and has been the highest three of the last four years. Below is a summary table showing results from the past years of spring sampling.

Largemouth Bass CPUE per Basin at Reelfoot Lake.

	2019	2020	2021	2022
Lower Basin	0	5	12	0
Middle Basin	8	27	26	28
Buck Basin	10.7	33.3	37.3	26.7
Upper Basin	10.4	5	12	6

Catch rates (0.50/hr.) decreased from 2021 and harvest rates (0.0/hr.) remained the same. Angler pressure decreased from 2021 and fell below the 10-year average in 2022.

Anglers spent $3.01 ($2.85 in 2021) per hour fishing for Largemouth Bass and were willing to spend an additional 49% (54% in 2021) seeking Largemouth Bass on Reelfoot Lake. The estimated total value of the Largemouth Bass fishery at Reelfoot Lake was $137,620 ($102,820 in 2021).

MANAGEMENT RECOMMENDATIONS:

Spawning structures installed in 2020 were evaluated in 2022 by an Agency ROV. Results indicated siltation or sinking of installed structures making them unusable to any fish species. Further improvements to spawning success are being analyzed before implementation.

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Age-0 CPUE	--	--	--	--	9.2	--		--	--	NS*
Substock CPUE	32.6	21.1	4.6	10.9	10.2	7.4	3.5	0.4	8.7	NS*
Total CPUE	32.7	24	10	10.7	11.6	9.4	5	0.9	9.3	NS*
Net Nights	40	40	40	40	37	39	40	40	40	NS*
n	1,308	961	329	469	402	366	199	36	371	NS*
Spring Density (Electrofishing Survey)										
PSD	99	100	74T	71T	86T	88	61T	84	84	99
RSD P	84	98	59T	54T	54T	74	42T	72	56	86
CPUE	36.5	28	6.5T	51.0T	19.5T	37.2	127.5T	21.3	21.1	21.9
CPUE ≥ Stock	36.5	26.4	6.1T	48.2T	19.5T	36.3	118.7T	20	21.1	19.7
CPUE ≥ P	30.7	25.9	3.8T	22.6T	9.9T	26.8	48.2T	14.4	11.7	17.1
n	137	105	35	296T	87T	121	362T	80	79	82
Spring Hrs	3.75	3.75	6.13T	7.2T	6.0T	3.25	3.2T	3.75	3.75	3.75
T=Targeted										
Growth										
Mean TL at Age-0 Fall	--	--	--	--	102	--	--	--	--	101
Mean TL at Age-2 Fall	--	--	--	--	276	--	--	--	--	285
Mortality										
Total Mortality	--	--	--	--	49% R2=093	--	--	--	--	34% R2=.73
Relative Weight (Fall)										
Stock	--	99	109	108	109	98	108	113	118	113
Quality	--	96	98	85	96	105	97	101	122	105
Preferred	--	--	117	106	111	121	99	111	107	122
Memorable	--	--	105	112	113	115	115	121	111	111
Trophy	--	--	--	111	113	--	123	113	113	117
Angling Pressure (Angler Hours per Acre)										
All Crappie	23.2	12.8	11.6	12.8	16.5	12.2	14.1	--	19.6	17.7
Fishing Success										
Crappie Catch Rate	1.13	0.57	0.87	0.93	0.91	0.93	0.79	--*	1.06	0.7
Crappie Harvest	0.88	0.52	0.45	0.61	0.61	0.65	0.44	--*	0.73	0.49
WC % Released	24	11	63	36	34	35	45	--*	33	31
WC Mean Weight	0.72	0.94	1	0.78	0.82	0.87	0.87	--*	0.87	0.95
Value of Fishery (Trip Expenditures in Thousands)										
All Crappie	1,375.30	770.2	818.8	779	1,112.80	620.5	789.5	--*	1,405.90	1,255.40

NS – NO SAMPLE

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey - Fall)										
Age-0 CPUE	--	--	--	--	2.7	--	--	--	--	NS*
Substock CPUE	6.9	3.2	0.7	0.3	2.7	1.8	2.6	0.4	1.8	NS*
Total CPUE	8.6	5.2	2.2	0.9	3.6	2.5	3	1.5	3.5	NS*
Net Nights	40	40	40	40	37	39	40	40	40	NS*
n	342	209	88	38	132	98	121	61	140	NS*
Density (Spring Electrofishing Survey)										
PSD	76	100	54T	64T	66T	39	44T	60	46	78
RSD Preferred	57	80	48T	22T	31T	18	33T	35	19	44
CPUE	5.9	2.9	10.5T	24.0T	7.3T	18.8	7.4T	15.2	16.3	8.8
CPUE ≥ Stock	5.6	2.7	9.8T	18.0T	6.9T	10.2	2.0T	12.8	14.4	8.5
CPUE Preferred	3.2	2.1	4.6T	4.6T	2.2T	1.9	0.6T	4.5	2.7	3.7
n	22	11	90T	170T	37T	61	24T	57	61	33
Spring Hours	3.75	3.75	6.13T	7.2T	6.0T	3.25	3.2T	3.75	3.75	3.75
% Black crappie	14	9	72T	36T	29.8T	34	6T	42	44	29
T=Targeted										
Growth (Fall)										
Mean TL at Age-0 Fall	--	--	--	--	91	--	--	--	--	71
Mean TL at Age-2 Fall	--	--	--	--	237	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	--	41% R2=0.46	--	--	--	--	--
Relative Weight (Fall)										
Stock	106	110	111	110	105	100	101	110	99	104
Quality	118	112	111	113	107	97	104	112	96	111
Preferred	100	101	102	112	104	98	110	111	98	106
Memorable	100	98	101	104	106	106	95	109	102	103
Trophy	NS	NS	NS	NS	101	99	72	98	99	103

NOTE: NS – NO SAMPLE

* 2022 - Trap net sampling was not conducted due to very low water levels in the Fall.

FISHERY FORECAST:

Spring electrofishing catch rates of White Crappie remained low for the third year in a row (Table 1). Spring electrofishing relative stock indices depicted a population of quality individuals and Wr's were within or exceeded the acceptable range three years in a row. Black Crappie CPUE decreased during spring electrofishing and fall electrofishing (10.3 fish/hour in 2022; 15.3 fish /hour in 2021; 17.5 fish/hour in 2020) The percentage of Black Crappie collected in the Fall $\geq$ 250 mm increased significantly in 2022 (75% in 2022; 9% in 2021; 30% in 2020).

A common trend in standard Spring electrofishing is waiting until water temperature rose to 65ºF to begin sampling. As temperatures rise through the Spring some early targeted sampling is routinely conducted on Reelfoot Lake to get additional collections of sportfish. Table 1 shows just how much more successful targeted efforts have been in the past. In 2022 targeted sampling was conducted April 21, and standard sampling took place April 26. Collections showed a significant CPUE difference in just a few days' time lapse. Angler success depicted reduced populations of crappie as catch and harvest rates decreased in 2022 and was below the 10-year average.

Table 1. Crappie collected during Spring electrofishing surveys. YOY -Fall trap nets. All basins combined.

	2018	2019	2020	2021	2022
White Crappie					
Std/hr	37.2	37.3	21.3	21.1	21.9
Target/hr	53.5	127.5	NA	87.8	45.6
% ≥ 10”	74	42	68	56	78
CPUE YOY	40.4	21.1	1.5	8.7	NS
Black Crappie					
Std/hr.	18.8	18.5	15.2	16.3	8.8
Target/hr	19.5	7.4	NA	33.5	17.2
% ≥ 10”	43	32	30	16	42
CPUE YOY	1.8	2.6	0.4	1.8	NS

NS – NO SAMPLE

Due to low water levels caused by drought conditions during the Summer months trap netting was not able to be conducted. This is indicated by NS (No Sample) in the tables in this report. Table 2 indicated YOY CPUE of both Crappie species by basin during trap net surveys.

Table 2. White and Black Crappie YOY CPUE during trap net surveys, by basin. Number in parenthesis represent black crappie YOY catch rates

	2018	2019	2020	2021	2022
Lower Blue	1.9 (0)	1.9 (2.0)	0.6 (0)	1.0 (0.1)	NS
Middle	23.4 (7.6)	5.3 (1.9)	0. 4(0.7)	21.9(2.5)	NS
Buck	3,8 (1.3)	2.5 (0.2)	0.2 (0.6)	8.4 (1.7)	NS
Upper Blue	2.2 (0.1)	4.4 (6.6)	0.3 (0.4)	3.4 (3.0)	NS

NS – NO SAMPLE

Although fishing pressure remained highest in the lower basin, Lower Blue Basin has historically had the lowest trap net catch rates. Black Crappie abundance has been inconsistent in electrofishing surveys during the last 10-years, and usually makes up around one third of the population. The density of Black Crappie will continue to be monitored.

The Crappie fishery has been stable, with variable catch rates in electrofishing and trap nets. Crappie do not respond well to drought conditions. 2022 recruitment levels were not able to be collected due to lower water levels, but recruitment rates have been good in six of the previous eight years.

Fishing pressure for Crappie was above the current 10-year average in 2022 and remains the most sought species. White Crappie angler catch rates (0.71/hr.) and harvest rates (0.50/hr.) decreased from data collected in 2021. Inconsistent water levels and unstable weather patterns have important impacts to both the fishery and data collection. Angler harvested Crappie from the last 10-years was referenced in Table 3.

Table 3. Total number of Crappie harvested per acre on Reelfoot Lake.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Crappie harvested per acre	20.4	7.1	4.9	8.9	9.8	8.6	11.1	--*	13.4	9.4

The average weight of White Crappie (0.95 lbs.) harvested at Reelfoot Lake has remained high quality and increased from 2021. The CPUE of silversides collected in seine hauls decreased below the 10-year average in 2022 and continues to show an inconsistent population. TWRA will closely monitor the population.

Anglers spent $6.81 ($6.89 in 2021) per hour seeking Crappie and were willing to spend an additional 25% (26% in 2021) to fish for Crappie at Reelfoot Lake. The total value of the fishery by anglers was $1,663,570 ($1,763,290 in 2021). The high estimate for anglers seeking Crappie was attributed to the fact that 29% (35% in 2021) of the anglers interviewed traveled over 250 miles to fish at Reelfoot Lake. Although the Crappie fishery has been inconsistent, anglers still travel long distances.

MANAGEMENT RECOMMENDATIONS:

Bluegill

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (Trap Net Survey - Fall)										
Age-1 CPUE	--	--	--	--	7.5(EL)	--	--	--	--	NS*
Substock CPUE	1	2.1	0.4	1.4	2.8	3.6	3.5	4.3	3.4	NS*
Total CPUE	1.2	3.7	0.6	1.6	4.6	4.7	5.5	6.7	5	NS*
Net Nights	40	40	40	40	37	39	40	40	40	NS*
n	47	149	24	74	169	185	221	268	198	NS*
Density (Spring Electrofishing Survey)										
PSD	58	38	62	68	65	64	53	45	63	78
RSD Preferred	17	7	5	23	13	10	19	11	10	7
CPUE	50.4	115.5	73.1	88	61.7	57.9	76.8	82.4	108.5	19.2
Substock CPUE	13.3	10.1	15.5	12.3	1	13.9	44.5	28.8	12.8	1.1
CPUE ≥ Stock	37.1	105.3	57.6	75.7	60.7	44	32.3	53.6	95.7	18.1
CPUE ≥ Preferred	6.4	6.9	2.9	17.1	8.7	4.3	6	6.1	9.6	1.3
n	189	433	274	330	289	188	307	309	407	72
Spring Hours	3.75	3.75	3.75	3.75	2.5	3.25	3.5	3.75	3.75	3.75
Growth										
Mean TL at Age-1	--	--	--	--	75	--	--	--	--	--
Mean TL at Age-3	--	--	--	--	158	--	--	--	--	--
Mortality										
Total Mortality	--	--	--	--	69% R2=0.92	--	--	--	--	--
Sunfish (Angler hrs. acre)	8.2	5.8	8.1	7.9	10.2	5.7	9.7	--**	9.5	7.2
Fishing Success										
Sunfish Catch Rate	2.22	2.53	1.98	1.78	2.14	1.8	1.51	--**	2.96	2.51
Sunfish Harvest Rate	1.83	1.88	1.56	1.34	1.7	1.34	1.09	--**	1.93	1.45
Bgill Mean Weight	0.51	0.5	0.41	0.43	0.41	0.39	0.44	--**	0.45	0.43
Bgill % Released	17	29	28	29	28	30	30	--**	33	47
Value of Fishery (Trip Expenditures in Thousands)										
Sunfish	520.5	363.4	582.8	504.5	691.6	283.8	548.5	--**	553.7	657.7

NS – NO SAMPLE

* 2022 - Trap net sampling was not conducted due to very low water levels in the Fall.

FISHERY FORECAST:

The Bluegill fishery remains an important fishery on Reelfoot Lake. Although PSD has remained at or above acceptable PSD values (20-60%), the CPUE of RSD8 fish has been mostly consistent the last ten years. The inconsistencies may be attributed to sampling conditions (cooler water temperatures in the spring, drought conditions, and inconsistent weather patterns). Total CPUE has been inconsistent annually and increased in 2019, 2020, and 2021 above the 10-year average, but fell dramatically in 2022 to well below 10-year averages. The decrease seen in CPUE in 2022 may be attributed to weather conditions and number of anglers encountered in sample areas the day sampling took place. Estimated total mortality appeared high (69%) in 2012 and 2017. However, the CPUE of stock size fish increased significantly in 2014 and remained high in 2015 and 2016, but declined in 2017, 2018, and 2019. It then increased in 2020 and 2021, with a significant decrease in 2022. Reelfoot has historically been one of the best Bluegill fisheries in Tennessee when considering number of fish caught per hour and mean weight.

Angler fishing pressure remained consistent from 2021 to 2022. Catch rates (2.80/hr.) and harvest rates (1.49/hr.) have remained above the 10-year average for the last two years.

Anglers spent $8.72 ($5.62 in 2021) per hour seeking Bluegill and were willing to spend an additional

23% (30% in 2021) to fish for Bluegill at Reelfoot Lake. The total value of the fishery by anglers was $851,590 ($718,440 in 2021). The high value estimate for anglers seeking Bluegill was attributed to the fact that 29% (35% in 2021) of the anglers interviewed traveled over 250 miles to fish.

MANAGEMENT RECOMMENDATIONS:
Conduct an angler survey in 2023 to collect data related to Bluegill regulations.

Channel Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure (Angler Hours per Acre)										
Catfish	0.14	0.05	0.58	1.54	1.5	0.6	1	--*	1.5	1
Fishing Success										
Catch Rate	0.14	0.7	1.1	1.22	1.61	1.13	1.12	--*	1.26	1.47
Harvest Rate	0.55	0.19	0.78	0.99	1.18	0.92	0.96	--*	1.04	1.27
% Released	0.79	20	30	28	35.5	23.7	32.1	--*	17.2	19.4
Mean Weight	0.55	2.52	1.93	2.15	2.01	1.98	1.99	--*	1.89	2.13
Value of Fishery (Trip Expenditures in Thousands)										
Catfish	NA	--	28.3	33.8	19	35.4	47.6	--*	42.4	49.9

Gizzard Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment										
CPUE < 150 mm	43.3	21.1	91.4	13.3	71.4	44.9	80.8	19.8	25.9	53.3
CPUE ≥ 280 mm	0.5	0	0	0.7	0.2	1.9	0.3	0.6	1.1	0.3
Density										
Fall total CPUE	106.6	70	219	90.3	110.1	89.2	103.8	52.3	56.2	77.8
Fall CPUE Substock	71	31.7	119.3	77	89	72.4	88.7	38.6	37.7	65.5
Fall CPUE ≥ Stock	35.5	38.2	99.7	12.7	6.7	16.8	15.1	13.7	18.5	12.2
Fall total collected (n)	317	310	547	393	430	390	377	241	270	253
Fall Electro Hours	3.9	4.31	2.56	5.27	4.75	4.77	3.38	5	4.6	3.21

Threadfin Shad

Density	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Fall CPUE < 75 mm	1	0	0	0	0	2.1	0	40.2	0	0
Fall Total CPUE	1	0	0	0	0	8.1	0	49.8	0.2	0
Fall Total collected (n)	4	0	0	0	0	75	0	284	1	0

NS – NO SAMPLE

Other Prey

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Silverside no/seine haul	176.3	129.8	164.3	136.2	84.7	121.9	43.3	5.8	45.7	5.8
Bluegill no/seine haul	48.2	56.4	559.3	132	133.4	439.4	71.9	218.3	101	157.6

Water levels have compromised fall survey data in the past, including 2022. Historically, Gizzard Shad, Silversides, and Bluegill have provided preferred size prey for predators, with Threadfin Shad providing good prey densities occasionally. In general, Gizzard Shad recruitment appeared to increase, and recruitment increased above historical levels in 2022, while these measurements were below average in 2020 and 2021. Bluegill densities have been high in seine surveys from 2015-2022.

Since Invasive Carp have been collected during surveys, Wr's were calculated for Gizzard Shad and are shown in Table 4. Relative weight trend data will continue to be monitored.

Table 2. Relative weights of Gizzard Shad by category on Reelfoot Lake.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Gizzard shad Wr ≥ stock	85	95	92	114	94	90	90	96	104	98
Gizzard shad Wr Stock-Quality	85	95	92	114	94	91	90	97	105	98

Invasive Carp

Reelfoot Lake		
	2021	**2022**
Net Hours	716.6	719.9
Number Collected		
Silver Carp	54	81
Grass Carp	1	0
Bighead Carp	1	9
Black Carp	0	0
Silver Carp Collected (mm)		
≤ 250	0	0
251-475	0	0
476-650	0.001 (1)	0
≥ 651	0.074 (53)	81

Discussion:

Adult Bighead, Grass, Black, and Silver Carps have been documented in Reelfoot Lake. Agency standardized gill net and electrofishing surveys have been employed to determine Invasive Carp presence and/or abundance within Reelfoot Lake.

Gill net standardized sampling was initiated in Summer 2021 with gill net sampling conducted in the Lower and Middle Basins (16 individual net sites using 91-meter gill nets; each net comprising 30.5-meter sections of 76-, 102-, and 127 – mm mesh). A total of 719.9 gill netting hours were completed on Reelfoot Lake with a total catch of 83 Silver Carp and 9 Bighead Carp. Catch rates of Silver Carp were higher in the fall, with respective CPUE/net of 0.875 in the summer and 4.31 in the fall. Total CPUE/net hr was 0.16 fish/net hr on Reelfoot Lake. The 102-mm mesh was most effective, catching 66% of the total fish captured.

Standardized electrofishing was not conducted in Reelfoot Lake in 2022 due to low water levels in both summer and fall seasons.

Other Species Collected during sampling – 2022

Species	**Number Collected**
Channel Catfish	26
Gizzard Shad	253

2022 Water Quality Monitoring (Six sampling stations)

In 2022, summer air and water temperatures were average when compared to historical records, but drought conditions in summer and early fall caused low water levels and reduced dissolved oxygen levels at certain stations in August. Samples were collected in June, July, and August at the sample stations listed below. Temperature and dissolved oxygen levels were measured in 1' increments from the surface to the lake bottom. Secchi disc, pH, conductivity, and alkalinity were measured at the surface at all stations. Dissolved oxygen levels fell below acceptable ranges within a few feet from the lake bottom but was a historical occurrence.

Sampling Stations

Office Station – bottom depth – 12'
Catfish Channel – bottom depth – 14'
Joe Basin - bottom depth – 5'
Palestine - bottom depth – 3'
Brewer's Bar - bottom depth – 2'
Upper Blue Basin- bottom depth – 5'

2022 Seine Data

Species	<1.0	1.0 - 1.9	2.0 - 2.9	3.0 - 3.9	4.0 - 4.9	>5.0	total #	%of total	CPUE
Yellow Bass		1	5	5		1	12	0.81%	1.50
Gizzard Shad	2	5	16	6	10	2	41	2.77%	5.13
Largemouth Bass			11	8	1		20	1.35%	2.50
Bluegill	194	1022	40	4	1		1261	85.26%	157.63
Mosquitofish	43	28					71	4.80%	8.88
Blackspotted Topminnow		2					2	0.14%	0.25
Freshwater Drum				3	1		4	0.27%	0.50
Golden Shiner		1					1	0.07%	0.13
Brook Silverside		5	7				12	0.81%	1.50
Inland Silverside	4	7	20	3			34	2.30%	4.25
Bluntnose Minnow			3				3	0.20%	0.38
Channel Catfish			9				9	0.61%	1.13
White Crappie			1				1	0.07%	0.13
Black Crappie			1			1	2	0.14%	0.25
Emerald Shiner		2		3			5	0.34%	0.63
Tadpole Madtom		1					1	0.07%	0.13
Totals	243	1074	113	32	13	4	1479	100.0%	184.92

REGION 2

Cheatham Reservoir

Description

Area (acres): 7,450 **Mean Depth (feet):** 18 **Shoreline (miles):** 320

Counties: Davidson. Cheatham and Sumner

Full Pool Elevation (feet-msl): 385 **Winter Pool Elevation (feet-msl):** 384

Dam Completion: 1952

Summary:

Annual fish population surveys for largemouth bass and crappie are used to evaluate and manage Cheatham Reservoir fisheries. Walleye, sauger and striped bass are stocked annually to enhance the riverine fishery. Because of the proximity of Cheatham Reservoir to metropolitan areas it has great potential to attract fishermen if quality fishing can be maintained and/or achieved.

Relative abundance (catch-per-unit-effort; CPUE) of largemouth bass from electrofishing in 2022 was very low at 33 fish/hour, the lowest in ten years. Electrofishing catch rate of largemouth bass over 15 inches was 4/hour, which is below average for the last four years. The 2022 CPUE of sub-stock largemouth bass (5/hour) was also the lowest in 10 years. While sub-stock CPUE was low for 2022, 2020 and 2021 had the strongest year classes (16 and 19/hour) in over ten years so hopefully we will see the benefits of these recruits in a year or two regarding mature adult fish. Fish condition, or relative weight (Wr) indices, were average with mean Wr's between 89 and 96 for all size classes of largemouth bass. Four spotted bass/hour were collected in 2022 spring electrofishing samples, which is half of the 10-year average. The low CPUE of largemouth bass from 2018 to 2022 (avg. 51 fish/hour) is significantly below the average from 2010-2017 (103 fish/hour). Fish populations will naturally vary over time, but this large drop is alarming and something we will continue to monitor.

A smallmouth bass study began in the spring of 2021 on the upper two-thirds of Cheatham Reservoir. The 2020 creel survey revealed that smallmouth bass were an important fishery and the third most targeted species on Cheatham Reservoir. Standardized electrofishing was performed to collect population characteristics of this smallmouth bass fishery. Smallmouth bass CPUE was 21 fish/hour, which is similar to other reservoirs in the state with strong smallmouth bass fisheries. Recruitment of sub-stock smallmouth bass was 10 fish/hour. Age and growth were also estimated for this population, with the maximum age being 11 years old and the population having a growth rate right on par with those of Dale Hollow and Norris Reservoirs, two renowned smallmouth bass fisheries in the state. Multiple fish greater than 20 inches and nearing 5 pounds were collected in this study, indicating there is great potential to catch a trophy smallmouth bass from Cheatham Reservoir.

White crappie dominate electrofishing and trap net catches of crappie from Cheatham Reservoir. Abundance of white crappie from trap net samples was 10.1 crappie/net night, well over the ten-year average (3.1 fish/net night). Trap net samples revealed an outstanding age-0 year class (8.5 crappie/net

night) in 2022, by far the highest in the last ten years. Hopefully this year class will help fishing improve and build upon the large year classes from 2019 (4.1 crappie/net night) and 2021 (1.8/net night). Fishing should improve in the coming years as the 2019, 2021, and 2022 year-classes move into harvestable size. Relative weights (Wr), or condition, of crappie collected in fall trap nets were good in 2022 and all in the 100's.

After no sauger were stocked in Cheatham in 2021, 86,256 sauger (11.6/acre) were stocked into Cheatham in 2022. This is the highest number of sauger stocked into Cheatham since 2018. The sauger population in Cheatham Reservoir is mostly dependent on stocking because the impounded riverine system has limited shoal areas for sauger to spawn naturally. The 2020 creel survey documented a successful fishery created by these stockings with a catch rate of 1.54 fish/hour and future stockings, especially high stockings like 2022, should continue to produce a good fishery.

Hatchery personnel stocked around 62,000 walleye fingerlings in Cheatham Reservoir in 2022, following 22,000 walleye fingerlings stocked in 2021. Cheatham reservoir receives about 63,000 walleye each year on average, so it is good to get back to normal stocking levels after a decrease in 2021 and 2020 (0 walleye). Like sauger, the walleye population in Cheatham Reservoir is mostly or entirely dependent on stocking. Anglers have reported regular catches and limits of walleye below Old Hickory Dam in the spring and summer.

In 2022, 94,000 (12.6/acre) striped bass fingerlings were stocked into Cheatham Reservoir which is well above the average of 51,000 dating back to 2013. Evaluation of the striped bass fishery is difficult because creel surveys are not typically conducted on Cheatham Reservoir. Quantitative sampling is also difficult because of the riverine habitat, high flows, and the unpredictable movement patterns of striped bass. Regular catches of striped bass are observed below Old Hickory Dam in the spring and are a very important component of this fishery. Cheatham Reservoir is a great source for hatchery brood fish if stocking numbers are maintained. Striped bass from Cheatham reservoir offers an earlier dependable source of hatchery brood fish and was used to make hybrid striped bass in previous years.

Monitoring for Asian carp began in 2017 and has continued each year. Electrofishing below Old Hickory Dam revealed a relatively low abundance of Asian carp in 2021. Standardized sampling for Asian carp began in 2020 using gill nets. Highest densities have occurred in Marrowbone and Johnson creeks as expected. We will continue to monitor relative abundance of this non-native species in 2023.

Largemouth Bass

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	12	5	15	7	11	6	11	16	19	5
Density (electrofishing)										
PSD	75	62	76	62	69	61	57	57	46	47
RSD (preferred)	28	31	27	22	25	20	19	16	17	14
CPUE (total)	106	91	97	84	90	47	54	55	66	33
CPUE ≥ Stock	94	86	82	77	79	41	43	39	47	28
CPUE ≥ 15"	26	26	22	17	20	8	8	6	8	4
CPUE ≥ 20"	1	3	4	1	4	0	2	0	0	0
Growth (electrofishing)										
Length Age-1	7.9	-	-	-	-	-	7.3	-	-	-
Length Age-3	13.2	-	-	-	-	-	11.6	-	-	-
Condition (spring electrofishing)										
Stock	92	91	96	90	92	91	93	92	88	91
Quality	99	86	105	87	92	90	91	91	88	89
Preferred	103	92	92	88	90	90	94	93	90	92
Memorable	97	97	95	96	94	94	97	96	94	96
Mortality (electrofishing)										
Total Mortality	0.3	-	-	-	-	-	0.24	-	-	-

Spotted Bass

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	4	2	1	0	0	0	3	6	6	2
Density (electrofishing)										
PSD	42	43	37	46	35	25	18	33	25	17
RSD (preferred)	4	43	2	46	0	13	0	0	0	0
CPUE (total)	12	10	22	5	7	3	10	10	9	4
CPUE ≥ Stock	9	9	20	4	7	3	7	4	3	2
Condition (spring electrofishing)										
Stock	114	91	99	92	103	100	93	99	95	93
Quality	103	92	102	91	113	103	88	99	89	94
Preferred	116	91	97	94	84	97	102	101	-	87
Memorable	-	-	-	-	-	-	-	-	-	-

White Crappie

Recruitment (trap netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	0.8	2.2	3	0.2	0.4	1.2	4.1	0.6	1.8	8.5
Density (trap netting (t) /electrofishing (e))										
PSD (e)	77	25	64	96	100	100	100	91	95	82
RSD (preferred) (e)	55	23	32	86	92	77	91	82	37	45
CPUE (total) (t)	2.5	3.5	5	1.3	1.7	3.6	5.3	1.8	3.2	10.1
CPUE ≥ Stock (t)	1.7	1.3	1.9	1.2	1.3	2.4	2.1	1.3	1.4	1.2
CPUE ≥ MLL (10-inches) (	1	0.3	0.6	0.5	0.5	1.5	0.6	0.2	0.2	0.9
Growth (electrofishing) (white crappie)										
Length Age-1	169	-	-	-	-	-	-	-	-	-
Length Age-3	283	-	-	-	-	-	-	-	-	-
Condition (trap netting)										
Stock	86	91	93	109	80	97	91	95	94	108
Quality	88	93	92	129	72	95	89	93	95	105
Preferred	88	79	91	112	82	97	90	98	94	110
Memorable	78	85	99	99	84	99	95	102	79	106
Mortality (electrofishing)										
Total Mortality	0.7	-	-	-	-	-	-	-	-	-

Sauger

Density (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CPUE (total)	-	-	-	-	-	-	-	-	-	
Growth (gill netting)										
Length Age-1	-	-	-	-	-	-	-	-	-	
Length Age-3	-	-	-	-	-	-	-	-	-	
Stocking										
#	57,141	51,429	0	0	0	84,486	0	29,419	0	86,256
#/Acre	7.7	6.9	0	0	0	11.4	0	3.9	0	11.6

Walleye

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
#	14,807	98,063	74,690	46,624	84,930	98,690	79,289	0	22,431	61,712
#/Acre	2	13.2	10	6.3	11.5	13.3	10.7	0	3	8.3

Striped Bass

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
#	46,116	15,908	44,847	65,927	80,623	69,513	76,037	31,547	25,701	93,824
#/Acre	6.2	2.1	6	8.8	10.9	9.4	10.3	4.2	3.4	12.6

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	July/August	Normal
Dissolved Oxygen	July/August	Normal

Old Hickory Reservoir

Description

Area (acres): 22,500 **Mean Depth (feet):** 32 **Shoreline (miles):** 440

Counties: Davidson, Sumner, Wilson, Trousdale, and Smith

Full Pool Elevation (feet-msl): 445 **Winter Pool Elevation (feet-msl):** 444

Dam Completion: 1954

Summary:

Anglers spent a total of 518,000 hours fishing Old Hickory Reservoir in 2022 (23 hours per acre) which ranks second in the state behind Kentucky Reservoir. Black bass fishing accounted for 205,000 hours of effort (9.1 hours/acre). Bass fishing remains the most popular with 34% of the total effort. Creel surveys indicated that anglers caught largemouth bass at a rate of 0.8 fish per hour in 2022, up from 0.6 in 2021.

Relative abundance of largemouth bass from 2022 electrofishing samples (82 largemouth bass/hour) was below average. Relative abundance of largemouth bass over 15 inches was also below average in 2022 (15 fish/hour). Spring electrofishing indicated an average age-0 year class at 15 fish/hour. The solid 2021 year class (38 fish/hour) should provide good fishing starting in 2024-2025. It is common to have fluctuations in year class strength over time in reservoirs, and Old Hickory is no exception. Largemouth bass condition (Wr) was excellent with all size groups between 95-100. Average weight of largemouth bass harvested in 2022 reported from creel surveys was average at 2.4 lbs. Age and growth data from 2018 showed that largemouth bass average six inches long after one year and 12.5 inches at age three.

Crappie fishing in Old Hickory Reservoir was the second most popular fishery in 2022. Anglers spent 58,000 hours fishing for crappie in 2022, down from 61,000 hours in 2021. The 2022 fall trap netting sample of 15 YOY fish/net night was by far a record for crappie year class (10-year average = 1.8). This year class should give the fishery a big boost after weak year classes in 2017, 2018, and 2021 and will be exciting to track as anglers begin catching them. Angler catch rate for any crappie in 2022 was the highest since 2017 at 1.2 crappie/hour. Catch rates should improve in the coming years as the 2019, 2020, and 2022 year classes move into harvestable size.

Old Hickory Reservoir supports a world class striped bass fishery with catches up to 50 and 60 pounds. The fishery is difficult to evaluate using standard sampling techniques. Creel data showed an average year at 38,000 angler hours. The catch rate was 0.08 which was a ten-year low. Good water quality, forage, and riverine habitat make Old Hickory Reservoir ideal for striped bass, and it is one of our best sources for hatchery brood fish. It is crucial that minimum stocking rates of ten/acre are maintained to ensure the success of this fishery and future brood source. In 2022, 239,000 striped bass fingerlings were stocked in Old Hickory Reservoir which is slightly below the ten-year average.

Sauger fishing on Old Hickory is an important and very popular winter and early spring fishery. In 2022, anglers spent 34,000 hours fishing for sauger, which was the highest total in ten years. Angler catch was average at 0.85 sauger/hour. Angler effort fluctuates greatly from year to year because of unpredictable water flows below Cordell Hull dam. Each year sauger brood fish are collected below Cordell Hull dam where sauger concentrate to spawn. Sauger are fast growers in Old Hickory and average 10 inches at age one and 15.6 inches at age three.

Walleye stocking in Old Hickory reservoir began in 2004 to enhance the fishery. Stocking rates have varied greatly from 16/acre down to 0. Hatchery personnel stocked 90,000 walleye fingerlings in 2022. Good hatchery production and stocking from 2017 to 2019 has resulted in improved fishing in 2022. Intended angler catch rate was 0.25 walleye/hour in 2022 which was a ten-year high. Targeted angler effort for walleye has varied from 6,000 to 23,000 over the past 10 years. In 2022, anglers spent 25,000 hours fishing for walleye, which was a ten-year high. Angler attitude has been positive with reports of walleye limits and fish caught exceeding ten pounds. Average weight of harvested walleye reported from creel surveys is usually around 3 pounds.

Catfish were the third most sought after species in Old Hickory reservoir in 2022. Creel surveys indicate catfishing accounted for 9.4% of the total effort with a catch rate of 0.3 fish/hour. Targeted angler effort was 49,000 hours in 2022. Channel catfish were the most frequently caught. Average weight of channel catfish harvested is typically 2-2.5 lbs.

Total Effort

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours	523,113	627,743	453,649	505,767	449,975	357,072	513,585	520,071	525,730	517,896
Angler Hours Per Acre	23.2	27.9	20.1	22.5	20	15.9	23	23.1	23.4	23
Angler Trips	117,937	150,607	101,906	109,794	98,125	78,495	112,612	118,185	116,087	107,093

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
All Black Bass (hrs)	209,533	219,417	164,835	184,693	133,839	133,653	209,837	215,384	172,699	205,322
(hrs/acre)	9.3	9.8	7.3	8.2	6	5.9	9	9.6	7.7	9.1
Any Black Bass (hrs)	362	1,673	283	0	1,282	391	596	1,668	9,376	25,496
(hrs/acre)	0	0	0	0	0	0	0	0	0	1.1
		214,712								
Largemouth Bass (hrs)	208,213	214,712	162,008	181,227	132,840	133,110	209,241	211,105	169,453	176,027
(hrs/acre	9.3	9.5	7.2	8	6	6	9	9	8	7.8
Smallmouth Bass (hrs)	958	2,741	2,261	3,466	539	543	596	2,611	2,924	3,799
(hrs/acre)	0	0	0	0	0	0	0	0	0	0.2
Spotted Bass (hrs)	0	291	566	0	460	0	-	-	322	-
(hrs/acre)	0	0	0	0	0	0	-	-	0	-
Tournaments (all black bass)										
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	

Largemouth Bass

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	20	6	42	6	14	10	23	4	38	15
Density (electrofishing)										
PSD	70	65	67	59	66	70	78	70	67	62
RSD (preferred)	22	20	30	23	16	25	26	31	28	22
CPUE (total)	145	124	143	94	118	105	126	63	114	82
CPUE ≥ Stock	125	118	101	88	105	95	103	59	76	67
CPUE ≥ 15	27	24	30	20	17	24	27	18	21	15
Growth (electrofishing)										
Length Age-1	-	-	-	-	-	5.8	-	-	-	-
Length Age-3	-	-	-	-	-	12.5	-	-	-	-
Condition (spring electrofishing)										
Stock	95	95	100	89	100	96	102	98	97	98
Quality	98	90	101	85	99	92	97	95	98	95
Preferred	100	95	97	88	101	96	103	99	100	99
Memorable	103	100	102	97	100	99	103	98	95	100
Fishing Success (creel)										
Catch Rate (intended)	0.78	0.71	0.87	0.73	0.79	0.76	0.6	0.6	0.64	0.8
Harvest Rate (intended)	0.08	0.07	0.09	0.09	0.08	0.08	0.06	0.1	0.08	0.08
% Released	90.1	89.3	86.1	84	88.3	91.8	91	84	88	92
Mean Weight	2.35	2.25	1.98	2.33	2.23	2.19	2.4	2.8	2.6	2.43

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	1.8	1.3	2.33	2.1	0.3	0.8	4.7	2.2	1.1	15
Density (trap netting (t) /electrofishing (e))										
PSD (e)	97	99	100	100	100	100	100	100	100	100
RSD (preferred) (e)	77	78	83	94	60	92	91	60	72	53
CPUE (total) (t)	2.7	1.8	3	2.6	0.9	1.25	5.8	3	2.2	15.6
CPUE ≥ Stock (t)	1	0.6	1.2	0.5	0.7	0.5	1.1	0.8	1.1	0.8
CPUE ≥ MLL (10-inches) (	0.7	0.4	0.53	0.2	0.2	0.2	0.3	0.05	0.4	0.4
Growth (electrofishing)										
Length Age-1	-		-	-	-	-	-	-	-	-
Length Age-3	-	289	-	-	-	-	-	-	-	-
Condition (trap netting)										
Stock	94	99	102	99	85	94	89	89	93	96
Quality	97	90	109	100	88	95	86	86	92	97
Preferred	89	129	103	100	77	94	91	94	91	97
Memorable	81	100	105	99	83	95	98	93	81	92
Blacknose Black Crappie Stocking										
#	70,036	192,578	0	0	0	0	0	0	0	0
#/Acre	3.1	8.6	0	0	0	0	0	0	0	0
Angling Pressure (creel)										
Angler Hours (all crappie)	80,894	91,269	71,428	77,726	45,153	41,511	50,395	56,506	60,953	57,530
Angler Hours/Acre	3.6	4	3.2	3.5	2	1.9	2.2	2.5	2.7	2.6
Fishing Success (creel)										
Catch Rate (any crappie)	1.64	1.2	1.33	1.41	1.38	1.06	1.1	1	1	1.22
Harvest Rate (any crappie)	0.82	0.75	0.48	0.57	0.83	0.57	0.6	0.4	0.44	0.58
% Released (white crappie	49.7	35.2	57.6	45.8	36.5	51.8	43.1	64	53.8	59.8
Mean Weight (white crappi	0.8	0.8	0.8	0.77	0.73	0.81	0.8	0.5	-	-
Value of Fishery (Trip Expenditures - creel)										
All Crappie	66,780	275,700	-	-	-	-	-	-	-	

Bluegill

Angling Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours (all sunfish)	13,196	18,180	6,428	10,510	11,216	8,381	8,000	14,865	13,378	8,680
Angler Hours/Acre	0.6	0.8	0.3	0.5	0.5	0.4	0.4	0.7	0.6	0.4
Fishing Success (creel)										
Catch Rate (any sunfish)	2.9	2.7	2.4	2.4	2.2	2.5	2.6	2	2.4	1.9
Harvest Rate (any sunfish)	1	1.6	1	1.9	0.8	1.6	0.9	0.9	0.3	1.1
% Released (bluegill)	81.2	53.4	70.5	49.2	69.8	56.1	62	68	64	64.8
Mean Weight (bluegill)	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.4	-	-

Sauger

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Density (gill netting)										
PSD	49	77	-	-	-	-	-	-	-	-
RSD (preferred)	5	7	-	-	-	-	-	-	-	-
CPUE (total)	4.4	2.56	-	-	-	-	-	-	-	-
CPUE ≥ Stock	4.4	2.56	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	0.2	0.17	-	-	-	-	-	-	-	-
Growth (gill netting)										
Length Age-1	11	-	-	-	-	10.3	10	-	-	-
Length Age-3	12.7	-	-	-	-	15.7	15.6	-	-	-
Condition (gill netting)										
Stock	86	93	-	-	-	-	-	-	-	-
Quality	90	87	-	-	-	-	-	-	-	-
Preferred	98	95	-	-	-	-	-	-	-	-
Memorable										
Mortality (gill netting)										
Total Mortality	28		-	-	-	37	51	-	-	-
Stocking										
#	255,144	253,226	18,766	44,585	221,778	249,281	221,995	155,989	0	229,997
#/Acre	11.3	11.3	0.8	2	9.9	11.1	10	6.9	0	10.2
Angling Pressure (creel)										
Angler Hours	21,260	16,945	15,881	18,720	16,099	13,713	9,097	8,704	15,958	33,845
Angler Hours/Acre	0.9	0.8	0.7	0.8	0.7	0.6	0.4	0.4	0.7	1.5
Fishing Success (creel)										
Catch Rate (intended)	0.9	0.7	1.3	0.65	0.65	0.7	0.9	0.6	1.5	0.85
Harvest Rate (intended)	0.2	0.2	0.5	0.18	0.27	0.51	0.1	0.2	0.13	0.13
% Released	81.9	66.5	63.2	70.2	71.8	65.3	85	65	81.8	86.7
Mean Weight	1.7	1.7	2	1.93	1.7	1.78	2.3	2.2	-	-

Striped Bass

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
#	321,480	183,911	217,595	269,615	371,714	276,841	276,744	177,997	317,004	238,838
#/Acre	14.3	8.2	9.7	11.9	16.5	12.3	12.3	7.9	14.1	10.6
Angling Pressure (creel)										
Angler Hours	31,969	29,634	33,010	44,673	48,499	32,102	51,092	37,011	55,700	38,200
Angler Hours/Acre	1.4	1.3	1.5	2	2.2	1.4	2.3	1.6	2.5	1.7
Fishing Success (creel)										
Catch Rate (intended)	0.13	0.23	0.2	0.19	0.14	0.21	0.2	0.2	0.1	0.08
Harvest Rate (intended)	0.08	0.13	0.06	0.07	0.06	0.05	0.09	0.04	0.03	0.03
% Released	41	45.6	64.9	54.3	59.3	81.1	73	79	67.1	68.7
Mean Weight	6.42	10.87	9.06	8.41	11.67	10.69	5.9	14.8	-	18.4

Catfish

Angling Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours (all catfish)	40,067	68,848	54,298	47,909	47,758	37,825	56,075	53,654	57,030	48,931
Angler Hours/Acre	1.8	3	2.5	2.1	2.1	1.7	2.5	2.4	2.5	2.2
Fishing Success (creel)										
Catch Rate (any catfish)	0.63	0.48	0.55	0.45	0.5	0.35	0.4	0.4	0.3	0.3
Harvest Rate (any catfish)	0.54	0.37	0.43	0.29	0.42	0.22	0.3	0.4	0.2	0.16
% Released (channel)	24.5	28.7	33.5	31.8	27.9	43.6	28	28	48.4	51.2
Mean Weight (channel)	2.39	2.17	2.18	2.09	2.23	2.51	2.5	6.7	-	-

Habitat Enhancement - 2022

Type of Work	Details	Quantity
Corregated Pipe Structures		0

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	July - August	Good
Dissolved Oxygen	July - August	Good

J. Percy Priest Reservoir

Description

Area (acres): 14,200 **Mean Depth (feet):** 28 **Shoreline (miles):** 265

Counties: Davidson. Rutherford, and Wilson

Full Pool Elevation (feet-msl): 490 **Winter Pool Elevation (feet-msl):** 483

Dam Completion: 1969

Summary:

J. Percy Priest Reservoir provides a variety of fishing opportunities close to Nashville and Murfreesboro. As a result, fishing pressure on Percy Priest was the second highest in the state in 2022 with 32 angler hours/acre for all species combined. The largemouth bass fishery continues to be good despite the angling pressure. Largemouth bass fishing is historically the most sought-after species year after year; however, that has not been the case in recent years as crappie have taken over the top spot. Catch rate for anglers targeting largemouth bass has remained constant over the past 10 years ranging from 0.5 to 0.7 fish per hour and was slightly lower for the third consecutive year in 2022 at 0.5 fish/hour. Overall abundance of largemouth bass from spring electrofishing was below average at 81 fish/hour. Abundance of sub-stock size (< 8 in.) largemouth bass was average at 12/hour. Solid recruitment of sub-stock size largemouth bass in 2021 (21/hour) should maintain a healthy population of fish for the future.

Crappie were the most sought-after species on Percy Priest for 2022. Despite increased effort the past few years, catch rates for crappie have stayed consistent at 1.6 crappie/hour. Trap net results from fall 2022 revealed below average year classes of both white crappie (0.1 fish/net night) and black crappie (0.1 fish/net night) after two great years in 2018 and 2019. These two year classes are still producing huge numbers of crappie greater than the 10” minimum right now and that should continue for the next couple of years. It has been and will continue to be exciting to track this cohort. The 2022 creel survey again showed a catch rate of white and black crappie approaching a 1:1 ratio.

Hybrid striped bass are an important component of Percy Priest Reservoir, and annual stockings are required to maintain this fishery. Hybrid striped bass are the third most popular fishery at Percy Priest Reservoir. This is likely the result of strong stockings since 2014. The catch rate from creel surveys in 2022 was average at 0.5 fish/hour. Relative abundance determined from fall gill netting was good for the fourth straight year with 11 fish/net night. Age-0 hybrid striped bass (2022 stocking) were captured at a rate of 0.7 fish/net night which was the second lowest in 10 years. Average to good recruitment over the previous three years should ensure good fishing for 2022 and beyond, since most fish exceed the minimum length of 15” before age 2. Hybrid striped bass are completely dependent on hatchery stocking and fingerling quality is critically important to ensure the success of the fishery. A total of 110,000 hybrids were stocked into Percy Priest Reservoir in 2022.

Striped bass are another species that must be continually stocked to maintain a fishery. Stocking rates of striped bass have been reduced in recent years and hybrid striped bass stocking numbers have increased because hybrids are more capable of coping with summertime water temperatures which results in increased survival. A total of 36,000 striped bass were stocked into Percy Priest in 2022. As a result of reduced stockings as of late, intended angler hours have dropped. Striped bass are difficult to sample with conventional sampling gear, thus we depend on creel data to evaluate the fishery.

Management of catfish on large reservoirs can be difficult and is sometimes overlooked. It is an important fishery at Percy Priest. As in previous years, creel surveys in 2022 indicated channel catfish made up most of the catch. The past few years we have seen increasing effort for catfish, although creel surveys likely under-estimate catfishing effort, since so many catfish anglers fish at night.

Overall fishing effort slightly decreased in 2022 but was still the third highest total in the past 10 years. These numbers are good to see after declining effort from 2006-2017. The agency's continued outreach and education efforts and good fishing will hopefully help retain these anglers.

Bank fishing areas are important on Percy Priest because of the proximity to several urban areas. These areas are popular for family fishing and recreation. Stewart Creek and Vivrett Creek recreational areas are managed for bank fisherman. In winter of 2020 we constructed two additional fishing piers at Stewart Creek which have been heavily used ever since. Fishing piers and fishing trails are continually maintained, and fish attractors are added as needed.

Fish habitat improvements at Percy Priest in 2022 included the addition of 300 pipe structures spread between 9 unbuoyed sites (GPS marked and viewable soon on the agency's GIS site) and checking and refurbishing 20 stake beds upstream of Hobson Pike Bridge in winter 2021/2022. We also felled 14 trees and anchored them to the stump with stainless steel cable in Suggs Creek to provide additional fishing opportunities for the public. Finally, 123 cypress trees approximately six feet tall were planted, primarily in the Stewart Creek embayment.

***NOTE:** Creel interviews were not performed in June, 2022, which resulted in an underrepresentation of angler hour data for intended species groups; however, the total angler hour estimate of 452,000 is accurate.

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
All Black Bass (hrs)	129,092	126,956	120,955	135,513	113,283	116,401	118,340	138,711	118,049	106,282
(hrs/acre)	9.1	8.9	8.5	9.5	8	8.2	8.3	9.8	8.3	7.5
Any Black Bass (hrs)	667	622	-	543	278	-	-	1,340	676	15,720
(hrs/acre)	0	0	-	0	0	-	-	0.1	0.1	1.1
Largemouth Bass (hrs)	120,527	117,263	114,731	126,671	107,598	113,256	115,873	127,937	113,492	82,571
(hrs/acr	8.5	8.3	8.1	8.9	7.6	8	8.2	9	8	5.8
Smallmouth Bass (hrs)	7,905	8,414	6,224	8,299	5,685	3,145	2,467	9,434	3,881	7,863
(hrs/acr	0.6	0.6	0.4	0.1	0.4	0.2	0.2	0.7	0.3	0.6
Spotted Bass (hrs)	0	656	-	-	-	-	-	-	-	128
(hrs/acre)	0	0	-	-	-	-	-	-	-	0

Largemouth Bass

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	8	17	16	8	8	10	12	12	21	12
Density (electrofishing)										
PSD	70	73	65	75	71	75	70	65	64	55
RSD (preferred)	19	20	18	26	20	28	21	24	26	17
CPUE (total)	87	115	112	105	103	94	93	105	84	81
CPUE ≥ Stock	79	98	96	97	95	85	80	93	63	69
CPUE ≥ MLL (15-inches)	15	20	17	25	19	24	17	21	17	12
Growth (electrofishing)										
Length Age-1	-	7.4	-	-	-	-	-	-	7.3	-
Length Age-3	-	13.4	-	-	-	-	-	-	13.4	-
Condition (spring electrofishing)										
Stock	92	91	91	88	92	82	92	95	91	94
Quality	92	92	90	90	92	88	91	94	88	96
Preferred	92	92	91	86	92	91	92	95	92	93
Memorable	97	92	95	91	93	103	93	102	94	93
Mortality (electrofishing)										
Total Mortality	-	46%	-	-	-	-	-	-	39%	-
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0	0	0	0	0	0	0	0	0	0
Fishing Success (creel)										
Catch Rate (intended)	0.7	0.7	0.7	0.8	0.6	0.7	0.7	0.5	0.5	0.5
Harvest Rate (intended)	0.09	0.08	0.07	0.1	0.06	0.07	0.08	0.06	0.07	0.05
% Released	86	87	87	87	90	88	90	89	88	89
Mean Weight	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.8	-	3

Smallmouth Bass

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
#	9741	0	6384	0	0	0	0	0	0	0
#/Acre	0.7	0	0.4	0	0	0	0	0	0	0
Fishing Success (creel)										
Catch Rate (intended)	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2
Harvest Rate (intended)	0	0	0.05	0	0.01	0	0	0.02	0	0.01
% Released	93	81	86	86	91	87	96	91	84	92
Mean Weight	3.3	3.8	3.3	2.3	3.9	3.6	3.1	4	-	4.1

Spotted Bass

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	0	0.3	0.6	0	1	1	1	2	1	1
Density (electrofishing)										
PSD	71	61	59	53	49	65	57	28	50	51
RSD (preferred)	9	14	15	18	9	6	0	4	22	11
CPUE (total)	17	8	8	10	14	11	11	15	6	13
CPUE $\geq$ Stock	17	8	8	9	13	10	10	13	5	13
Condition (spring electrofishing)										
Stock	101	94	96	92	97	90	100	103	98	103
Quality	96	93	96	93	99	95	100	104	97	101
Preferred	94	96	98	92	95	86	99	99	101	106
Fishing Success (creel)										
Catch Rate (intended)	-	0	-	-	-	-	-	-	-	0
Harvest Rate (intended)	-	0	-	-	-	-	-	-	-	0
% Released	74	68	76	80	85	85	68	91	69	89
Mean Weight	1.2	0.9	1.1	1.2	1	1.3	1.5	0.8	-	-

White Crappie

Recruitment (trap netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	0.1	0.6	0	0.4	0.2	1.9	1.8	0.4	0.9	0.1
Density (trap netting (t) /electrofishing (e))										
PSD (e)	100	100	100	100	100	100	100	100	100	100
RSD (preferred) (e)	78	94	100	73	33	100	100	33	75	100
CPUE (total) (t)	0.23	0.8	0.63	0.4	0.3	2	2.1	1.4	1.1	0.9
CPUE ≥ Stock (t)	0.15	0.2	0.63	0.2	0.1	0.1	0.3	1.1	0.2	0.8
CPUE ≥ MLL (10-inches) (t)	0.15	0	0.05	0.03	0.05	0.08	0	0.08	0.03	0.05
Growth (spring electrofishing)										
Length Age-1	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)										
Stock	-	93	98	96	89	91	94	99	97	95
Quality	103	-	-	91	92	-	-	99	90	-
Preferred	99	98	86	98	85	90	-	-	96	-
Memorable	-	92	-	99	-	91	102	98	106	96
Mortality (spring electrofishing)										
Total Mortality	-	-	-	-	-	-	-	-	-	-
Stocking										
#	-	-	-	-	-	-	-	-	-	
#/Acre	-	-	-	-	-	-	-	-	-	
Angling Pressure (creel)										
Angler Hours (all crappie)	116,284	112,385	111,680	117,876	80,275	73,002	62,080	131,152	142,941	106,557
Angler Hours/Acre	8.2	7.9	7.9	8.3	5.7	5.1	4.4	9.2	10.1	7.5
Fishing Success (creel)										
Catch Rate (any crappie)	1.6	1.4	1.8	1.7	1.6	1.3	1.4	1.7	1.6	1.6
Harvest Rate (any crappie)	0.79	0.86	0.68	0.86	0.79	0.9	0.59	0.79	0.78	0.87
% Released (white crappie)	58	41	63	51	54	31	60	58	53	44
Mean Weight (white crappie)	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	-	1

Black Crappie

Recruitment (trap netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	0.73	1.75	2.4	0.25	0.43	12.58	3.03	0.9	2.4	0.1
Density (trap netting (t) /electrofishing (e))										
PSD (e)	98	36	71	100	100	100	100	97	100	93
RSD (preferred) (e)	85	10	29	87	73	79	100	68	70	57
CPUE (total) (t)	1.1	2.8	3.53	0.4	0.5	13.6	3.9	1.8	3.4	1.4
CPUE ≥ Stock (t)	0.4	1.05	1.13	0.2	0.1	1	0.9	0.9	1	1.3
CPUE ≥ MLL (10-inches) (t)	0.2	0.1	0.33	0	0	0.3	0.2	0.13	0.1	0.4
Growth (trap netting)										
Length Age-2	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
Condition (trap netting)										
Stock	96	97	89	93	94	96	99	96	94	101
Quality	104	96	93	101	93	97	102	98	96	98
Preferred	99	101	87	93	97	98	95	95	91	98
Memorable	90	96	89	86	-	94	92	85	91	-
Stocking										
#	206,437	184,617	0	0	0	0	0	0	0	
#/Acre	14.5	8.2	0	0	0	0	0	0	0	
Angling Pressure (creel)										
Angler Hours (all crappie)	116,284	112,385	111,680	117,876	80,275	73,002	62,080	131,152	142,941	106,557
Angler Hours/Acre	8.2	7.9	7.9	8.3	5.7	5.1	4.4	9.2	10.1	7.5
Fishing Success (creel)										
Catch Rate (any crappie)	1.6	1.4	1.8	1.7	1.6	1.3	1.4	1.7	1.6	1.6
Harvest Rate (any crappie)	0.79	0.86	0.68	0.86	0.79	0.9	0.59	0.79	0.78	0.87
% Released (black crappie)	45	34	50	40	48	25	51	58	48	39
Mean Weight (black crappie)	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.7	-	-

Bluegill

Angling Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours (all sunfish)	10,936	9,711		10,213	5,007	7,558	6,062	10,344	9,968	6,170
Angler Hours/Acre	0.8	0.7		0.7	0.4	0.5	0.4	0.7	0.7	0.4
Fishing Success (creel)										
Catch Rate (any sunfish)	2.8	1.1	2.4	2.3	2.6	2.2	1.5	1.6	3.8	4.1
Harvest Rate (any sunfish)	1.16	1.49	1	0.86	1.96	0.8	0.42	1.1	2.7	3
% Released (bluegill)	67	61	64	54	51	67	83	47	41	35
Mean Weight (bluegill)	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	-	-

Striped Bass

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Substock CPUE	0	0	-	0	0	0	0	0	0	0
Density (gill netting)										
CPUE (total)	0.16	0.3	-	0.5	0.08	0.16	0	0.16	0	0
CPUE ≥ Stock	0.16	0	-	0.5	0.08	0.16	0	0.16	0	0
CPUE ≥ 15-inches	0.08	0.3	-	0.5	0.08	0.16	0	0.16	0	0
Growth (gill netting)										
Length Age-2	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-
Stocking										
#	68,748	29,898	34,073	34,232	34,166	0	0	0	38,604	35,659
#/Acre	4.8	2.1	2.3	2.4	2.4	0	0	0	2.7	2.5
Angling Pressure (creel)										
Angler Hours	5,898	4,457	2,185	5,173	1,887	3,675	2,559	677	136	1,206
Angler Hours/Acre	0.4	0.3	0.2	0.4	0.1	0.3	0.2	0.1	0	0.1
Fishing Success (creel)										
Catch Rate (intended)	0	0	0.1	0	0	0	0	0	0	0
Harvest Rate (intended)	0	0	0.06	0	0	0.01	0	0	0	0
% Released	76	86	84	64	31	17	45	56	60	50
Mean Weight	5.9	3.6	8	8.4	5.4	2.5	1.2	-	-	-

Catfish

Angling Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours (all catfish)	28,764	21,253	20,209	22,403	13,556	15,286	16,808	17,617	17,636	10,972
Angler Hours/Acre	2	1.5	1.4	1.6	1	1.1	1.2	1.2	1.2	0.8
Fishing Success (creel)										
Catch Rate (any catfish)	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Harvest Rate (any catfish)	0.18	0.03	0.27	0.22	0.18	0.19	0.31	0.3	0.24	0.22
% Released (channel)	25	32	31	29	49	27	30	33	27	27
Mean Weight (channel)	2.1	1.8	1.9	1.9	2.2	2	2.3	1.9	-	-

Hybrid (Cherokee) Bass

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Age-0 CPUE	5.1	0.5	2.6	4	2.8	1.3	6.4	2.6	2.8	0.7
Density (gill netting)										
PSD	31	91	60	62	66	83	66	75	78	94
RSD (preferred)	29	79	42	60	60	69	58	71	74	81
CPUE (total)	7.3	4.75	7.4	10	7.9	5.7	16.9	10.5	10.5	11
CPUE ≥ Stock	6.9	0.42	7.3	9.5	7.8	5.4	16.8	10.5	10	11
CPUE ≥ 15-inches	2	3.75	3.75	5.7	4.7	3.75	9.75	7.4	7.3	9.3
Growth (gill netting)										
Length Age-2	-	19.1	19.5	19.2	19.9	18.8	18.5	19.4	19.6	
Length Age-3	23.1	21.1	21.6	22.8	21.6	20.7	21.1	20.7	21.2	
Condition (gill netting)										
Stock	99	94	88	90	95	95	93	92	92	89
Quality	86	98	96	95	97	97	99	100	101	91
Preferred	92	99	87	131	97	95	95	99	90	89
Memorable	97	93	82	85	93	97	90	89	90	86
Stocking										
#	106,598	217,459	192,684	113,114	131,944	135,981	157,016	76,142	102,400	109,525
#/Acre	7.5	15.3	13.6	8	9.3	9.6	11.1	5.4	7.2	7.7
Angling Pressure (creel)										
Angler Hours	11,419	25,449	29,580	59,433	36,989	36,475	57,874	60,572	67,191	64,738
Angler Hours/Acre	0.8	1.8	2.1	4.2	2.6	2.6	4.1	4.3	4.7	4.6
Fishing Success (creel)										
Catch Rate (intended)	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.4	1	0.5
Harvest Rate (intended)	0.12	0.11	0.2	0.17	0.2	0.16	0.12	0.18	0.24	0.17
% Released	80	78	72	65	64	59	72	65	74	66
Mean Weight	5.5	3	3.5	3.9	4.3	4.2	3.3	4.1	NA	-

Habitat Enhancement - 2022

Type of Work	Details	Quantity		
		New		Renovated
Planted	Cypress Trees	173		
Rebrushed	Pipe structures	300		spread out across 9 new unmarked sites
Checked and Refurbished	stake beds		20	checked & refurbished upstream of Hobson Pike

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	July to August	normal
Dissolved Oxyged	July to August	normal

Total Effort and Expenditures

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angler Hours	378,199	416,833	378,235	440,836	322,798	340,903	358,696	505,068	476,837	451,709
Angler Hours Per Acre	26.6	29.4	26.6	31	22.7	24	25.3	35.6	33.6	31.8
Angler Trips	86,277	96,782	89,673	99,640	73,637	75,390	77,432	111,054	106,044	81,517

Normandy Reservoir

Description

Area (acres): 3,048 **Mean Depth (feet):** 36.1 **Shoreline (miles):** 72

Counties: Coffee and Bedford

Full Pool Elevation (feet-msl): 875 **Winter Pool Elevation (feet-msl):** 859

Dam Completion: 1976

Summary:

Three major sampling methods are employed yearly to evaluate the three primary fisheries in Normandy Reservoir. Sampling methods employed include spring boat electrofishing for black bass, fall gill nets for recruitment evaluation of stocked Walleye, and angler creel surveys for the determination of angler pressure, angler intended catch rate, angler intended harvest rate, and angler release rate. Over the past ten years, only three yearly angler creel surveys (2014, 2015, and 2019) have been conducted on Normandy Reservoir. Results of these yearly angler creel surveys indicated that angler hours had increased by 36.5 % (since 2014). In conjunction with an increase in angler hours, an increase in the number of angler trips was documented. Since 2014, the number of angler trips has increased by 37.3 %. Based on the last three years of angler creel data, total yearly fishing effort and number of angler trips have increased consistently during each successive yearly angler creel survey. Whether these trends of increasing fishing effort and increasing angler trips continue will be determined with data collected during the next yearly angler creel survey of Normandy Reservoir.

The Normandy Reservoir black bass fishery is comprised of three species: Largemouth Bass, Spotted Bass, and Smallmouth Bass. Based on the results of the last two yearly angler creel surveys, directed angler effort for black bass has increased by 33.2 %. As a result, angler hours per acre for black bass have increased to over 30.0 hours per acre. Finally, based on the results of the 2019 angler creel survey, Largemouth Bass, Spotted Bass, and Smallmouth Bass accounted for 49.9 % of directed angler effort.

Over the past seven years, data collected during yearly spring electrofishing samples have indicated consistent, moderate, yearly Largemouth Bass reproduction has been occurring. Over the past ten years, limited Largemouth Bass reproduction was only noted in 2015. In spite of this, Largemouth Bass recruitment has remained consistent over the last seven years. Since 2019, yearly total relative abundance values of Largemouth Bass have ranged from a low of 51.0 fish / hour (2022) to a high of 72.0 fish / hour (2021). The 2022 total relative abundance value of Largemouth Bass was the second lowest value documented over the last eight years, yet still rated as “moderate.” Since 2020, calculated yearly PSD values have not varied significantly. In each year, the calculated yearly PSD value indicated that the Largemouth Bass population was slightly “out-of-balance,” mainly as a result of a consistent elevated abundance of Largemouth Bass ranging in length from 15.0 inches to 18.0 inches. The aforementioned indicated that the 15-inch minimum length limit has been (and continues to be) successful in yielding a quality Largemouth Bass fishery for anglers. The last Largemouth Bass age sample (2016) indicated an above average growth rate for age-1 Largemouth Bass and a slightly below average growth rate for age-3 Largemouth Bass. Calculated 2022 condition factors for Largemouth Bass (with lengths greater than eight inches) indicated Largemouth Bass to be in “good” condition. Length frequency data collected in 2022 indicated the continued existence of a quality Largemouth Bass population. Lengths of collected Largemouth Bass ranged from 4.0 inches to 22.9 inches. Within this length range, missing length groups

were not documented. Of all of the documented length groups, the fourteen inch length group was the most abundant (N=32) and comprised approximately 20.9 % of the 2022 Largemouth Bass sample. Additionally, of the total number of Largemouth Bass collected during 2022 spring electrofishing samples (N=153), 41.2 % were greater than or equal to fifteen inches in length. This value was only 1.6 % higher than the previous year's value. Therefore, based on the previous four years of spring electrofishing data, the yearly percentage of Largemouth Bass greater than fifteen inches in length will remain elevated, and vary only minimally over the next two years.

The majority of fishing opportunities for black bass anglers fishing Normandy Reservoir are provided by Largemouth Bass and Spotted Bass. In Normandy Reservoir, Largemouth Bass are the most abundant black bass, followed by Spotted Bass. Spring electrofishing data collected in 2022 indicated that the mean total relative abundance of Spotted Bass (12.0 fish / hour) was approximately 76.5 % lower than the mean total relative abundance of Largemouth Bass (51.0 fish / hour). Furthermore, based on 2019 angler creel data, Spotted Bass have been released at a lower rate (71.5 %) than Largemouth Bass (80.3 %). The lower release rate of Spotted Bass has been attributed to the absence of a minimum length limit regulation. Except for "very limited" 2014 and 2021 year classes, fairly consistent (but low) Spotted Bass yearly reproduction has been documented over the past ten years. Over this time period, elevated yearly Spotted Bass reproduction was not detected. However, Spotted Bass yearly recruitment has been consistent (at a moderate level) since 2005.

The calculated 2022 PSD value of 74.0 % indicated an unbalanced Spotted Bass population because of a limited abundance of "stock length" Spotted Bass. However, the validity of the calculated PSD value is questionable because of the limited number of Spotted Bass collected in 2022 (N=36). The total relative abundance value of Spotted Bass in 2022 (12.0 fish / hour) was low. Since 2018, low relative abundance values ($\leq$ 12.0 fish / hour) have been documented four times. Furthermore, since 2015, a notable decrease in yearly relative abundance of Spotted Bass has been documented. Likely the result of the absence of a minimum length limit, the yearly relative abundance of Spotted Bass greater than fifteen inches in length has remained low ($\leq$ 3.0 fish / hour) since 2012. Age data from the last Spotted Bass age sample (conducted in 2016) indicated a "below average" growth rate for both age-1 Spotted Bass and age-3 Spotted Bass. However, calculated weight indices indicated the condition of Spotted Bass to be "excellent." The continued "above average" mean relative weights of Spotted Bass was the result of an abundance of forage, specifically Threadfin Shad. Length frequency data collected in 2022 indicated a Spotted Bass population comprised primarily of "quality" length to "preferred" length fish. Of the total number of Spotted Bass sampled in 2022 (N=36), 66.7 % were greater than eleven inches in length. However, only 22.2 % were equal to or longer than fifteen inches in length. Lengths of collected Spotted Bass ranged from 6.0 inches to 16.9 inches; only the 9.0 inch length group was absent. Based on the 2022 Spotted Bass length frequency histogram (and assuming consistent recruitment), the abundance of Spotted Bass greater than twelve inches in length in the population will decrease slightly in 2022.

A highly productive reservoir, Normandy Reservoir consistently has low water clarity. Furthermore, cobble-boulder substrate, which is the preferred habitat of Smallmouth Bass, is the least abundant habitat type found in Normandy Reservoir. Therefore, as a result of limited habitat and low water clarity, the Smallmouth Bass population continues to persist at a minimal level of abundance. Smallmouth Bass yearly total relative abundance values historically have ranged from 1.0 fish / hour to 3.0 fish / hour. However, in 2021 and in 2022, Smallmouth Bass yearly total relative abundance values exceeded the historic range, but only minimally. The elevated 2022 total relative abundance value was the result of an increased occurrence of memorable length Smallmouth Bass. Lengths of collected Smallmouth Bass from 2022 electrofishing samples ranged from 5.0 inches to 19.0 inches; however, the 6.0 inch,

7.0 inch, 9.0 inch, 11.0 inch, and 18.0 inch length groups were absent. Since Smallmouth Bass are limited in abundance, directed angler effort for Smallmouth Bass is extremely low compared to directed angler effort for Largemouth Bass. Supplemental stockings of Smallmouth Bass have occurred sporadically over the last twenty years, with stocking rates ranging from 0.3 / acre to 6.6 / acre. However, post stocking evaluations and creel data have indicated that these stockings have not enhanced the Smallmouth Bass fishery of Normandy Reservoir.

The Black Crappie and White Crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery on Normandy Reservoir. Assessing the Normandy Reservoir crappie fishery with traditional sampling methods has been, and continues to be, problematic. As a result, the primary method of assessing the crappie population has been with creel data. Based on data from the last yearly creel survey (which was completed in 2019), directed angler effort for crappie was approximately 23.5 % of total angler directed effort. Since 2014, directed angler hours toward crappie have increased by 57.2 %. This large increase in directed angler hours confirmed rising angler directed effort first noted in 2011. Additionally, the 2019 angler catch rate of 1.37 crappie / hour was consistent with yearly angler catch rates documented in 2011 and in 2015. All yearly angler catch rate values were rated as “above average.” Based on the weight data from the last three yearly creel surveys, the mean weight of crappie has ranged from 0.94 pounds per crappie to 0.98 pounds per crappie. The documented mean weight range was rated as “good.” The effect of variable recruitment has been documented in the White Crappie population, and continues to be a management issue. White Crappie reproduction is sporadic, with successful spawns occurring every four to six years. Black Crappie reproduction is less sporadic, and has been, and continues to be, bolstered by yearly stockings. Over the past five years, Black Crappie stocking rates have ranged from 23.9 fish / acre to 34.1 fish / acre. Recruitment of stocked crappie and consistent yearly catch rates of crappie have been documented by yearly creel survey data. Finally, based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing higher catch rates, and have been harvesting crappie above the minimum length limit at a slightly higher rate than normal.

Walleye were initially stocked into Normandy Reservoir in 2007. Since then, one major Walleye stocking event per year has occurred. Based on the last ten years of stocking data, the mean stocking rate of Walleye was 26.1 fish / acre. Data collected during fall 2022 gill net samples indicated that the mean relative abundance estimate of stock length Walleye was 9.5 fish / net night, which again rated as “above average” for Normandy Reservoir. Because yearly stockings have been occurring since 2007, yearly recruitment of Walleye had been fairly consistent (until 2018). Including 2018, yearly relative abundance values of age-0 Walleye have ranged from 0.0 fish / net night (2018 and 2022) to 2.4 fish / net night (2020). The absence of age-0 Walleye in 2018 and 2022 gill net samples was likely the result of poor yearly recruitment, and not because of a large decrease in the numbers of stocked Walleye. The calculated PSD value of 97.0 % indicated an “out-of-balance” Walleye population (with Walleye < 14.0 inches absent). The absence of Walleye < 14.0 inches indicated that recruitment of the stocked 2021 year class was very low, and may not have been detected. However, length frequency data collected in 2022 indicated the continued existence of a quality Walleye population. Lengths ranged from 14.0 inches to 23.9 inches; missing length groups were not detected, which indicated that successful recruitment has been occurring. Additionally, of the total number of Walleye collected during 2022 fall gill net samples (N=114), 73.7 % were greater than or equal to sixteen inches in length. Also, from yearly fall gill net data, Walleye growth rates (mean length at age) were determined for all Walleye collected each year over the previous ten years. Based on the past ten years of age data, mean length at age values for age-1 Walleye and for age-3 Walleye have displayed only minimal variation. Calculated condition factors (for all

detected length categories) of Walleye ranged from “fair” to “good.” Based on the most recent creel survey data, angling pressure on the Walleye population has increased moderately. Furthermore, the percent of Walleye released by anglers has remained fairly low, and has displayed only minimal variation over the last two yearly angler creel surveys (2015 and 2019). The low release rate of Walleye has coincided with an elevated and consistent yearly abundance of quality length and preferred length fish in the Walleye population of Normandy Reservoir.

Habitat work on Normandy Reservoir and on Tims Ford Reservoir occurs every year. On Woods Reservoir, habitat work occurs every other year. In 2022, habitat enhancements on Normandy Reservoir (by the region two southern reservoir crew) were “moderate.” During 2022, ten bamboo structures and four polytree structures were placed in Boyd’s Branch to concentrate adult fish for exploitation by anglers. Furthermore, to provide structure for fish to concentrate around, four hundred Christmas trees were added around Barton Springs cove. Finally, two hundred eighty-five bald cypress trees were planted in Riley Creek and one hundred bald cypress trees were planted around the large island located near Barton’s Springs access area. Habitat enhancements scheduled for 2023 will be comprised primarily of bald cypress tree plantings and the placement of artificial structures in the upper section of the reservoir.

Lakewide Angling Summary, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
Angler Hours	x	128,907	136,294	x	x	x	202,955	x	x	x
Angler Hours Per Acre	x	42.3	44.7	x	x	x	66.6	x	x	x
Angler Trips	x	25,165	26,247	x	x	x	40,168	x	x	x
Value of Fishery (angler expenditures creel)										
All Species	x	555,030	601,150	x	x	x	765,660	x	x	x

Black Bass, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
All Black Bass (hrs)	x	66,208	67,673	x	x	x	101,296	x	x	x
(hrs/acre)	x	21.7	22.2	x	x	x	33.2	x	x	x
Any Black Bass (hrs)	x	64,990	66,747	x	x	x	101,121	x	x	x
(hrs/acre	x	21.3	21.9	x	x	x	33.2	x	x	x
Largemouth Bass (hrs)	x	94	674	x	x	x	x	x	x	x
(hrs/acı	x	0.0	0.2	x	x	x	x	x	x	x
Smallmouth Bass (hrs)	x	x	139	x	x	x	x	x	x	x
(hrs/acr	x	x	0.0	x	x	x	x	x	x	x
Spotted Bass (hrs)	x	1,124	113	x	x	x	175	x	x	x
(hrs/acre)	x	0.4	0.0	x	x	x	0.1	x	x	x
Tournaments (all black bass)										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures)										
All Black Bass	x	358,700	333,070	x	x	x	426,590	x	x	x
Any Black Bass	x	354,820	325,230	x	x	x	424,760	x	x	x
Largemouth Bass	x	100	5,960	x	x	x	x	x	x	x
Smallmouth Bass	x	x	870	x	x	x	x	x	x	x
Spotted Bass	x	3,780	1,010	x	x	x	1,830	x	x	x

Largemouth Bass, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	3	3	0	4	3	2	4	5	5	2
Density (electrofishing)										
PSD	85	72	65	70	87	71	73	79	79	80
RSD (preferred)	53	46	40	22	41	33	46	44	43	43
CPUE (total)	46	44	53	66	54	48	65	55	72	51
CPUE ≥ Stock	44	41	46	62	50	46	61	50	68	49
CPUE ≥ MLL (15-inches)	23	19	24	14	21	15	28	22	29	21
Growth (electrofishing)										
Length Age-1	x	x	x	7.8	x	x	x	x	x	x
Length Age-3	x	x	x	12.8	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	92	94	96	96	96	92	98	94	97	92
Quality	95	95	96	94	93	97	95	96	94	87
Preferred	92	97	95	96	93	96	92	95	93	90
Memorable	94	77	100	92	97	92	92	118	95	91
Mortality (electrofishing)										
Total Mortality	x	x	x	31	x	x	x	x	x	x
Stocking										
#	0	5967	0	0	0	0	0	0	0	0
#/Acre	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	0.5	0.27	x	x	x	x	x	x	x
Harvest Rate (intended)	x	0	0.07	x	x	x	x	x	x	x
% Released	x	77	79.8	x	x	x	80.3	x	x	x
Mean Weight	x	2.46	3.21	x	x	x	2.43	x	x	x
Value of Fishery (Trip Expenditures)										
Largemouth Bass	x	100	5,960	x	x	x	x	x	x	x

Smallmouth Bass, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	0	3	0	1	0	x	0	0	1	0
Density (electrofishing)										
PSD	100	78	0	50	75	78	67	50	84	83
RSD (preferred)	100	56	0	50	38	44	33	25	68	67
CPUE (total)	1	3	2	2	3	3	3	3	7	4
CPUE ≥ Stock	1	3	1	1	3	3	3	3	6	4
CPUE ≥ MLL (18-inches)	0	0	0	0	1	0	0	0	1	0
Growth (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	76	x	x	x	83	79	98	83	79
Quality	x	88	x	x	74	80	82	85	85	71
Preferred	80	75	x	x	81	77	80	x	83	77
Memorable	x	77	x	x	78	82	x	79	82	80
Mortality (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	3,904	14390	0	15,817	0	0	0	0	0	0
#/Acre	0.3	4.7	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	x	0	x	x	x	x	x	x	x
Harvest Rate (intended)	x	x	0	x	x	x	x	x	x	x
% Released	x	91	77.7	x	x	x	83.8	x	x	x
Mean Weight	x	3.03	3.1	x	x	x	3.15	x	x	x
Value of Fishery (Trip Expenditures)										
Smallmouth Bass	x	x	870	x	x	x	x	x	x	x

Spotted Bass, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	1	3	0	1	1	1	3	1	2	0
Density (electrofishing)										
PSD	89	50	68	53	67	67	62	88	79	74
RSD (preferred)	36	15	33	11	16	10	15	44	21	43
CPUE (total)	16	36	15	16	16	11	21	12	11	12
CPUE ≥ Stock	15	33	13	15	15	10	18	11	9	12
CPUE ≥ 15-inches	2	1	2	1	1	0	0	2	1	3
Growth (electrofishing)										
Length Age-1	x	x	x	5.3	x	x	x	x	x	x
Length Age-3	x	x	x	11.4	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	107	103	x	x	102	101	103	111	93	100
Quality	100	101	99	x	94	97	100	106	98	104
Preferred	92	97	91	94	90	89	95	101	89	96
Memorable	x	x	x	x	x	x	x	x	x	x
Mortality (electrofishing)										
Total Mortality	x	x	x	36	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	0.68	0.5	x	x	x	0	x	x	x
Harvest Rate (intended)	x	0.57	0	x	x	x	0	x	x	x
% Released	x	52.7	71.4	x	x	x	71.5	x	x	x
Mean Weight	x	1.31	1.27	x	x	x	1.27	x	x	x
Value of Fishery (Trip Expenditures)										
Spotted Bass	x	x	1010	x	x	x	1,830	x	x	x

White Crappie, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	x	x	x	x	x	x	x	x	x	x
RSD (preferred) (e)*	x	x	x	x	x	x	x	x	x	x
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	x	x	x	x	x	x
Quality	x	x	x	x	x	x	x	x	x	x
Preferred	x	x	x	x	x	x	x	x	x	x
Memorable	x	x	x	x	x	x	x	x	x	x
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	27,301	34,313	x	x	x	47,764	x	x	x
Angler Hours/Acre	x	9.0	11.3	x	x	x	15.7	x	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	1.67	1.34	x	x	x	1.37	x	x	x
Harvest Rate (any crappie)	x	0.7	0.62	x	x	x	0.69	x	x	x
% Released (white crappie)	x	64.9	89.9	x	x	x	100	x	x	x
Mean Weight (white crappie)	x	0.7	0.85	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	109,380	128,140	x	x	x	198,460	x	x	x

Black Crappie, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	43	75	x	100	100	x	100	100	100	50
RSD (preferred) (e)*	43	50	x	100	100	x	75	x	60	x
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	11.2	x	11.2	x	x	x	x
Condition (spring electrofishing)										
Stock	111	148	x	x	x	x	x	x	x	107
Quality	x	102	x	x	x	x	97	x	110	103
Preferred	x	111	x	102	96	x	97	89	101	x
Memorable	86	89	x	x	93	x	95	x	105	x
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	20,659	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	27,301	34,313	x	x	x	47,764	x	x	x
Angler Hours/Acre	x	9.0	11.3	x	x	x	15.7	x	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	1.67	1.34	x	x	x	1.37	x	x	x
Harvest Rate (any crappie)	x	0.7	0.62	x	x	x	0.69	x	x	x
% Released (black crappie)	x	48.4	60.3	x	x	x	84.6	x	x	x
Mean Weight (black crappie)	x	0.95	1.03	x	x	x	0.84	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	109,380	128,140	x	x	x	198,460	x	x	x

Blacknose Crappie, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	x	x	x	x	x	x	x	x	x	x
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	66.3	92.9	83.3	100	100	100	88.9	85.7	100	70
RSD (preferred) (e)*	50	63	33	83	66	92	65	62	91	48
CPUE (total) (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ Stock (t)*	x	x	x	x	x	x	x	x	x	x
CPUE ≥ MLL (10-inches) (t)*	x	x	x	x	x	x	x	x	x	x
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	11.2	x	9.7	x	x	x	10.3
Condition (spring electrofishing)										
Stock	110	92	107	x	78	x	110	91	x	109
Quality	110	99	95	104	103	109	103	102	105	106
Preferred	99	99	87	95	97	112	99	107	96	103
Memorable	94	97	x	91	90	102	91	93	94	87
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	60	x	x	x	x
Stocking										
#	86,629	103,887	97,450	92,164	103,938	100,124	102,263	82,720	72,982	82,666
#/Acre	28.4	34.1	32.0	30.2	34.1	32.8	33.5	27.1	23.9	27.1
Angling Pressure (creel)										
Angler Hours (all crappie)	x	27,301	34,313	x	x	x	47,764	x	x	x
Angler Hours/Acre	x	9.0	11.3	x	x	x	15.7	x	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	1.67	1.34	x	x	x	1.37	x	x	x
Harvest Rate (any crappie)	x	0.7	0.62	x	x	x	0.69	x	x	x
% Released (blacknose crappie)	x	63.8	52.6	x	x	x	52.6	x	x	x
Mean Weight (blacknose crappie)	x	0.97	0.94	x	x	x	0.98	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	109,380	128,140	x	x	x	198,460	x	x	x

Walleye, Normandy Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (gill netting)										
Age-0 CPUE	0.75	2.2	3.8	1.5	0.5	x	1.7	2.42	1.25	x
Density (gill netting)										
PSD	86.7	69.7	64.1	88.5	85.1	91.7	65.8	64.9	87.3	97
RSD (preferred)	13	14	8	13	22	17	12	1	13	18
CPUE (total)	8.16	8.25	10.8	13.1	5.58	4	6.33	6.67	10.17	9.5
CPUE ≥ Stock	8.16	8.25	10.7	13	5.58	4	6.08	6.42	9.84	9.5
CPUE ≥ 16-inches	5.8	4.92	5.92	10.08	4.42	3.25	2.67	3.5	6.34	6.67
Growth (gill netting)										
Length Age-1	16.3	15.9	16.2	16.7	16.2	15.8	15.6	16.5	16.1	16.0
Length Age-3	19.9	19.7	18.8	20.2	20.0	19.6	21.5	20.4	x	20.6
Condition (gill netting)										
Stock	100.0	92.4	91.7	103.1	88.6	90.1	105.0	95.6	87.8	84.7
Quality	94.8	87.8	85.2	86.9	87.2	82.6	86.7	92.4	91.2	87.8
Preferred	90.1	82.5	78.1	83.8	81.9	84.2	82.7	x	86.2	82.2
Memorable	x	x	70.4	x	x	91.1	73.4	x	x	x
Stocking										
#	58,771	115,421	95,823	58,380	78,417	106,455	78,828	72,887	55,601	74,417
#/Acre	19.3	37.9	31.4	19.2	25.7	34.9	25.9	23.9	18.2	24.4
Angling Pressure (creel)										
Angler Hours	x	8,759	6,218	x	x	x	10,756	x	x	x
Angler Hours/Acre	x	2.5	2.0	x	x	x	3.5	x	x	x
Fishing Success (creel)										
Catch Rate (intended)	x	0.34	0.51	x	x	x	0.23	x	x	x
Harvest Rate (intended)	x	0.17	0.35	x	x	x	0.17	x	x	x
% Released	x	63.6	28.3	x	x	x	30.9	x	x	x
Mean Weight	x	2.57	2.88	x	x	x	2.25	x	x	x
Value of Fishery (Trip Expenditures - creel)										
Walleye	x	24,950	31,000	x	x	x	35,620	x	x	x

2022 Habitat Enhancement - Normandy Reservoir

				Quantity	
Type of Work	**Details**		**New**		**Renovated**
Planted	Bald cypress trees planted around Riley Creek		285		
	Bald cypress trees planted around Barton Springs Island		100		
Rebrushed	Existing fish attractors were not rebrushed				
Added	Christmas trees around Barton Springs		400		
	Bamboo structures at Boyds Branch		10		
	Polytree structures at Boyds Branch		4		

2022 Water Quality Monitoring - Normandy Reservoir

Parameter		**Sampling Period**		**Water Quality**	
Temperature		July to August		Normal	
Dissolved Oxyged		July to August		Normal	

Tims Ford Reservoir

Description

Area (acres): 10,600 **Mean Depth (feet):** 28 **Shoreline (miles):** 265

Counties: Franklin and Coffee

Full Pool Elevation (feet-msl): 888 **Winter Pool Elevation (feet-msl):** 860

Dam Completion: 1970

Summary:

Sampling methods employed each year to evaluate the primary sport fisheries of Tims Ford Reservoir include boat electrofishing in the spring for the determination of black bass population parameters, trap net samples in the fall to ascertain crappie reproduction, gill net samples in the fall for recruitment evaluation of stocked Striped Bass, Hybrid Striped Bass, and Walleye, and yearly angler creel surveys for the determination of angler pressure, angler intended catch rate, angler intended harvest rate, and angler release rate. The last yearly angler creel survey on Tims Ford Reservoir was completed in 2020. Based on the results of the 2020 angler creel survey, anglers fished a total of 260,297 hours (24.6 hours / acre). Total yearly fishing effort in 2020 was 7.3 % lower than total yearly fishing effort in 2017. Despite the decrease in total yearly fishing effort in 2020, the total number of angler fishing trips actually increased (by approximately 1.0%). Finally, in spite of the additional four hundred and eighty fishing trips in 2020, the number of hours spent fishing (per reservoir acre) by anglers actually decreased by approximately two angler hours per reservoir acre.

Based on the results of the 2020 creel survey, black bass accounted for approximately 61.2 % of directed angler effort. The black bass fishery of Tims Ford is comprised of two primary fisheries: a Largemouth Bass fishery and a Smallmouth Bass fishery. Spotted Bass have occasionally been collected during standard spring electrofishing samples, but this population continues to be limited in abundance. Data from yearly spring electrofishing samples have indicated consistent yearly Largemouth Bass reproduction has been occurring since 2010. But, limited Largemouth Bass reproduction was documented in 2015 and 2017. Despite the limited reproduction noted in 2015 and 2017, consistent yearly recruitment has been documented over the past eighteen years. Since 2018, Largemouth Bass reproduction has displayed moderate variation.

Yearly Largemouth Bass total relative abundance values have been fairly variable since 2018, yet have been on the “higher-end” of the documented historical range of these values. The calculated 2022 PSD value of 82 indicated the Largemouth Bass population to be “out-of-balance,” mainly as a result of a decrease in Largemouth Bass ranging in length from 8.0 inches to 11.9 inches. Furthermore, an increase in abundance of Largemouth Bass in the 13.0 inch to 16.9 inch length range indicated that the 15-inch minimum length limit has been successful at protecting Largemouth Bass below the length limit and that angler harvest rates above the minimum length limit have remained low. The last age data, which was collected in 2016, indicated an “above average” growth rate for age-1 Largemouth Bass and an “average” growth rate for age-3 Largemouth Bass. Calculated condition factors for Largemouth Bass with lengths greater than eight inches indicated Largemouth Bass to be in “fair” to “good” condition. Length frequency data collected in 2022 indicated the continued existence of a quality Largemouth Bass population. Lengths ranged from 5.0 inches to 21.9 inches; only the 20.0 length group was absent. Of the total number of Largemouth Bass collected during 2022 spring electrofishing samples (N=156), approximately

46.1 % were greater than or equal to fifteen inches in length. However, based on the previous years of spring electrofishing data, the yearly percentages of Largemouth Bass greater than fifteen inches in length have displayed, and will continue to display, moderate variability.

A prevalence of cobble / boulder substrate (which comprise large areas of the middle and lower reaches of the reservoir), and consistent water clarity provide ideal habitat for Smallmouth Bass. Since 2016, directed effort by anglers for Smallmouth Bass has remained greater than directed effort by anglers for Largemouth Bass. The elevated directed effort by anglers for Smallmouth Bass continues to indicate the relevance of this fishery to anglers. However, the habitat utilized by Smallmouth Bass makes obtaining a representative sample through electrofishing or other methods problematic. Therefore, creel data are the primary data utilized to assess this fishery. Based on the last year of angler creel data (2020), Smallmouth Bass harvest was not documented. The mean weight of Smallmouth Bass was 2.73 pounds, which indicated that fish above the 18" minimum length limit were present in the population and were being utilized by anglers. Additionally, based on the last Smallmouth Bass age data (collected in 2014), the abundance of sub-legal length Smallmouth Bass (16.0 – 17.9 inches) was elevated. The elevated abundance of sub-legal length Smallmouth Bass indicated that the minimum length limit regulation was effective. Furthermore, based on the results of the 2014 age sample, nine year classes were detected (age-2 to age-10); missing age classes were absent, which indicated consistent natural reproduction. Weighted mean length at age-3 was 12.4 inches; Smallmouth Bass did not reach 18.0 inches in length until age-6. Therefore, the growth rate of Smallmouth Bass was considered "slow." Finally, during 2022 spring electrofishing samples, twenty-four Smallmouth Bass were collected. A length frequency histogram generated from these data indicated that Smallmouth Bass lengths ranged from 8.0 inches to 18.9 inches. Missing length groups included the 11.0 inch and 15.0 inch length groups. The 4.0 inch length group was also detected. Furthermore, the length frequency histogram indicated that the abundance of sub-legal length Smallmouth Bass (16.0 – 17.9 inches) was moderately elevated (which indicated that the minimum length limit regulation was effective). Therefore, since consistent recruitment and moderate abundance continues to be documented yearly, supplemental stockings are not warranted at this time.

The Black Crappie and White Crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery of Tims Ford Reservoir. Directed effort for crappie was approximately 14.3 % of the total angler directed effort. Assessing crappie reproduction on Tims Ford Reservoir has been, and continues to be, problematic. As a result, the primary means of assessing the crappie fishery has been by yearly angler creel surveys. Over the last seven years, yearly angler creel surveys were conducted in 2016, 2017, and 2020. Based on the data from these three yearly angler creel surveys, it was determined that angler hours have increased by 24.6 % (since 2016). However, the 2020 catch rate of 0.83 crappie / hour was the lowest documented catch rate over the previous three angler creel surveys, and continues a trend of decreasing yearly crappie catch rates noted since 2011. The mean weights of White Crappie and Black Crappie ranged from 0.87 pounds to 0.91 pounds per crappie respectively. Both of the documented mean weight values were rated as "good." The effect of variable recruitment has been documented in the crappie fishery, and continues to be a management issue. Crappie reproduction is sporadic, with successful spawns occurring every four to six years. As a result, crappie reproduction has been, and continues to be, bolstered by yearly stockings. Because of the ability to easily procure Black Crappie brood fish, yearly stockings are only comprised of Black Crappie. From 2016 to 2019, and in 2021, Black Crappie stocking rates exceeded 12.0 fish / acre. However, as a result of production issues, Black Crappie stocking rates were reduced to 2.8 fish / acre in 2020 and to 6.2 fish / acre in 2022. Recruitment of stocked Black Crappie has been, and continues to be, documented by yearly angler creel

data. Data have indicated consistent, but fairly low, yearly catch rates since 2017. Despite these lower catch rates, ample yearly recruitment of stocked Black Crappie has been occurring. Because of the low number of Black Crappie stocked in 2020 and 2022, the relative abundance of Black Crappie will remain lower than normal. Finally, based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing acceptable catch rates, and have been harvesting crappie at a slightly lower rate than normal (above the minimum length limit).

Tims Ford Reservoir Hybrid Striped Bass fishery remains a popular fishery. In addition to local anglers, a large percentage of "out-of-state" anglers (primarily from Alabama) comprise those anglers pursuing Hybrid Striped Bass. Additionally, many "out-of-state" anglers employ local guide services to help them find and capture Hybrid Striped Bass. Based on numerous years of forage base data, Tims Ford Reservoir has a moderate abundance of Alewife and Gizzard Shad. However, Threadfin Shad abundance continues to display high year-to-year variability. Therefore, the yearly stocking rates of Hybrid Striped Bass must be closely monitored. To ascertain the extent of yearly recruitment (of fingerling Hybrid Striped Bass) from yearly stocking events, the Hybrid Striped Bass population continues to be monitored yearly through the use of horizontal gill nets. Based on gill net data collected during 2022, inconsistent recruitment of Hybrid Striped Bass was evident. Likely the result of highly variable stocking rates (since 2018), yearly Hybrid Striped Bass recruitment has not been documented since 2019. A fifteen inch minimum length limit (in combination with a limited daily creel limit of two per day) resulted in an elevated abundance of Hybrid Striped Bass in the 15.0 inch length class to 17.0 inch length class. Hybrid Striped Bass ranged in length from 14.0 inches to 18.0 inches; the 21.0 inch and 22.0 inch length classes were also documented.

From 2018 to 2020, Hybrid Striped Bass total relative abundance values equaled (or exceeded) 4.0 fish / net night. Prior to 2018, total relative abundance values were more variable, ranging from 1.9 fish / net night to 3.5 fish / net night. However, since 2021, yearly total relative abundance values have been variable and less than 1.7 fish / net night. These declines in yearly total relative abundance were influenced by the absence of a 2020 stocking (production issues) and variable yearly stocking rates (since 2018). The 2022 age sample (generated from 2022 gill net samples) indicated Hybrid Striped Bass were over twenty-one inches by age-3. Age-2 hybrid Striped Bass were not documented in 2022. Since 2017, consistent growth rates for age-2 and age-3 Hybrid Striped Bass have been documented; over this six year period, mean length at age for age-2 Hybrid Striped Bass was 19.1 inches and mean length at age for age-3 Hybrid Striped Bass was 21.1 inches. The growth rates of age-2 and age-3 Hybrid Striped Bass were rated as "average" and did not vary appreciably from Hybrid Striped Bass growth rates from other middle Tennessee Hybrid Striped Bass populations. The last available creel data (from 2020) indicated that angling pressure was fairly "low;" however, since 2017, angling pressure has increased by 46.9 %. Additionally, the 2020 angler catch rate value was again rated as "low," although it was much higher than the 2017 catch rate value. The 2020 harvest rate of Hybrid Striped Bass was extremely low, and was the lowest documented during the last three yearly angler creel surveys. Mean weight of Hybrid Striped Bass was not determined in 2020. However, based on 2017 creel data, the mean weight of Hybrid Striped Bass exceeded eight pounds; this value was the highest recorded mean weight value from the last four yearly creel surveys.

Stocked initially to exploit the abundant clupeid populations, Striped Bass have been stocked into Tims Ford Reservoir for numerous decades. Since the equipment and fishing methods are similar, anglers who fish for Hybrid Striped Bass often fish for Striped Bass. As opposed to gill net monitoring of Hybrid Striped Bass, gill net monitoring of Striped Bass has been, and continues to be, an ineffective method. Therefore, creel data have historically been utilized to assess the status of the Striped Bass fishery.

Reported angler catch and harvest rates (2020) of adult Striped Bass were low, with only angler catch rate being slightly above zero. The calculated release rate of Striped Bass was 88.9 %. Mean weight of Striped Bass was not calculated. Based on 2022 age data, the mean length value (at age-2) of Striped Bass was rated as “above average” and the length value (at age-3) of Striped Bass (N=1) was within the historic length range. Finally, in 2022, 86,594 Striped Bass fingerlings were stocked into Tims Ford Reservoir. The 2022 stocking rate of 8.2 Striped Bass fingerlings per acre was the highest stocking rate over the past ten years. Traditionally, Striped Bass stocking rates have varied only minimally, and have ranged from 2.5 Striped Bass per acre to 3.5 Striped Bass per acre.

Stocking of Walleye into Tims Ford Reservoir has been occurring yearly over the past two decades. However, in 2007 (as a result of production issues), Walleye were not stocked into Tims Ford Reservoir. Dependent upon the length of the stocked Walleye fingerlings, the total number of stocked Walleye can vary greatly. Therefore, over the past ten years, yearly stocking rates of Walleye have ranged from 2.6 fish / acre (in 2020) to 16.9 fish / acre (in 2014). Based on 2022 fall gill net data, the mean relative abundance value of Walleye $\geq$ stock length was 1.2 fish / net night, which rated as “average” for Tims Ford Reservoir. Because consecutive yearly Walleye stockings have occurred since 2008, recruitment of stocked Walleye has been very consistent. Over the last ten years, the abundance of age-0 Walleye has ranged from 0.1 fish / net night to 1.7 fish / net night. Although these values are low, they are indicative of consistent yearly recruitment of stocked Walleye. The calculated PSD value of 95.0 % indicated an unbalanced Walleye population (because of the low abundance of ten inch to fifteen inch Walleye). Additionally, the calculated PSD value indicated that the sixteen inch minimum length limit has been successful at increasing the yearly abundance of Walleye sixteen inches in length and longer.

Total yearly relative abundance values of Walleye have remained consistent over the previous six years, but at a reduced level. From 2011 to 2016, total yearly relative abundance values of Walleye were consistent, but at a much higher level. From Walleye collected during 2022 standard gill net samples, Walleye yearly growth rates (mean length at age) were determined. Based on 2022 data, the mean length at age value (of age-1 Walleye) increased by more than 0.5 inches since the last age sample was conducted in 2021. Furthermore, the mean length at age value of age-3 Walleye has increased by more than 2.0 inches since 2021. Over the previous two years (2021—2022), yearly Walleye stocking rates have varied only minimally (from 12.6 fish / acre in 2021 to 12.9 fish / acre in 2022). As a result, mean length at age (for age-1 Walleye) should only vary slightly in 2023. Age data collection and analysis in 2023 will confirm or refute the aforementioned assumption. Calculated condition factors indicated Walleye (10.0 inches in length to 19.9 inches in length) to be in “good” condition. Since 2017, angling pressure has increased by approximately 8.1 %. Finally, yearly angler catch rates and yearly angler harvest rates have not varied significantly over the last three yearly creel surveys.

Habitat enhancements on Tims Ford Reservoir by the region two southern reservoir crew were minimal in 2022. Habitat enhancements on Tims Ford Reservoir and on Normandy Reservoir occur every year. Habitat enhancements on Woods Reservoir occur every other year. In 2022, four hundred Christmas trees were placed throughout the cove at Tims Ford State Park. Artificial structures were not placed into the reservoir in 2022. Bamboo structures and spawning benches (for black bass spawning) were not placed into the reservoir in 2022. Bald Cypress trees were not planted in Tims Ford Reservoir in 2022. Finally, the next major habitat work on Tims Ford Reservoir has been scheduled for the late fall of 2023.

Lakewide Angling Summary, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
Angler Hours	x	x	x	214,724	280,734	x	x	260,297	x	x
Angler Hours Per Acre	x	x	x	20.3	26.5	x	x	24.6	x	x
Angler Trips	x	x	x	38,758	49,753	x	x	50,233	x	x
Value of Fishery (angler expenditures creel)										
All Species	x	x	x	941,740	1,553,930	x	x	934,980	x	x

Black Bass, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
All Black Bass (hrs)	x	x	x	156,384	213,467	x	x	159,256	x	x
(hrs/acre)	x	x	x	14.8	20.1	x	x	15.0	x	x
Any Black Bass (hrs)	x	x	x	136,465	196,517	x	x	156,132	x	x
(hrs/acre)	x	x	x	12.9	18.5	x	x	14.7	x	x
Largemouth Bass (hrs)	x	x	x	3,297	1,173	x	x	742	x	x
(hrs/acre	x	x	x	0.3	0.1	x	x	0.1	x	x
Smallmouth Bass (hrs)	x	x	x	16,622	15,777	x	x	2,382	x	x
(hrs/acre	x	x	x	1.6	1.5	x	x	0.2	x	x
Spotted Bass (hrs)	x	x	x	x	x	x	x	x	x	x
(hrs/acre)	x	x	x	x	x	x	x	x	x	x
Tournaments (all black bass)										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures)										
All Black Bass	x	x	x	708,130	1,143,950	x	x	635,700	x	x
Any Black Bass	x	x	x	603,050	1,269,220	x	x	626,130	x	x
Largemouth Bass	x	x	x	13,900	8,200	x	x	3,010	x	x
Smallmouth Bass	x	x	x	91,180	117,070	x	x	6,560	x	x
Spotted Bass	x	x	x	x	x	x	x	x	x	x

Largemouth Bass, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	2	3	1	3	1	4	6	4	5	2
Density (electrofishing)										
PSD	83	87	74	81	89	74	79	81	76	82
RSD (preferred)	37	46	43	38	44	42	43	47	39	49
CPUE (total)	31	39	37	37	38	48	58	40	55	35
CPUE ≥ Stock	29	35	35	34	36	44	52	36	50	33
CPUE ≥ MLL (15-inches)	11	15	14	13	15	18	22	17	19	16
Growth (electrofishing)										
Length Age-1	x	x	x	7.1	x	x	x	x	x	x
Length Age-3	x	x	x	13.6	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	84	76	87	98	86	87	94	91	90	84
Quality	84	85	84	100	91	86	92	93	92	85
Preferred	86	84	85	89	89	83	86	85	89	84
Memorable	83	77	x	x	89	94	76	89	88	76
Mortality (electrofishing)										
Total Mortality	x	x	x	32	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	0.28	0.47	x	x	0.2	x	x
Harvest Rate (intended)	x	x	x	0.14	0	x	x	0	x	x
% Released	x	x	x	83	90.8	x	x	76.3	x	x
Mean Weight	x	x	x	2.44	2.44	x	x	2.7	x	x
Value of Fishery (Trip Expenditures)										
Largemouth Bass	x	x	x	13,900	8,200	x	x	3,010	x	x

Smallmouth Bass, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	0	0	0	0	0	1	2	0	x	0
Density (electrofishing)										
PSD	86	82	93	82	87	82	86	74	68	78
RSD (preferred)	52	72	75	72	53	62	70	53	49	57
CPUE (total)	14	9	13	9	10	15	14	9	8	5
CPUE ≥ Stock	14	9	13	9	10	14	12	8	8	5
CPUE ≥ MLL (18-inches)	2	1	1	2	1	2	2	1	1	1
Growth (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	12.4*	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	89	82	89	93	100	90	90	85	87	86
Quality	83	75	82	84	86	83	84	82	87	79
Preferred	76	73	79	77	83	76	77	75	81	75
Memorable	68	74	75	75	73	74	73	71	72	71
Mortality (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	0.52	0.85	x	x	1.15	x	x
Harvest Rate (intended)	x	x	x	0.06	0.02	x	x	0	x	x
% Released	x	x	x	94	93.6	x	x	94.6	x	x
Mean Weight	x	x	x	2.89	3.45	x	x	2.73	x	x
Value of Fishery (Trip Expenditures)										
Smallmouth Bass	x	x	x	91,180	117,070	x	x	6,560	x	x

White Crappie, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	0.0	0.0	0.0	x	x	0.0	0.0	0.0	x	x
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	72	100	100	100	100	100	100	100	80	100
RSD (preferred) (e)*	27	67	100	36	74	93	100	100	80	100
CPUE (total) (t)*	0.04	0.1	0.18	0.01	0.04	0.02	0.03	0.04	0.05	0.03
CPUE ≥ Stock (t)*	0.01	0.0	0.01	0.01	0.04	0.02	0.01	0.01	0.05	0.03
CPUE ≥ MLL (10-inches) (t)*	0	0	0	0	0.04	0.01	0.01	0.01	0.01	0.01
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	101	x	x	x	x	x	x	x	94	x
Quality	99	93	x	100	96	92	x	x	x	x
Preferred	89	94	x	101	91	91	92	x	97	100
Memorable	90	90	87	86	92	85	84	95	87	79
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	28,071	34,231	x	x	37,247	x	x
Angler Hours/Acre	x	x	x	2.7	3.2	x	x	3.5	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	1.16	0.93	x	x	0.83	x	x
Harvest Rate (any crappie)	x	x	x	0.62	0.59	x	x	0.4	x	x
% Released (white crappie)	x	x	x	61.5	24.2	x	x	74	x	x
Mean Weight (white crappie)	x	x	x	0.67	0.71	x	x	0.87	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	90,770	145,120	x	x	113,610	x	x

Black Crappie, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	0.1	0.2	0.1	0.0	0.1	0.1	0.1	x	0.2	0.2
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	83	100	91	100	78	71	89	100	83	100
RSD (preferred) (e)*	83	56	55	x	44	57	72	71	33	100
CPUE (total) (t)*	0.2	0.2	0.3	0.03	0.08	0.21	0.14	x	0.26	0.35
CPUE ≥ Stock (t)*	0.06	0.3	0.18	0.01	0.01	0.13	0.04	x	0.1	0.13
CPUE ≥ MLL (10-inches) (t)*	0	0	0	0	0	0.03	0.01	x	x	2
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	86	98	138	x	97	x
Quality	91	94	93	101	85	82	92	97	96	x
Preferred	80	87	80	x	x	98	90	92	91	91
Memorable	86	83	80	x	85	81	87	93	84	99
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	91,191	0	57,576
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5.4
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	28,071	34,231	x	x	37,247	x	x
Angler Hours/Acre	x	x	x	2.7	3.2	x	x	3.5	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	1.16	0.93	x	x	0.83	x	x
Harvest Rate (any crappie)	x	x	x	0.62	0.59	x	x	0.4	x	x
% Released (black crappie)	x	x	x	14	45.1	x	x	50.2	x	x
Mean Weight (black crappie)	x	x	x	0.91	0.93	x	x	0.91	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	90,770	145,120	x	x	113,610	x	x

Blacknose Crappie, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	0.0	0.0	0.0	0.0	0.0	x	0.1	0.0	x	0.0
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	100	100	100	100	100	100
RSD (preferred) (e)*	63	63	83	100	60	38	79	41	73	100
CPUE (total) (t)*	0.15	0.1	0.06	0.1	0.08	0.19	0.45	0.04	x	0.1
CPUE ≥ Stock (t)*	0.11	0.0	0.04	0.07	0.03	0.19	0.35	0.03	x	0.07
CPUE ≥ MLL (10-inches) (t)*	0.01	0	0	0	0	0.04	0.01	0.01	x	0.01
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	x	x	x	x	x	x
Quality	85	96	72	x	91	97	94	104	95	x
Preferred	93	89	86	x	85	x	88	97	89	85
Memorable	83	83	76	97	88	76	80	88	84	86
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	106,004	156,411	156,411	136,284	133,894	137,477	137,940	29,773	152,016	65,433
#/Acre	10.0	14.8	14.8	12.9	12.6	13.0	13.0	2.8	14.3	6.2
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	28,071	34,231	x	x	37,247	x	x
Angler Hours/Acre	x	x	x	2.7	3.2	x	x	3.5	x	x
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	1.16	0.93	x	x	0.83	x	x
Harvest Rate (any crappie)	x	x	x	0.62	0.59	x	x	0.4	x	x
% Released (blacknose crappie)	x	x	x	51.7	62.6	x	x	46.5	x	x
Mean Weight (blacknose crappie)	x	x	x	0.89	0.97	x	x	0.84	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	90,770	145,120	x	x	113,610	x	x

Walleye, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (gill netting)										
Age-0 CPUE	1.7	0.44	0.16	0.23	0.45	0.1	0.5	0.1	0.3	0.1
Density (gill netting)										
PSD	59.2	65.7	91.9	85.7	76.5	81.81	40	75	75	95.2
RSD (preferred)	14	7	8	32	38	27	5	10	19	14
CPUE (total)	4.1	3.8	2.1	3.9	1.9	1.3	1.2	1.1	0.9	1.3
CPUE ≥ Stock	3.94	3.7	2.1	3.9	1.9	1.3	1.2	1.2	0.9	1.2
CPUE ≥ 16-inches	2.05	2.1	1.7	3.4	1.5	0.8	0.4	0.7	0.6	1
Growth (gill netting)										
Length Age-1	14.8	15.6	16.8	17.1	17.2	15.0	14.4	15.8	15.8	16.4
Length Age-3	19.1	19.1	x	20.4	20.8	20.0	18.6	18.5	16.7	19.4
Condition (gill netting)										
Stock	89.0	97.2	85.8	90.0	88.2	82.8	90.4	99.8	89.2	84.1
Quality	87.0	86.4	84.9	85.7	78.3	80.2	87.4	84.5	84.4	87.6
Preferred	79.8	80.0	78.1	83.8	80.4	82.1	74.7	83.0	81.8	87.3
Memorable	x	80.5	x	x	x	x	x	x	x	83.3
Stocking										
#	115,346	179,511	117,977	98,127	117,163	120,857	114,820	27,567	133,871	136,819
#/Acre	10.9	16.9	11.1	9.3	11.1	11.4	10.8	2.6	12.6	12.9
Angling Pressure (creel)										
Angler Hours	x	x	x	10,478	10,717	x	x	4,529	x	x
Angler Hours/Acre	x	x	x	1.0	1.0	x	x	0.4	x	x
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	0.16	0.12	x	x	0.19	x	x
Harvest Rate (intended)	x	x	x	0.14	0.10	x	x	0.13	x	x
% Released	x	x	x	19.9	33.3	x	x	11.5	x	x
Mean Weight	x	x	x	2.63	3.23	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
Walleye	x	x	x	59,680	59,690	x	x	20,820	x	x

Striped Bass, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (gill netting)										
Age-0 CPUE	0.11	x	x	0.06	0.34	0.23	0.05	x	x	x
Density (gill netting)										
PSD	14	x	100	55	40	13.3	55.6	x	37.5	50
RSD (preferred)	x	x	x	x	x	x	11	x	x	x
CPUE (total)	0.5	x	0.2	0.7	0.9	1.2	0.6	x	0.5	0.3
CPUE ≥ Stock	0.39	x	0.2	0.6	0.4	0.84	0.5	x	0.5	0.2
CPUE ≥ 15-inches	0.11	x	0	0.4	0.5	0.4	0.5	x	0.4	0.3
Growth (gill netting)										
Length Age-2	20.3	x	x	14.2	20.0	19.8	18.9	x	20.0	21.3
Length Age-3	x	x	x	24.6	x	x	24.8	x	x	24.1
Condition (gill netting)										
Stock	82.9	x	94.4	93.8	84.9	90.1	77.2	x	86.6	83.5
Quality	x	x	x	91.8	81.7	87.9	70.7	x	75.0	81.4
Preferred	x	x	x	x	x	x	59.8	x	x	x
Memorable	x	x	x	x	x	x	x	x	x	x
Stocking										
#	43,713	29,470	15,538	37,532	28,046	26,882	30,261	32,123	49,998	86,594
#/Acre	4.1	2.8	1.5	3.5	2.6	2.5	2.9	3.0	4.7	8.2
Angling Pressure (creel)										
Angler Hours	x	x	x	5,849	4,036	x	x	11,940	x	x
Angler Hours/Acre	x	x	x	0.6	0.4	x	x	1.1	x	x
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	0.15	0.02	x	x	0.72	x	x
Harvest Rate (intended)	x	x	x	0.11	0.00	x	x	0.08	x	x
% Released	x	x	x	44.1	100	x	x	88.9	x	x
Mean Weight	x	x	x	9.53	x	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
Striped Bass	x	x	x	40,100	22,740	x	x	39,290	x	x

Hybrid (Cherokee) Bass, Tims Ford Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (gill netting)										
Age-0 CPUE	0.78	0.28	x	1.62	0.45	2.23	2.11	x	x	x
Density (gill netting)										
PSD	73.4	92.2	100	52.6	84.5	54.3	48.5	100	92.8	100
RSD (preferred)	47	59	88	37	76	49	45	92	93	93
CPUE (total)	2.62	2.9	1.9	3.3	2.6	4.7	3.9	4.8	0.8	1.67
CPUE ≥ Stock	2.5	2.8	1.9	3.2	2.5	4.5	3.7	4.8	0.8	1.67
CPUE ≥ 15-inches	1.17	1.6	1.7	1.2	1.9	2.2	1.7	4.4	0.7	1.56
Growth (gill netting)										
Length Age-2	16.2	20.4	19.2	16.5	19.3	19.7	18.5	19.0	19.3	x
Length Age-3	14.7	21.0	19.3	17.3	21.3	21.1	21.8	x	20.1	21.1
Condition (gill netting)										
Stock	98.6	92.4	x	98.0	91.1	88.5	87.6	x	89.6	x
Quality	90.1	89.2	93.7	85.5	85.4	83.4	82.3	81.5	x	84.9
Preferred	86.4	88.7	95.2	89.1	84.9	88.2	86.7	83.7	80.3	84.7
Memorable	79.0	92.3	84.9	100.0	86.3	87.1	81.3	83.5	83.1	88.8
Stocking										
#	25,150	29,282	77,047	33,896	27,413	53,982	25,403	0	34,155	32,506
#/Acre	2.4	2.8	7.3	3.2	2.6	5.1	2.4	0.0	3.2	3.1
Angling Pressure (creel)										
Angler Hours	x	x	x	2,617	3,085	x	x	6,577	x	x
Angler Hours/Acre	x	x	x	0.2	0.3	x	x	0.6	x	x
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	0.50	0.41	x	x	0.72	x	x
Harvest Rate (intended)	x	x	x	0.31	0.05	x	x	0.12	x	x
% Released	x	x	x	52.2	96.3	x	x	82.5	x	x
Mean Weight	x	x	x	5.76	8.80	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
Cherokee Bass	x	x	x	5,520	16,180	x	x	17,070	x	x

2022 Habitat Enhancement - Tims Ford Reservoir

				Quantity	
Type of Work	**Details**		**New**		**Renovated**
Planted	Bald cypress trees were not planted				
Rebrushed	Existing fish attractors were not rebrushed				
Added	Christmas trees throughout State Park cove		400		

2022 Water Quality Monitoring - Tims Ford Reservoir

Parameter		**Sampling Period**		**Water Quality**	
Temperature		July to August		Normal	
Dissolved Oxyged		July to August		Normal	

Woods Reservoir

Description

Area (acres): 3,600 **Mean Depth (feet):** **Shoreline (miles):** 65

Counties: Franklin and Coffee

Full Pool Elevation (feet-msl): 960 **Winter Pool Elevation (feet-msl):** 957

Dam Completion: 1952

Summary:

The three major sampling methods utilized to evaluate the two primary Woods Reservoir fisheries include spring boat electrofishing for black bass, fall trap nets for the evaluation of crappie reproduction, and angler creel surveys for the determination of angler pressure, angler intended catch rate, angler intended harvest rate, and angler release rate. From 2010 to 2020, angler creel surveys were only conducted at Normandy Reservoir and at Tims Ford Reservoir. Resultant data collected over this time period were utilized to adjust stocking rates of the various species that are stocked yearly into Tim Ford Reservoir and Normandy Reservoir. Since Woods Reservoir black bass populations and crappie populations are self-sustaining (and therefore not dependent upon yearly TWRA stockings), annual angler creel surveys at Woods Reservoir are not required as often as annual angler creel surveys are required at Normandy Reservoir and at Tims Ford Reservoir. Because more than ten years have elapsed since the last annual angler creel survey was conducted at Woods Reservoir, two consecutive annual angler creel surveys were conducted in 2021 and in 2022. Results from the 2021 and the 2022 annual angler creel surveys indicated that yearly angler fishing effort and associated yearly angler hours per acre have decreased by 34.4 %. Furthermore, yearly angler trips have decreased by 37.3 % since 2021, yet the number of angler trips in 2022 still exceeded the number of angler trips (per year) in four out of the last five years in which a yearly creel survey was conducted. This moderate decrease in the number of angler trips to Woods Reservoir was attributed to a decreased abundance of Largemouth Bass and to a decreased abundance of “legal-length” ($\geq$ 10.0 inches) crappie in Woods Reservoir.

Two primary fisheries comprise the black bass fishery of Woods Reservoir: a Smallmouth Bass fishery and a Largemouth Bass fishery. Of these two fisheries, the Smallmouth Bass fishery is more limited in both abundance and size structure. Since preferred Smallmouth Bass habitat (rocky substrate) is limited to a few “points” prior to entering coves in the lower end of the lake, directed angler effort for Smallmouth Bass has historically been very low when compared to directed angler effort for Largemouth Bass. Yearly spring electrofishing data indicated that Smallmouth Bass reproduction has been consistent, but limited, since 2013. Furthermore, consistent, but low yearly Smallmouth Bass relative abundance has been documented since 2012. Since 2018, yearly Smallmouth Bass relative abundance values have displayed only minimal variation. Length frequency data from 2022 spring electrofishing samples indicated that the majority of the collected Smallmouth Bass ranged from eleven inches to eighteen inches, that moderate recruitment (of larger Smallmouth Bass) was occurring, and that Smallmouth Bass ($\geq$ 15.0 inches) represented 39.1 % of the total sample. Furthermore, since 2013, Smallmouth Bass ($\geq$ 18.0 inches) were only collected during 2016, 2018, and 2022 spring electrofishing samples. Finally, population enhancement (through yearly supplemental Smallmouth Bass stockings) did occur in the 1980’s and into the1990’s. However, post-stocking evaluations indicated that these supplemental stockings did not enhance the Smallmouth Bass fishery of Woods Reservoir and were therefore discontinued.

The Largemouth Bass fishery continues to be the primary black bass fishery of Woods Reservoir. Data collected during yearly spring electrofishing samples have indicated consistent yearly Largemouth Bass reproduction (since 2010). Elevated reproduction was noted in 2013, in 2014, and in 2015; in all other years, reproduction was rated as "moderate." In four out of the last five years, yearly total Largemouth Bass relative abundance values have been "low." However, over the past two years, yearly total relative abundance values of Largemouth Bass did not vary. The normal yearly variation in total relative abundance values has been, and continues to be, the direct result of age-0 Largemouth Bass relative abundance (and not the result of other limiting factors). Additionally, yearly relative abundance values of Largemouth Bass (≥ 15.0 inches) have remained at (or above) 12.0 fish / hour since 2018. In two of the past three years, yearly relative abundance values of Largemouth Bass ((≥ 15.0 inches) have equaled (or exceeded) 19.0 fish / hour. Finally, since 2013, yearly relative abundance values of Largemouth Bass (≥ 15.0 inches) have displayed only "minimal" yearly variation.

The most recent age data (2016) indicated an above average growth rate for age-1 Largemouth Bass, and an average growth rate for age-3 Largemouth Bass. Calculated condition factors for Largemouth Bass (with lengths > 15.0 inches) indicated Largemouth Bass to be in "good" condition. A calculated 2022 PSD value of 81 indicated the Largemouth Bass population to be slightly "out-of-balance" because of a paucity of Largemouth Bass in the 8.0 inch to 10.9 inch length range. Length frequency data displayed a bimodal distribution with modal length groups of 12.0 inches and 16.0 inches. Documented length groups ranged from the 6.0 inch length group to the 21.0 inch length group; within this length range, all inch "length groups" were documented. Furthermore, of the total number of Largemouth Bass (≥ 8.0 inches) collected during 2022 spring electrofishing (N=121), 47.0 % were greater than fifteen inches in length. This value was slightly higher than the 2021 value, which continued a trend of increasing values first noted in 2020. Based on the previous five years of spring electrofishing data, the yearly percentages of Largemouth Bass ≥ 15.0 inches have been, and will continue to be, elevated.

The Black Crappie and White Crappie fisheries combined (hereafter crappie fishery) comprise the second most popular Woods Reservoir fishery. Directed effort for crappie has historically been greater than 30.0 % of total angler directed effort. However, both the 2021 and 2022 Woods Reservoir angler creel surveys indicated that directed angler effort for crappie was slightly less than 30.0%. Additionally, based on the 2022 angler creel survey, crappie anglers fished a total of 27,837 hours, which equated to 7.7 angler hours / acre. Since the last angler creel survey was conducted in 2021, the yearly number of hours anglers spent fishing for crappie has decreased by 43.9 %. Angler catch rate of crappie in 2022 was 1.8 crappie / hour, which was the highest yearly value documented over the last five creel surveys. Finally, the 2022 crappie harvest rate varied only minimally from the 2021 crappie harvest rate; in both years, the harvest rate values were rated as "moderate."

Based on the last age data sample (2013), the growth rate of crappie was "above average," with crappie exceeding ten inches by three years of age. Over the past four years, crappie reproduction has varied from "high" (2019), to "moderate" (2020 and 2022), to "low (2021). Historically, large natural crappie year classes have consistently occurred approximately every four to six years. Since 2010, large natural crappie year classes have occurred in 2011 (7.8 fish / net night), in 2014 (11.8 fish / net night), and in 2019 (15.0 fish / net night). In all other years (except 2021), "moderate" crappie reproduction was documented. Therefore, even with consistent yearly recruitment, the 2023 Woods Reservoir crappie fishery will be comprised of an increasing number of crappie less than ten inches in length. The increasing abundance of "sub-legal" length crappie in the 2023 crappie fishery will be the result of the consistent harvest rate of "legal-length" crappie. As in 2022, angler pressure and angler harvest will decrease throughout the summer and into the fall of

2023. Finally, based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing increasing catch rates, and have been harvesting crappie (above the minimum length limit) at a slightly higher rate than normal.

Yearly habitat enhancements have occurred over the previous fourteen years on Woods Reservoir. Historically, bald cypress trees have been planted at three different areas of the reservoir to aid in shoreline stabilization and to provide nursery habitat (for fish) as these trees mature. Pine trees have been regularly added to both shallow and deep fish attractor sites to concentrate adult fish. Stake beds, using wooden stakes, have been installed to provide fishing habitat for crappie anglers. Artificial fish attractors have also periodically been installed to benefit black bass and sunfish anglers. But, as a result of limited yearly winter drawdown, spawning benches have not been placed into Woods Reservoir. In 2022, the only habitat enhancement completed was the planting of seventy-five bald cypress trees at river mile 176.5 (left bank descending, LBD). Habitat work tentatively scheduled for 2023 includes bald cypress tree plantings and the placement of artificial fish attractors.

Lakewide Angling Summary, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
Angler Hours	x	x	x	x	x	x	x	x	182,296	119,523
Angler Hours Per Acre	x	x	x	x	x	x	x	x	50.6	33.2
Angler Trips	x	x	x	x	x	x	x	x	38,586	24,188
Value of Fishery (angler expenditures creel)										
All Species	x	x	x	x	x	x	x	x	756,400	528,550

Black Bass, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angling Pressure										
All Black Bass (hrs)	x	x	x	x	x	x	x	x	93,020	57,617
(hrs/acre)	x	x	x	x	x	x	x	x	25.8	16.0
Any Black Bass (hrs)	x	x	x	x	x	x	x	x	82,653	42,081
(hrs/acre)	x	x	x	x	x	x	x	x	23.0	11.7
Largemouth Bass (hrs)	x	x	x	x	x	x	x	x	10,367	15,000
(hrs/acre)	x	x	x	x	x	x	x	x	2.9	4.2
Smallmouth Bass (hrs)	x	x	x	x	x	x	x	x	x	536
(hrs/acre)	x	x	x	x	x	x	x	x	x	0.1
Spotted Bass (hrs)	x	x	x	x	x	x	x	x	x	x
(hrs/acre)	x	x	x	x	x	x	x	x	x	x
Tournaments (all black bass)										
# Tournaments (BITE)	x	x	x	x	x	x	x	x	x	x
Pounds/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Bass/Angler Day (BITE)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures)										
All Black Bass	x	x	x	x	x	x	x	x	516,180	355,920
Any Black Bass	x	x	x	x	x	x	x	x	467,490	269,250
Largemouth Bass	x	x	x	x	x	x	x	x	48,690	81,410
Smallmouth Bass	x	x	x	x	x	x	x	x	x	5,260
Spotted Bass	x	x	x	x	x	x	x	x	x	x

Largemouth Bass, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	10	18	12	3	7	3	8	8	9	2
Density (electrofishing)										
PSD	54	68	69	70	53	84	63	86	76	81
RSD (preferred)	24	29	x	36	27	40	31	39	44	47
CPUE (total)	60	79	75	60	43	52	49	61	42	42
CPUE ≥ Stock	50	61	62	45	35	49	40	53	33	40
CPUE ≥ (15-inches)	12	17	14	14	10	19	12	21	14	19
Growth (electrofishing)										
Length Age-1	x	x	x	7.1	x	x	x	x	x	x
Length Age-3	x	x	x	13.7	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	81	81	85	84	90	85	80	93	85	95
Quality	83	84	86	85	95	91	85	90	85	92
Preferred	95	95	97	96	95	93	91	97	94	90
Memorable	95	99	99	92	100	79	x	96	93	95
Mortality (electrofishing)										
Total Mortality	x	x	x	25	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	x	x	x	x	x	0.47	0.3
Harvest Rate (intended)	x	x	x	x	x	x	x	x	0.15	0.05
% Released	x	x	x	x	x	x	x	x	76.8	91.6
Mean Weight	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures)										
Largemouth Bass	x	x	x	x	x	x	x	x	48,690	81,410

Smallmouth Bass, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (electrofishing)										
Substock CPUE	0	1	2	2	1	2	5	2	2	0
Density (electrofishing)										
PSD	29	38	40	74	33	61	38	60	50	82
RSD (preferred)	29	13	x	48	33	28	23	20	36	50
CPUE (total)	3	7	8	12	4	8	9	9	9	8
CPUE ≥ Stock	2	5	7	10	3	6	4	7	7	7
CPUE ≥ MLL (18-inches)	0	0	0	1	0	1	0	0	0	1
Growth (electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	78	84	82	x	87	83	81	87	86	88
Quality	x	78	85	x	x	84	80	81	81	80
Preferred	87	68	87	79	88	90	87	84	82	75
Memorable	x	81	x	79	89	83	91	93	86	80
Mortality (electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel)										
Catch Rate (intended)	x	x	x	x	x	x	x	x	x	0.34
Harvest Rate (intended)	x	x	x	x	x	x	x	x	x	0
% Released	x	x	x	x	x	x	x	x	89.3	94.8
Mean Weight	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures)										
Smallmouth Bass	x	x	x	x	x	x	x	x	x	5,260

White Crappie, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	1.3	7.0	2.3	0.2	0.4	0.1	7.4	0.1	0.2	0.1
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	100	100	x	100	100	x
RSD (preferred) (e)*	48	91	x	100	100	50	x	x	93	x
CPUE (total) (t)*	1.42	7.3	2.4	0.25	0.42	0.13	7.38	0.06	0.27	0.13
CPUE ≥ Stock (t)*	0.17	0.0	0.06	0.06	0.04	0.02	0.02	0	0.04	0.02
CPUE ≥ MLL (10-inches) (t)*	0.04	0.04	0.02	0.06	0.04	0.02	0	0	0.04	0.02
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	10.47	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	x	x	x	x	x	x
Quality	96	96	100	x	x	139	x	x	106	x
Preferred	94	93	92	89	105	x	x	99	99	x
Memorable	x	92	65	94	x	90	x	x	105	x
Mortality (spring electrofishing)										
Total Mortality	72	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	x	x	x	x	x	49,528	27,837
Angler Hours/Acre	x	x	x	x	x	x	x	x	13.8	7.7
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	x	x	x	x	x	1.23	1.81
Harvest Rate (any crappie)	x	x	x	x	x	x	x	x	0.49	0.54
% Released (white crappie)	x	x	x	x	x	x	x	x	51.9	63.6
Mean Weight (white crappie)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	x	x	x	x	x	143,220	89,220

Black Crappie, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	0.7	4.4	1.7	1.3	1.9	0.6	7.5	1.0	0.4	1.4
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	100	100	100	100	100	100
RSD (preferred) (e)*	*	50	x	89	67	x	x	75	62	62
CPUE (total) (t)*	0.81	4.4	1.77	1.38	1.96	0.77	7.56	1.02	0.67	1.5
CPUE ≥ Stock (t)*	0.1	0.1	0.06	0.08	0.1	0.13	0.04	0.06	0.29	0.08
CPUE ≥ MLL (10-inches) (t)*	0	0.04	0.02	0	0.02	0.04	0.02	0.04	0.08	0
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	8.62	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	x	x	x	x	x	x
Quality	89	87	x	94	95	x	x	93	105	97
Preferred	x	86	86	91	91	92	86	92	90	88
Memorable	x	x	x	72	87	x	x	x	x	81
Mortality (spring electrofishing)										
Total Mortality	69	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	x	x	x	x	x	49,528	27,837
Angler Hours/Acre	x	x	x	x	x	x	x	x	13.8	7.7
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	x	x	x	x	x	1.23	1.81
Harvest Rate (any crappie)	x	x	x	x	x	x	x	x	0.49	0.54
% Released (black crappie)	x	x	x	x	x	x	x	x	68.8	75.3
Mean Weight (black crappie)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	x	x	x	x	x	143,220	89,220

Blacknose Crappie, Woods Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recruitment (trap netting)										
Substock CPUE	0.1	0.4	0.1	0.1	0.2	0.1	0.1	0.1	x	0.1
Density (trap netting (t) /electrofishing (e))*										
PSD (e)*	100	100	100	100	100	x	x	0	100	100
RSD (preferred) (e)*	*	54	x	60	100	x	x	x	x	x
CPUE (total) (t)*	0.06	0.4	0.1	0.17	0.19	0.1	0.15	0.12	x	0.15
CPUE ≥ Stock (t)*	0.06	0.0	0	0.04	0.02	0	0	0	x	0.02
CPUE ≥ MLL (10-inches) (t)*	0	0.04	0	0	0	0	0	0	x	0
Growth (spring electrofishing)										
Length Age-1	x	x	x	x	x	x	x	x	x	x
Length Age-3	x	x	x	x	x	x	x	x	x	x
Condition (spring electrofishing)										
Stock	x	x	x	x	x	x	x	x	x	x
Quality	83	90	99	95	x	x	x	x	89	x
Preferred	x	85	93	83	92	x	x	x	x	87
Memorable	x	x	86	88	93	x	x	x	x	x
Mortality (spring electrofishing)										
Total Mortality	x	x	x	x	x	x	x	x	x	x
Stocking										
#	0	0	0	0	0	0	0	0	0	0
#/Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel)										
Angler Hours (all crappie)	x	x	x	x	x	x	x	x	49,528	27,837
Angler Hours/Acre	x	x	x	x	x	x	x	x	13.8	7.7
Fishing Success (creel)										
Catch Rate (any crappie)	x	x	x	x	x	x	x	x	1.23	1.81
Harvest Rate (any crappie)	x	x	x	x	x	x	x	x	0.49	0.54
% Released (blacknose crappie)	x	x	x	x	x	x	x	x	65.2	73.5
Mean Weight (blacknose crappie)	x	x	x	x	x	x	x	x	x	x
Value of Fishery (Trip Expenditures - creel)										
All Crappie	x	x	x	x	x	x	x	x	143,220	89,220

2022 Habitat Enhancement - Woods Reservoir

				Quantity	
Type of Work	**Details**		**New**		**Renovated**
Planted	Cypress Trees planted upper end across from HWY 127		75		
Rebrushed	Existing fish attractors were not rebrushed				
Added					

2022 Water Quality Monitoring - Woods Reservoir

Parameter		**Sampling Period**		**Water Quality**	
Temperature		July to August		Normal	
Dissolved Oxyged		July to August		Normal	

REGION 3

Center Hill Reservoir (Annual Report 2022)

Reservoir Facts

Area (acres): 18,220 **Mean Depth (feet):** 73 **Shoreline (miles):** 415

Counties: Dekalb, Putnam, Warren, White

Full Pool Elevation (feet-msl): 648 **Winter Pool Elevation (feet-msl):**

Dam Completion: 1948

Reservoir Description: Center Hill Reservoir was created in 1948 by the completion of Center Hill Dam on the Caney Fork River. The United States Army Corps of Engineers is the operating authority of Center Hill Reservoir. This reservoir lies within Dekalb, Putnam, Warren, and White counties in Tennessee and incorporates 18,220 surface acres of water. Towns near Center Hill Reservoir include McMinnville, Smithville, and Cookeville. Center Hill Reservoir is characterized by rocky shorelines surrounded by steep ridges which also represent the beauty of this reservoir. Center Hill Reservoir is home to several gamefish such as black bass, crappie, walleye, bluegill, and catfish.

Update: In 2008 a drawdown was instituted on Center Hill Reservoir by the U.S. Army Corps of Engineers (USACE) to facilitate repair to the Center Hill Dam. The completion of this long-term project was realized in the year 2020 meaning historic full summer pool levels were achieved once again. Normal full pool level is 648 feet-MSL. During the years of this drawdown, there were realized increases in terrestrial vegetation and small trees (i.e., willow bushes, sycamore, cedar trees, etc.) along the exposed shoreline. This should create great habitat for various fish species, especially spawning success, and juvenile fish refuges, upon the initial re-fill of the reservoir and subsequent years. A joint effort habitat enhancement program was planned for the winter of 2018/2019 with the USACE but delayed due to a recent forecast by USACE of the return to full pool in 2019/20.

NOTE: Creel interviews in 2021 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program although pressure counts were performed at Center Hill during these two months. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions could be realized when comparing it to previous years where these surveys were conducted all 12 months.

Status and management of fish species:

Largemouth bass (LMB): The largemouth bass fishery should continue to provide good fishing opportunities based on trends in electrofishing data surveys conducted in the spring biannually by TWRA. According to annual TWRA roving creel surveys, angling pressure for black bass (largemouth, smallmouth, and spotted bass) has remained consistent over the past several years. Electrofishing surveys were conducted in 2021 and are scheduled to be conducted again in 2023 per the bi-annual electrofishing work schedule. The overall CPUE (LMB/hr.) for largemouth bass collected via electrofishing in 2021 (30.8 LMB/hour) was above average when compared to the previous ten years at 28.0 lmb/hr.

The CPUE for LMB/hour ≥ the MLL of 15” was near the 10-year average at a rate of 14.0 LMB/hour for 2021. Condition factors (Wr) for all size ranges of largemouth bass looked satisfactory which has remained consistent for the past ten years. During the extended drawdown by the USACE (2008 – 2020), spawning success for largemouth bass looked consistently low according to the summer seining samples as well as Age 1 largemouth bass collected from spring electrofishing surveys. No summer seining surveys have been conducted since 2018. Although the average weight of largemouth are lower (2.13 lb.) than the ten-year average; the overall condition factors (WRs) for largemouth bass collected during spring electrofishing surveys are satisfactory. The year-long roving creel survey conducted at Center Hill in 2021 showed an average catch rate for “any black bass” to be 0.63 bass/hour. This same creel survey showed that the average weight of largemouth bass caught was 2.13 lbs., which is slightly below the 10-year average.

Smallmouth bass (SMB): Smallmouth bass fishing is expected to remain favorable at Center Hill Reservoir. Center Hill harbors great SMB habitat with miles of rocky shoreline, points, and bluff areas. This is similar habitat to the famed smallmouth bass capital, Dale Hollow Reservoir, in several regards. A targeted electrofishing survey for SMB was last conducted in 2016 which showed great CPUE’s for SMB catch rates (28.0 SMB/hr.). During the bi-annual black bass electrofishing surveys conducted in the spring of 2017, more SMB over the state regulation of 18” MLL were observed. Overall CPUE of all SMB collected in the 2021 spring blackbass electrofishing surveys were near average for past electrofishing surveys at a rate of 8.2 SMB/hour (See table). Despite an over 10-year draw down of Center Hill by the USACE, SMB tend to be doing well according to spring electrofishing surveys and reports from bass anglers. The year-long roving creel survey on Center Hill conducted in 2021 showed that the average catch rate by anglers specifically fishing for SMB to be 0.66 SMB/hour with an average weight of 2.75 lbs.

Spotted bass (SPB): Center Hill Reservoir has historically hosted a good population of spotted bass. Anglers in pursuit of spotted bass will still find opportunity at Center Hill for angling success. Optimum SPB habitat is available at Center Hill (E.g., rocky banks, points, bluffs, etc.). For many years, Center Hill Reservoir was the host of the state record spotted bass of 5lb 8oz. (this record is currently held by a 6lb 1oz spotted bass caught in Chickamauga Reservoir). The overall CPUE for 2017 SPB collected via electrofishing was 5.6 SPB/hour, 11.0 SPB/hour in 2019, and 5 SPB/hour in 2021, which is a ten-year low. The CPUE for mid-summer seining surveys in 2018 for SPB was low at a CPUE of 1.9 SPB/seine haul. No seining surveys have been conducted since 2018. The past 5 years of data further indicate possible declines in reproduction for the SPB at Center Hill. Overall condition factors (Wrs) for spotted bass look good indicating sufficient available forage.

Genetic Study: Fin clips were taken from 29 spotted bass in 2019 on Center Hill Reservoir to determine genetic integrity. Specifically, TWRA was looking for any Alabama bass influence within this native population of spotted bass. These spotted bass were collected from the Floating Mill and Little Hurricane sections (mid-reservoir) of Center Hill. The genetic test concluded that all 29 specimens were pure Northern spotted bass which are native to Center Hill. **NO** Alabama bass influence was detected. Future like genetic surveys will be warranted here to monitor for possible Alabama bass presence.

Crappie (Black, White): White crappie make up a small percentage of the overall crappie population in Center Hill Reservoir and are more oriented towards the upper end of the reservoir. Black crappie, however, (including “blacknose” crappie) represent most of the crappie present in Center Hill Reservoir. This difference in utilization of the reservoir by white and black crappie is likely due to water clarity preferences. Black crappie prefer more clear water which is more prevalent on the lower end of the reservoir, which is typically the case for most reservoirs. Anglers pursuing crappie should expect to find good numbers of crappie at Center Hill thanks to an annual stocking program of blacknose crappie (BNC) and black crappie by TWRA. Low reproductive success, occurring on an annual basis, led to the initiation

of a “blacknose” crappie stocking program here in 1990, the first crappie project of its kind in the state of Tennessee. There were 116,997 black crappie fingerlings stocked into Center Hill in 2022. Traditionally, blacknose crappie (black crappie with genetic marking on forehead) have been stocked to aid in determining stocking success. TWRA has determined, by observing crappie stocking rates and creel harvest, that the crappie population at Center Hill is stable thanks to the annual TWRA stocking project. According to angler surveys (creel), angler catch rates for “any” crappie at Center Hill in 2021 were 0.71 crappie/hour. Angling pressure for crappie according to annual roving creel surveys were near average in 2021 at 1.42 hrs. (expended/acre), which is at a ten year high. The average weights for both black and white crappie caught by anglers in 2021 were slightly below the ten-year average (See Crappie Table below).

Bluegill/Redear: Fair bluegill and redear fishing should be anticipated for sunfish anglers on Center Hill Reservoir. There are no specific surveys conducted on Center Hill regarding bluegill or redear. However, roving creel surveys indicate that these species are pursued and there is evidence of successful trips. These species of fish also provide a forage base for many gamefish as well.

Walleye: Catch rates (walleye caught/hour) for walleye during the 2021 roving creel surveys were near the ten-year average (see table below). Covid restrictions impeded the creel process during 2020 and 2021, thus the roving creel surveys conducted at Center Hill in 2020 were not conducted the entire year. Walleye continue to be stocked into Center Hill Reservoir on an annual basis by TWRA. There were 187,588 walleye fingerlings stocked in 2022 into Center Hill Reservoir by TWRA. Because of the annual TWRA walleye stocking program, walleye anglers should anticipate stable, good fishing for walleye at Center Hill. Total trip expenditures by anglers in pursuit of walleye for 2021 were $71,050 at Center Hill according to the creel survey there. The average weight for harvested walleye in 2021 at Center Hill was 2.65 lbs. Walleye are caught throughout Center Hill Reservoir at varying times of the year.

Additionally, Center Hill Reservoir continues to be a brood source for walleye for several state hatchery facilities. Walleye brood are collected via electrofishing in mid-March in the upper reach of the reservoir in the “blue hole” area of the Caney Fork River near Rock Island State Park. Considerable thought should be given to maintaining adequate stocking regimes to maintain this reliable source of brood walleye for multiple state hatcheries, especially Normandy Fish Hatchery.

Catfish: Catch rates for catfish at Center Hill are stable based on 10-year averages obtained from annual roving creel surveys. According to those creel surveys $33,570 was spent on trip expenditures in pursuit of “all” catfish in 2019. Center Hill Reservoir is not known as a top destination for catfish angling when compared to other reservoirs in Region 3, especially those on the Tennessee River. Both channel and flathead catfish are typically recorded during annual roving creel surveys at Center Hill though. The average weight for channel catfish recorded by creel in 2021 was 3.59 pounds.

Lakewide Angling Summary

Angling Pressure	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	205,427	-	171,352	143,802	-	105,332	180,004	201,523	235,570	-	177,573
Angler Hrs./Acre	11.4	-	9.4	7.9	-	5.7	10.1	11.1	12.9	-	9.8
Angler Trips	37,436	-	31,542	25,194	-	20,049	33,503	14,248	38,943	-	28,702
Value of Fishery (Trip expenitures-creel)											
All Species	$780,460	-	$808,780	$467,070	-	$384,220	$622,240	$250,500	$891,280	-	$600,650

***- 8 month creel survey**

Black bass, Center Hill Reservoir

Angling Pressure	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	104,049	-	98,918	101,807	-	73,028	105,875	43,047	128,311	-	93,576
(hrs./acre)	5.71	-	5.43	5.59	-	4.0	5.81	2.36	7.04	-	5.14
Any Black Bass (hrs.)	88,620	-	88,248	86,650	-	67,886	98,748	34,637	122,923	-	83,959
(hrs./acre)	4.86	-	4.84	4.76	-	3.73	5.42	1.90	6.75	-	4.61
Largemouth Bass (hrs.)	-	-	4,581	955	-	664	-	-	-	-	2,067
(hrs./acre)	-	-	0.25	0	-	0	-	-	-	-	0.08
Smallmouth Bass (hrs.)	7,923	-	4,389	7,869	-	2,436	2,024	8,410	3,466	-	5,217
(hrs./acre)	0.44	-	0.24	0.43	-	0.13	0.11	0.46	0.19	-	0.29
Spotted Bass (hrs.)	7,506	-	1,700	6,293	-	2,042	5,103	-	1,922	-	4,094
(hrs./acre)	0.41	-	0.09	0.35	-	0.11	0.28	-	0.11	-	0.23
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	0.33	-	0.84	0.33	-	0.63	0.51	0.27	0.81	-	0.53
Non-Tournament Catch Rate (cre	0.52	-	0.41	0.44	-	0.66	0.54	0.68	0.58	-	0.55
Value of Fishery (Trip Expenditures)											
All Black Bass	$441,440	-	$544,300	$343,010	-	$312,650	$420,320	$193,830	$611,090	-	$409,520
Any Black Bass	$369,440	-	$496,070	$297,890	-	$285,350	$390,790	$147,250	$587,040	-	$367,690
Largemouth Bass	-	-	$19,420	$3,800	-	$4,870	-	-	-	-	$9,363
Smallmouth Bass	$39,010	-	$23,070	$24,470	-	$16,960	$12,850	$46,580	$19,290	-	$26,033
Spotted Bass	$32,990	-	$5,740	$16,850	-	$5,470	$16,680	-	$4,760	-	$13,748

*** - 8 month creel survey**

Largemouth bass, Center Hill Reservoir

Recruitment	2013	2014	2015	2016	2017*	2018**	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	1.80	-	0.60	-	2.80	-	0.40	-	0.8	-	1.28
CPUE (mid-summer seine)	0.50	0.30	1.40	0.10	0.30	0.01	-	-	-	-	0.44
Density (spring electrofishing)											
PSD	90	-	90	-	67	-	89	-	87	-	84.6
RSD (preferred)	68	-	56	-	50	-	56	-	47	-	55.4
CPUE (total)	20.0	-	25.8	-	7.6	-	56.0	-	30.8	-	28.0
CPUE ≥ Stock	18.2	-	24.1	-	3.5	-	55.6	-	30.0	-	26.3
CPUE ≥ MLL (15-inches)	15.0	-	13.5	-	2.4	-	31.2	-	14.0	-	15.2
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	160	-	160
Length Age-3	-	-	-	-	-	-	-	-	358	-	358
Condition (spring electrofishing)											
Stock to Quality	102.9	-	97.6	-	87.1	-	94.8	-	97.6	-	96.0
Quality to Preferred	102.6	-	96.1	-	81.9	-	100.8	-	95.9	-	95.5
Preferred to Memorable	96.7	-	91.3	-	80.6	-	97.1	-	92.5	-	91.6
Memorable to Trophy	91.3	-	89.2	-	92.7	-	96.7	-	90.9	-	92.2
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	34.0%	-	34.0%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	0.13	0.09	-	0.00	-	-	-	-	0.07
Catch Rate, num./hr. (any black bass)	0.52	-	0.55	0.44	-	0.87	0.63	0.45	0.63	-	0.58
Harvest Rate, num./hr. (any black bass)	0.17	-	0.11	0.13	-	0.18	0.12	0.06	0.17	-	0.13
% Released	82.6%	-	84.2%	72.6%	-	79.7%	87.6%	90.3%	58.3%	-	79.3%
Mean Weight	2.65	-	2.78	3.02	-	3.02	2.60	2.00	2.13	-	2.60

Note: 2017* - Completed in fall due to heavy spring rains.
2018 - 8 month creel survey.**

Smallmouth Bass, Center Hill Reservoir

Recruitment	2013	2014	2015	2016	2017*	2018**	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	0.62	-	1.80	-	0.60	-	0.20	-	0.81
CPUE (mid-summer seine)	0.10	0.30	1.40	0.60	0.50	0.00	-	-	-	-	0.48
Density (spring electrofishing)											
PSD	-	-	78	-	75	-	79	-	65	-	74
RSD (preferred)	-	-	20	-	75	-	63	-	45	-	51
CPUE (preferred)	-	-	1.0	-	1.8	-	8.6	-	1.0	-	3.1
CPUE (total)	-	-	8.9	-	4.2	-	14.2	-	8.2	-	8.9
CPUE ≥ Stock	-	-	8.3	-	4.2	-	13.6	-	8.0	-	8.5
CPUE ≥ Preferred	-	-	1.7	-	2.8	-	6.2	-	3.6	-	3.6
CPUE ≥ MLL (18-inches)	-	-	0.4	-	2.0	-	0.6	-	0.4	-	0.9
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	311	-	311
Condition (spring electrofishing)											
Stock to Quality	-	-	93.3	-	77.5	-	87.3	-	88.4	-	86.6
Quality to Preferred	-	-	85.5	-	71.9	-	85.5	-	92.6	-	83.9
Preferred to Memorable	-	-	85.1	-	81.6	-	87.3	-	80.9	-	83.7
Memorable to Trophy	-	-	80.4	-	77.7	-	82.2	-	76.4	-	79.2
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	34%	-	34%
Stocking											
#	-	-	-	15,990	46,939	-	-	-	-	-	31,465
#/Acre	-	-	-	0.9	2.6	-	-	-	-	-	1.8
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.40	-	0.74	0.41	-	0.58	0.80	1.85	0.66	-	0.78
Catch Rate, num./hr. (any black bass)	0.52	-	0.55	0.44	-	0.87	0.63	0.45	0.63	-	0.58
Harvest Rate, num./hr. (any black bass)	0.17	-	0.11	0.13	-	0.18	0.12	0.06	0.17	-	0.13
% Released	87.9%	-	94.6%	95.7%	-	89.5%	96.2%	98.3%	82.5%	-	92.1%
Mean Weight	3.22	-	3.37	2.67	-	3.09	2.88	3.11	2.75	-	3.01

Note: 2017* - Completed in fall due to heavy spring rains.
2018 - 8 month creel survey.**

Smallmouth Bass (Targeted), Center Hill Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	1.76	-	-	-	-	-	-	1.76
Density (electrofishing)											
PSD	-	-	-	67	-	-	-	-	-	-	67
RSD (preferred)	-	-	-	32	-	-	-	-	-	-	32
CPUE (preferred)	-	-	-	2.0	-	-	-	-	-	-	2.0
CPUE (total)	-	-	-	28.0	-	-	-	-	-	-	28.0
CPUE ≥ Stock	-	-	-	26.2	-	-	-	-	-	-	26.2
CPUE ≥ Preferred	-	-	-	8.3	-	-	-	-	-	-	8.3
CPUE ≥ MLL (18-inches)	-	-	-	0.5	-	-	-	-	-	-	0.5
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	84.0	-	-	-	-	-	-	84.0
Quality to Preferred	-	-	-	85.0	-	-	-	-	-	-	85.0
Preferred to Memorable	-	-	-	71.8	-	-	-	-	-	-	71.8
Memorable to Trophy	-	-	-	81.9	-	-	-	-	-	-	81.9
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-

Spotted Bass, Center Hill Reservoir

Recruitment	2013	2014	2015	2016	2017*	2018**	2019	2020	2021	2021	10 yr. Average
Substock CPUE (spring electrofishing)	0.6	-	2.3	-	0.4	-	0.8	-	-	-	1.0
CPUE (mid-summer seine)	21.4	7.6	9.8	8.1	4.5	1.9	-	-	-	-	8.9
Density (spring electrofishing)											
PSD	56	-	59	-	42	-	69	-	80	-	61.2
RSD (prefered)	16	-	9	-	12	-	47	-	40	-	24.8
CPUE (total)	11.0	-	43.5	-	5.6	-	11.0	-	5.0	-	15.2
CPUE ≥ Stock	10.6	-	41.2	-	2.7	-	10.2	-	5.0	-	13.9
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	308	-	308
Condition (spring electrofishing)											
Stock to Quality	114.5	-	105.7	-	96.0	-	107.0	-	100.3	-	104.7
Quality to Preferred	111.5	-	98.0	-	96.6	-	103.6	-	96.4	-	101.2
Preferred to Memorable	98.4	-	91.3	-	93.3	-	98.6	-	91.2	-	94.6
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	13%	-	13%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.70	-	0.08	0.74	-	0.64	0.65	-	0.29	-	0.52
Catch Rate, num./hr. (any black bass)	0.52	-	0.55	0.44	-	0.87	0.63	0.45	0.63	-	0.58
Harvest Rate, num./hr. (any black bass)	0.17	-	0.11	0.13	-	0.18	0.12	0.06	0.17	-	0.13
% Released	54.8%	-	70.2%	59.6%	-	65.0%	74.3%	73.6%	56.3%	-	64.8%
Mean Weight	1.63	-	1.56	1.54	-	1.37	1.44	1.16	1.05	-	1.39

Note: 2017* - Survey was conducted in fall due to heavy spring rains.
2018 - 8 month creel survey.**

Black Crappie, Center Hill Reservoir

Recruitment (electrofishing)	2013*	2014	2015	2016	2017	2018**	2019	2020	2021	2022	10 yr. Average
Substock CUPE	0.00	-	-	-	-	-	-	-	-	-	0.00
Density (electrofishing)											
PSD	92.0	-	-	-	-	-	-	-	-	-	92.0
RSD (preferred)	56.0	-	-	-	-	-	-	-	-	-	56.0
CPUE (total)	7.4	-	-	-	-	-	-	-	-	-	7.4
CPUE ≥ Stock	7.4	-	-	-	-	-	-	-	-	-	7.4
CPUE ≥ MML (10 inches)	3.5	-	-	-	-	-	-	-	-	-	3.5
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	109.5	-	-	-	-	-	-	-	-	-	109.5
Quality to Preferred	115.4	-	-	-	-	-	-	-	-	-	115.4
Preferred to Memorable	107.0	-	-	-	-	-	-	-	-	-	107.0
Memorable to Trophy	109.0	-	-	-	-	-	-	-	-	-	109.0
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	153,847	114,691	116,997	128,512
#/Acre	-	-	-	-	-	-	-	8.4	6.3	6.4	7.0
Angler Pressure (creel)											
Angler Hrs. (all crappie)	13,060	-	13,324	11,691	-	11,803	13,540	13,594	25,921	-	14,705
Angler Hrs./Acre	0.72	-	0.73	0.64	-	0.65	0.74	0.75	1.42	-	0.81
Fishing Success (creel)											
Catch Rate (any crappie)	0.98	-	0.24	0.81	-	0.25	1.64	0.98	0.71	-	0.80
Harvest Rate (any crappie)	0.40	-	0.12	0.44	-	0.14	0.46	0.42	0.3	-	0.33
% Released (black crappie)	60.5%	-	73.9%	21.9%	-	18.4%	86.7%	63.9%	68.0%	-	0.56
Mean Weight (black crappie)	0.92	-	1.00	1.10	-	1.31	0.93	0.93	1.00	-	1.03
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$48,920	-	$40,120	$32,480	-	$24,210	$32,020	$39,300	$104,510	-	$45,937

Note: * - Targeted sample

**** - 8 month creel survey**

Blacknose Crappie, Center Hill Reservoir

Recruitment (electrofishing)	2013*	2014	2015	2016	2017	2018**	2019	2020	2021	2022	10 yr. Average
Substock CUPE	0.00	-	-	-	-	-	-	-	-	-	0.00
Density (electrofishing)											
PSD	97.0	-	-	-	-	-	-	-	-	-	97.0
RSD (preferred)	44.0	-	-	-	-	-	-	-	-	-	44.0
CPUE (total)	26.2	-	-	-	-	-	-	-	-	-	26.2
CPUE ≥ Stock	26.2	-	-	-	-	-	-	-	-	-	26.2
CPUE ≥ MML (10 inches)	9.7	-	-	-	-	-	-	-	-	-	9.7
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	99.5	-	-	-	-	-	-	-	-	-	99.5
Quality to Preferred	116.2	-	-	-	-	-	-	-	-	-	116.2
Preferred to Memorable	119.1	-	-	-	-	-	-	-	-	-	119.1
Memorable to Trophy	103.6	-	-	-	-	-	-	-	-	-	103.6
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	118,954	114,960	129,984	143,049	138,140	114,968	109,720	-	78,961	-	118,592
#/Acre	6.5	6.3	7.1	7.6	7.6	6.3	6.0	-	4.3	-	6.5
Angler Pressure (creel)											
Angler Hrs. (all crappie)	13,060	-	13,324	11,691	-	11,803	13,540	13,594	25,921	-	14,705
Angler Hrs./Acre	0.72	-	0.73	0.64	-	0.65	0.74	0.75	1.42	-	0.81
Fishing Success (creel)											
Catch Rate (any crappie)	0.98	-	0.24	0.81	-	0.25	1.64	0.98	0.71	-	0.80
Harvest Rate (any crappie)	0.40	-	0.12	0.44	-	0.14	0.46	0.42	0.3	-	0.33
% Released (blacknose crappie)	58.9%	-	64.9%	46.5%	-	45.2%	80.4%	72.4%	56.4%	-	60.7%
Mean Weight (blacknose crappie)	1.00	-	1.06	1.16	-	1.49	0.96	0.92	1.11	-	1.10
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$48,920	-	$40,120	$32,480	-	$24,210	$32,020	$39,300	$104,510	-	$45,937

Note: * - Targeted sample

**** - 8 month creel survey**

White Crappie, Center Hill Reservoir

Recruitment (electrofishing)	2013*	2014	2015	2016	2017	2018**	2019	2020	2021	2022	10 yr. Average
Substock CUPE	0.00	-	-	-	-	-	-	-	-	-	0.00
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	1.7	-	-	-	-	-	-	-	-	-	1.7
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	13,060	-	13,324	11,691	-	11,803	13,540	13,594	25,921	-	14,705
Angler Hrs./Acre	0.72	-	0.73	0.64	-	0.65	0.74	0.75	1.42	-	0.81
Fishing Success (creel)											
Catch Rate (any crappie)	0.98	-	0.24	0.81	-	0.25	1.64	0.98	0.71	-	0.80
Harvest Rate (any crappie)	0.4	-	0.12	0.44	-	0.14	0.46	0.42	0.30	-	0.33
% Released (white crappie)	0.0%	-	0.0%	-	-	-	72.2%	0.0%	0.0%	-	14.4%
Mean Weight (white crappie)	1.00	-	0.70	-	-	-	0.90	0.83	0.80	-	0.85
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$48,920	-	$40,120	$32,480	-	$24,210	$32,020	$39,300	$104,510	-	$45,937

Note: * - Targeted sample
**** - 8 month creel survey**

Walleye, Center Hill Reservoir

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.5	0.0	-	0.4	0.6	-	-	-	-	-	0.38
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	85,279	242,276	182,666	167,330	185,052	185,715	182,645	111,761	174,318	187,588	170,463
#/Acre	4.7	13.3	10.0	9.2	10.2	10.2	10.0	6.1	9.6	10.3	9.4
Angler Pressure (creel)											
Angler Hrs.	37,116	-	32,212	11,291	-	3,975	28,707	3,693	24,629	-	20,232
Angler Hrs./Acre	2.04	-	1.77	0.62	-	0.22	1.58	0.2	1.4	-	1.12
Fishing Success (creel)											
Catch Rate (intended)	0.21	-	0.17	0.06	-	0.06	0.26	0.05	0.13	-	0.13
Harvest Rate (intended)	0.12	-	0.13	0.04	-	0.06	0.17	0.03	0.10	-	0.09
% Released	45.9%	-	27.2%	29.6%	-	-	39.6%	59.2%	23.2%	-	37.5%
Mean Weight	3.10	-	2.44	2.97	-	-	2.75	5.10	2.65	-	3.17
Value of Fishery (Trip Expenditures - creel)											
Walleye	$115,970	-	$111,260	$29,050	-	$6,660	$96,640	$7,490	$71,050	-	$62,589

Note: * - 8 month creel survey

Sunfish, Center Hill Reservoir

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	0.90	5.40	3.00	4.00	2.30	2.60	-	-	-	-	3.03
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	27,146	-	9,769	5,710	-	4,298	6,576	-	6,897	-	10,066
Angler Hrs./Acre	1.49	-	0.54	0.31	-	0.24	0.36	-	0.38	-	0.55
Fishing Success (creel)											
Catch Rate (any sunfish)	1.7	-	4.14	4.23	-	2.11	1.62	-	1.10	-	2.48
Harvest Rate (any sunfish)	1.14	-	2.69	2.86	-	1.45	0.91	-	0.53	-	1.60
% Released (bluegill)	40.5%	-	31.6%	25.1%	-	38.1%	61.7%	0.0%	45.8%	-	34.7%
Mean Weight (bluegill)	0.43	-	0.37	0.39	-	0.37	0.55	0.75	0.43	-	0.47
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	$112,420	-	$50,580	$32,980	-	$14,240	$10,980	-	$23,560	-	$40,793

Note: *- 8 month creel survey

Redear

Recruitment	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	0.00	-	-	-	-	0.40	-	-	-	-	0.20
Redear CPUE (electrofishing)	-	-	-	-	-	-	28.2	-	-	-	28.2
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	27,146	-	9,769	5,710	-	4,298	6,576	-	6,897	-	10,066
Angler Hrs./Acre	1.49	-	0.54	0.31	-	0.24	0.36	-	0.38	-	0.55
Fishing Success (creel)											
Catch Rate (any sunfish)	1.7	-	4.14	4.23	-	2.11	1.62	-	1.10	-	2.48
Harvest Rate (any sunfish)	1.14	-	2.69	2.86	-	1.45	0.91	-	0.53	-	1.60
% Released (redear)	40.5%	-	31.6%	25.1%	-	38.1%	35.5%	-	30.9%	-	33.6%
Mean Weight (redear)	0.43	-	0.37	0.39	-	0.37	0.51	-	0.55	-	0.44
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	$112,420	-	$50,580	$32,980	-	$14,240	$10,980	-	$23,560	-	$40,793

Note: *- 8 month creel survey

Catfish, Center Hill Reservoir

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	13,239	-	8,248	6,055	-	7,978	-	2,720	12,797	-	8,506
Angler Hrs./Acre	0.73	-	0.45	0.33	-	0.44	-	0.15	0.70	-	0.47
Fishing Success (creel)											
Catch Rate (any catfish)	0.32	-	0.25	0.23	-	0.23	0.24	0.26	0.19	-	0.25
Harvest Rate (any catfish)	0.29	-	0.25	0.23	-	0.23	0.24	0.26	0.19	-	0.24
% Released (channel)	25.5%	-	2.1%	0.0%	-	0.0%	0.0%	0.0%	1.1%	-	4.1%
Mean Weight (channel)	3.14	-	3.74	3.45	-	4.16	4.11	3.2	3.59	-	3.63
Value of Fishery (Trip Expenditures - creel)											
All Catfish	$40,700	-	$22,720	$10,360	-	$15,610	$34,030	$6,200	$33,570	-	$23,313

Note: *- 8 month creel survey

Shad, Center Hill Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	1.8	-	1.8
Gizzard CPUE	-	-	-	-	18.4	-	5.8	-	5.8	-	10.0
Threadfin CPUE	-	-	-	-	-	-	14.0	-	28.6	-	21.3

Habitat Enhancement, Center Hill Reservoir

Type of Work	Details	Quanity	
		New	Renovated
none performed			

Water Quality Monitoring, Center Hill Reservoir

Parameter	Sampling Period	Water Quality
Temperature	none performed	
Dissolved Oxygen	none performed	
PH	none performed	
Conductivity	none performed	

Center Hill Reservoir Headwater Report 2021 (Great Falls Tailwater)

Description

Area: Center Hill Headwater sampling area begins at Warren County Boat Ramp which is located approximately at CFRM (Caney Fork River Mile) 60 and ends just above Blue Hole Ramp (ref. Rock Island State Park Ramp) which is at CFRM 62. This area is known for its excellent walleye fishery in the pre and early spring times due to the preferred available habitat for spawning. Musky have also filled a niche in this area due to favorable habitat. The substrate in this area consists of large rock and sandy substrate as is typical of an upper river/stream environment. The area around the "Blue Hole" is utilized by boat and bank fishermen alike. Fishing regulations are more restrictive here in the early spring to protect walleye during the spawning when they are more vulnerable to acts such as snagging.

Counties: Warren and White Counties

Summary: A targeted survey was conducted in 2018 and 2021 (See tables below) during the fall of the year. These surveys will not be conducted as necessary in the future to provide data available for studying trends with important game species that inhabit this area. Of the species observed, black bass (largemouth, smallmouth, and spotted) were collected, and data was compiled regarding lengths and weights. The tables below illustrate CPUE's for these species of black bass. In the most recent survey (2021), largemouth bass were represented the most, followed by spotted bass. Smallmouth bass were minimally represented in this recent 2021 survey. These surveys also revealed appropriate habitat and forage availability to sustain a black bass fishery in this area. Both gizzard and threadfin shad were also observed.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	1.33	-	-	5.86	-	3.60
Density (fall electrofishing)											
PSD	-	-	-	-	-	81	-	-	82	-	81.5
RSD (preferred)	-	-	-	-	-	29	-	-	41	-	35
CPUE (total)	-	-	-	-	-	9.4	-	-	28.1	-	18.8
CPUE ≥ Stock	-	-	-	-	-	8.2	-	-	22.3	-	15.3
CPUE ≥ MLL (15-inches)	-	-	-	-	-	2.3	-	-	9.4	-	5.85
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	92.3	-	-	82.1	-	87.2
Quality to Preferred	-	-	-	-	-	90.5	-	-	86.2	-	88.4
Preferred to Memorable	-	-	-	-	-	99.6	-	-	95.8	-	97.7
Memorable to Trophy	-	-	-	-	-	104.5	-	-	-	-	104.5

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	11.30	-	-	-	-	11.30
Density (fall electrofishing)											
PSD	-	-	-	-	-	57	-	-	-	-	57
RSD (preferred)	-	-	-	-	-	29	-	-	-	-	29
CPUE (preferred)	-	-	-	-	-	1.6	-	-	-	-	1.6
CPUE (total)	-	-	-	-	-	16.9	-	-	4.6	-	10.8
CPUE ≥ Stock	-	-	-	-	-	5.6	-	-	-	-	5.6
CPUE ≥ Preferred	-	-	-	-	-	1.6	-	-	-	-	1.6
CPUE ≥ MLL (18-inches)	-	-	-	-	-	0.0	-	-	-	-	0
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	85.8	-	-	-	-	85.8
Quality to Preferred	-	-	-	-	-	86.8	-	-	-	-	86.8
Preferred to Memorable	-	-	-	-	-	82.6	-	-	-	-	82.6
Memorable to Trophy	-	-	-	-	-	90.6	-	-	-	-	90.6

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	-	16.70	-	-	5.01	-	10.86
Density (fall electrofishing)											
PSD	-	-	-	-	-	77	-	-	60	-	68.5
RSD (preferred)	-	-	-	-	-	23	-	-	47	-	35
CPUE (total)	-	-	-	-	-	28.1	-	-	11.2	-	19.7
CPUE ≥ Stock	-	-	-	-	-	11.7	-	-	6.2	-	9.0
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	91.0	-	-	91.3	-	91.2
Quality to Preferred	-	-	-	-	-	89.5	-	-	90.2	-	89.9
Preferred to Memorable	-	-	-	-	-	98.6	-	-	100.6	-	99.6

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	-	-	14.8	-	-	5.0	-	9.9
Threadfin CPUE	-	-	-	-	-	1122.2	-	-	51.9	-	587.05

Center Hill Angler Attitude Surveys (2021)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg. size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies and would be gathered from actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of pertinent insight from anglers.

TWRA interviewed the angling public with attitude surveys again in 2021 on the three reservoirs in Region 3 that creel surveys were conducted (Center Hill, Dale Hollow, and Chickamauga reservoirs). No creel survey was conducted on Center Hill in 2022.

Overall “approval” of Region 3 reservoirs in this 2021 survey is very favorable at the current time as well as the past years this survey has been taken. We feel confident that this summary of our “angler attitudes” will once again provide insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

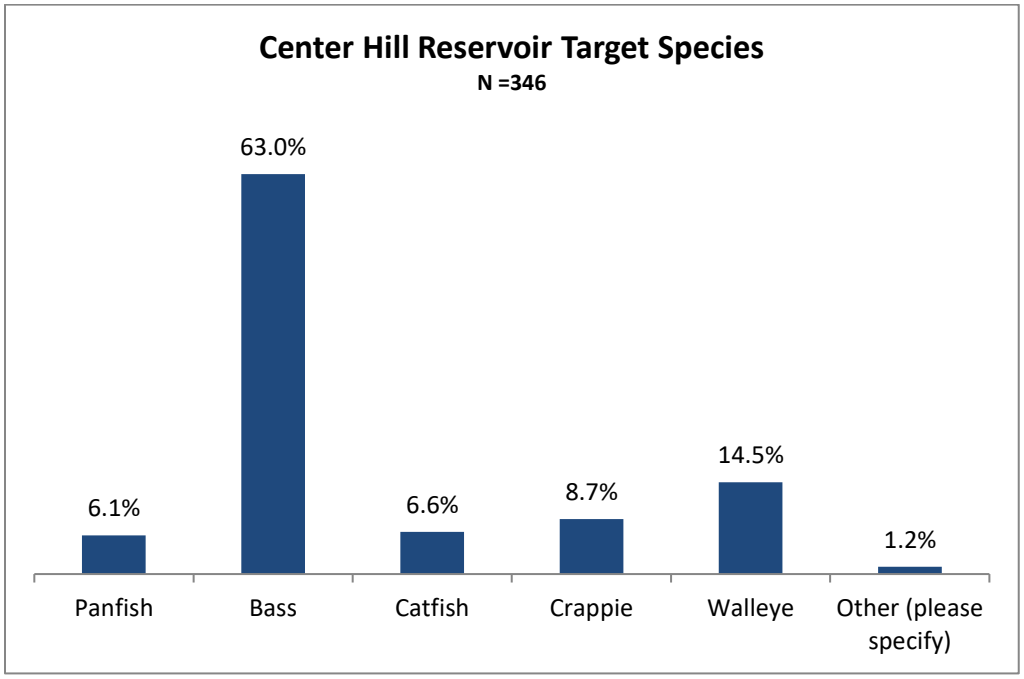
Results from the 2021 Angler Attitude Survey for Center Hill are as follows:

NOTE: Creel interviews in 2021 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program although pressure counts were performed at Center Hill during these two months. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers.

Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions could be realized when comparing it to previous years where these surveys were conducted all 12 months. A roving creel survey will be conducted at Center Hill again in the near future.

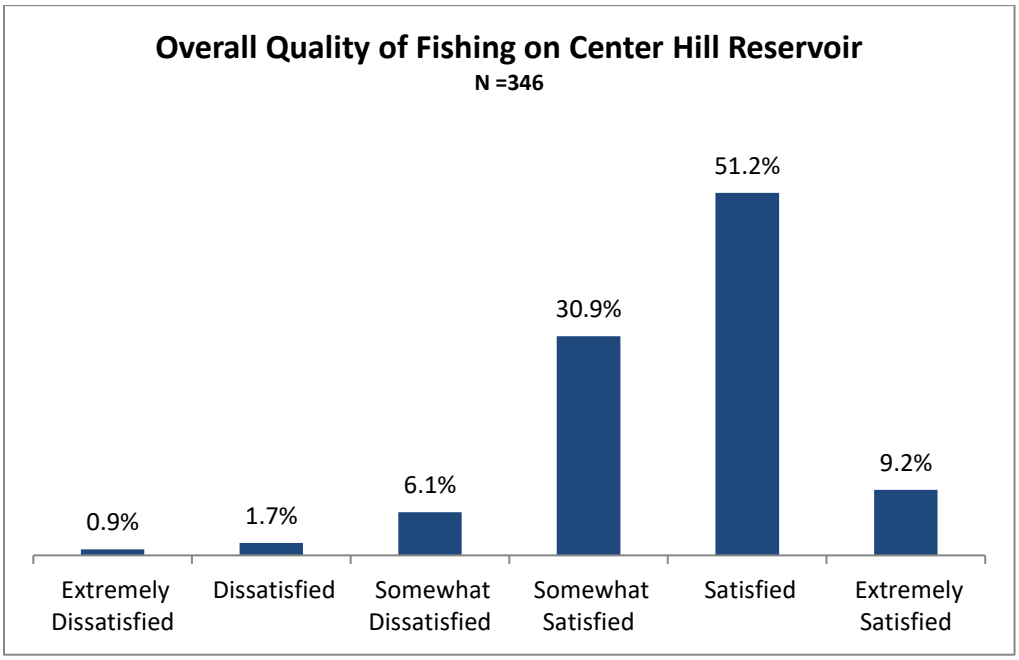
There were a total of 346 angler attitude interviews taken from those who were fishing at Center Hill Reservoir in 2021. Duplicate interviews of the same person on different days were not used for overall evaluation categories. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

As the graph below indicates, the most targeted species of fish by anglers on Center Hill Reservoir was “bass” (63.0%) with walleye being a distant second (14.5%).

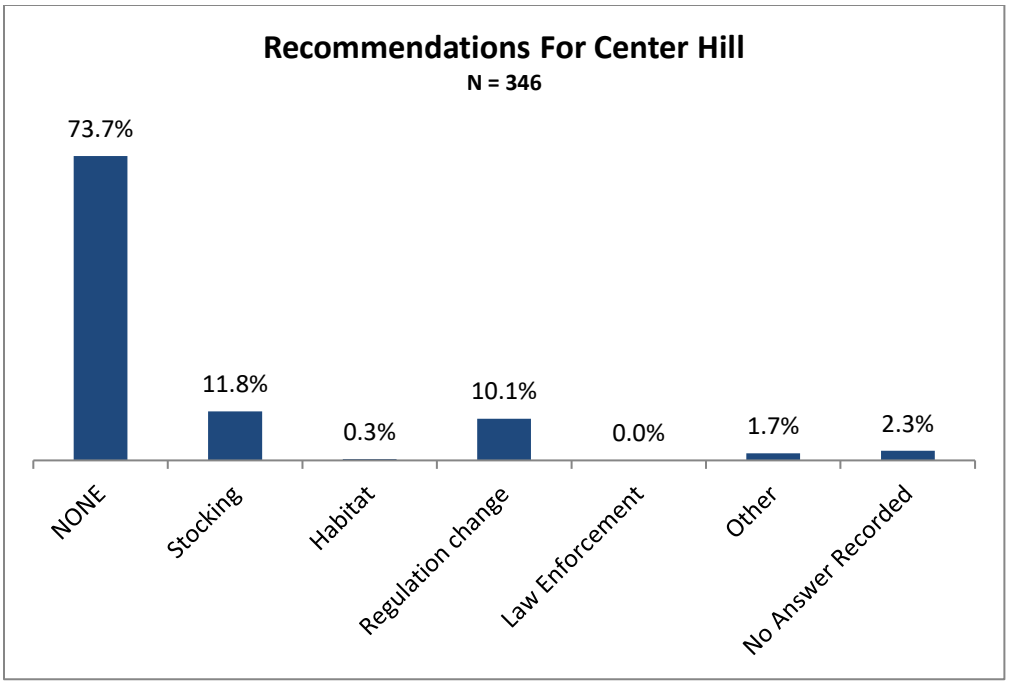


These surveys also revealed that fishermen who identified “Bass” (n=218) as their primary target species, 51.5% of those also fished bass tournaments. On average, these bass tournament fishermen at Center Hill Reservoir fished an average of 10.8 bass tournaments/year.

As the graph below depicts anglers expressed a high satisfaction rating (91.3%) overall when asked about the “overall quality of fishing on Center Hill Reservoir”.



According to the graph below, when anglers who fish Center Hill were asked if they had any recommendations for the overall management of Center Hill Reservoir the majority (73.7%) had “NONE” indicating that TWRA’s management of the fisheries at Center Hill was agreeable. Concerns over stocking and various regulation changes covered most comments given by anglers. Currently, TWRA stocks walleye, trout, and blacknose crappie and/or black crappie into Center Hill Reservoir on an annual basis.



Overall, according to our 2021 annual creel interviews, the angler attitudes for those fishing at Center Hill Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA. This has been consistent since 2013 when this angler surveys were first instituted by TWRA's Region 3 reservoir program.

Chickamauga Reservoir (2022 Annual Report)

Reservoir Facts

Area (acres): 36,240 **Mean Depth (feet):** **Shoreline (miles):** 784

Counties: Rhea, Meigs, Bradley, McMinn, and Polk

Total Fishing Effort (angler hours): 554,433 (2021) **Total Value by Anglers:** $5,093,060 (2021)

Reservoir Description: Chickamauga Reservoir was created in 1940 when the Tennessee Valley Authority (TVA) impounded a section of the Tennessee River by completing Chickamauga Dam at Tn River mile 471.0. Chickamauga is a 36,200-acre reservoir with 784 miles of shoreline. Chickamauga Reservoir lies within Rhea, Meigs, Bradley, and Polk counties in the southeastern portion of the state. Major cities adjacent to Chickamauga Reservoir include Dayton (mid-reservoir section) and Chattanooga, TN (lower end of reservoir). Watts Bar dam is 59 miles upriver from Chickamauga Dam. The upper half of Chickamauga Reservoir is more riverine while the mid to lower end of the reservoir has more sluggish water with large sloughs and embayments. Chickamauga offers great opportunities for several species of gamefish such as largemouth bass, smallmouth bass, striped bass, bluegill, redear sunfish, walleye, sauger, and catfish. Chickamauga Reservoir also offers a variety of habitat types (ex. stumps, laydowns, humps, points, rocky shorelines, aquatic vegetation, etc.) that support these fish species. The Tennessee Wildlife Resources Agency (TWRA) annually stocks several species of fish into Chickamauga including striped bass, walleye, and Florida largemouth bass.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory the TN River reservoirs in Region 3 for their presence. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These ongoing surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam (downriver from Chickamauga Dam) which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for data collections and possible observations. TVA also helped with these surveys initially (summer of 2020) with their own timing and methodologies. A summary of TWRA's efforts for 2021 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/16/2022 and continuing through 8/23/2022 in Chickamauga Reservoir below Watts Bar Dam. Boat electrofishing was used to survey tailwater areas directly below Watts Bar Dam. The general survey area was located from Pinhook Access Ramp upstream to Watts Bar Dam. One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 1.45 km below the dam moving upstream. The face of the dam and the lock chambers were also surveyed. Standard electrofishing settings were used. Temperatures ranged from 11 to 29 C, the average discharge was 19,034 cfs, and the average tailwater elevation was 682.72 ft. Total surveillance effort in 2022 was 10.45 hours. An additional 5.16 hours of effort below Chickamauga Dam was conducted while electrofishing for hatchery brood fish on three separate occasions in mid-March 2022. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.
At least 12 different species were observed in Chickamauga Reservoir in 2022: Largemouth Bass, Smallmouth Bass, Gizzard Shad, Threadfin Shad, Striped Bass, Skipjack Herring, Gar spp., Lake Sturgeon, Buffalo spp., Sucker spp., Paddlefish, and Freshwater Drum.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys (creel) and brood gamefish collections in Tennessee River reservoirs. Furthermore, a

roving creel clerk was surveying on Chickamauga three days per week in 2021. This position interacts with anglers throughout the reservoir and has had no sightings or reports of any Invasive Carp in Chickamauga. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Additionally, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020, 2021, and 2022.

NOTE: Creel interviews in 2021 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions could be realized when comparing it to previous years where these surveys were conducted all 12 months. No creel surveys were conducted on Chickamauga Reservoir in 2022.

Status and management of fish species:

Largemouth bass (LMB): Spring electrofishing surveys were conducted for black bass in Chickamauga during the spring of 2022 by the TWRA reservoir crew. These surveys are typically conducted on alternate years; thus, the next scheduled spring electrofishing survey will be during 2024.

Fishing success for largemouth bass in Chickamauga Reservoir remains positive. Several contributing factors support the largemouth bass fishery at Chickamauga Reservoir at the present time, which are establishments of favorable aquatic vegetation, the ongoing Florida Largemouth bass (FLMB) stocking program, ample forage base, and consistent natural recruitment. A FLMB stocking project at Chickamauga was started in the year 2000 by TWRA and FLMB fingerlings have been stocked annually since, except for the year 2011 (due to the unavailability of FLMB fry for TWRA hatcheries). Most recently, a total of 250,773 FLMB fingerlings were stocked into Chickamauga in 2022. A reduced number of FLMB were stocked in 2016 due to the demand for FLMB fingerlings in neighboring reservoirs (Watts Bar and Nickajack) where a FLMB stocking project was launched at those reservoirs in 2015. Well over 3 million FLMB fingerlings have been stocked into Chickamauga since the onset of this FLMB stocking project. Genetic analyses continue to be conducted to aid in evaluating the success of this project although original project goals (15% Florida genes present in the LMB genome) were realized and surpassed by the year 2010. Genetic tests have confirmed that F1 hybrids (FLMB x “Native”-pre stocked LMB) exhibit the greatest growth potential thus far. Early generation backcrosses also expressed greater growth rates than those of the pre-stocked LMB population in Chickamauga Reservoir according to genetic analysis. Pure FLMB however, have been minimally represented in all surveys conducted and thus noncontributory overall to the success of this project on an individual basis. Tennessee Tech University (TTU) recently concluded a study to further identify the impacts of the FLMB stocking program to the Chickamauga bass population. This TTU study paralleled previous findings by the TWRA Region 3 Reservoir managers.

Electrofishing surveys have shown an overall increase in abundance of largemouth bass ≥ 15 inches over the course of the Chickamauga FLMB stocking project (See **Figure 1** below). Spring black bass electrofishing surveys, conducted in 2022, showed a CPUE for LMB ≥ 15" to be 30.4 LMB/hour which is the highest recorded over the past ten years of TWRA electrofishing data at Chickamauga.

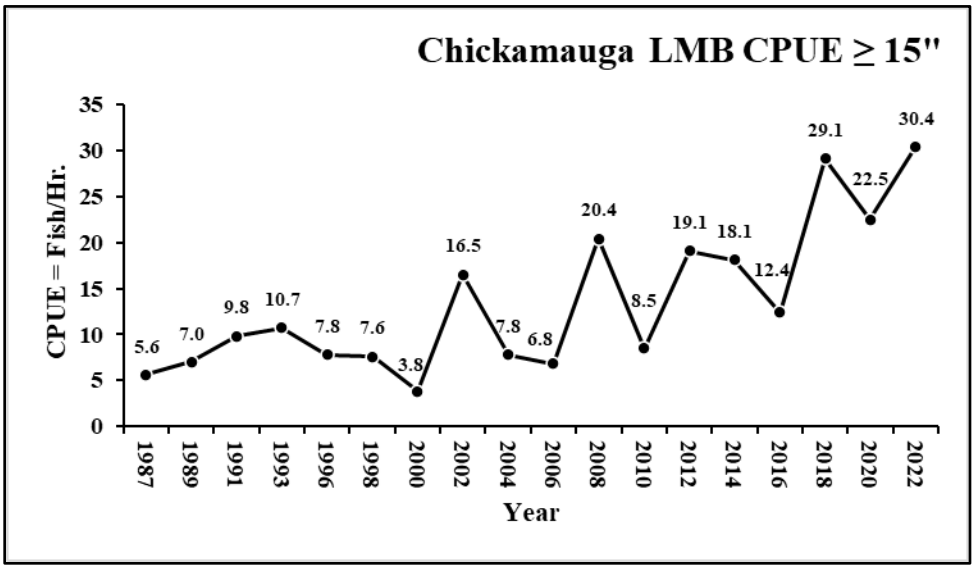


Figure 1. (*CPUE for largemouth bass >15" collected at Chickamauga in spring electrofishing surveys*).

Overall CPUE for LMB was 69.5 LMB/hour for the 2022 spring electrofishing surveys, which is well above average when compared to the past ten years. Substock densities also are near average according to this most recent electrofishing survey with a CPUE realized of 6.55 substock LMB/hour, also well above average. Chickamauga has a good history of consistent year classes which has been a key ingredient for a successful largemouth bass fishery there. The current LMB regulation at Chickamauga is a 5 fish daily creel limit, 15" minimum length limit (MLL). Age and growth studies conducted in 2014 showed that on average a 3-year-old LMB from Chickamauga was 334 mm (13.15 inches) in length based on otolith calculations. These same age 3 fish averaged 327 mm in 2022 studies. Condition factors (Wrs) for LMB collected over the past 10 years were satisfactory in all size classes although these figures could be slightly elevated since they were gathered from spring black bass surveys and gonadal development likely influenced Wr figures.

The latest roving creel survey was conducted on Chickamauga in 2021. The data from this survey showed angling pressure for "any black bass" on Chickamauga to be near the ten-year average at 5.48 hours/acre. More specifically, anglers who were pursuing largemouth bass did so with a representative effort of 3.76 hours/acre, which is down from the previous two creel surveys at Chickamauga. Creel surveys have shown that the average size of LMB caught have more than doubled over the course of the FLMB project but down slightly in most recent surveys (see **Figure 2** below).

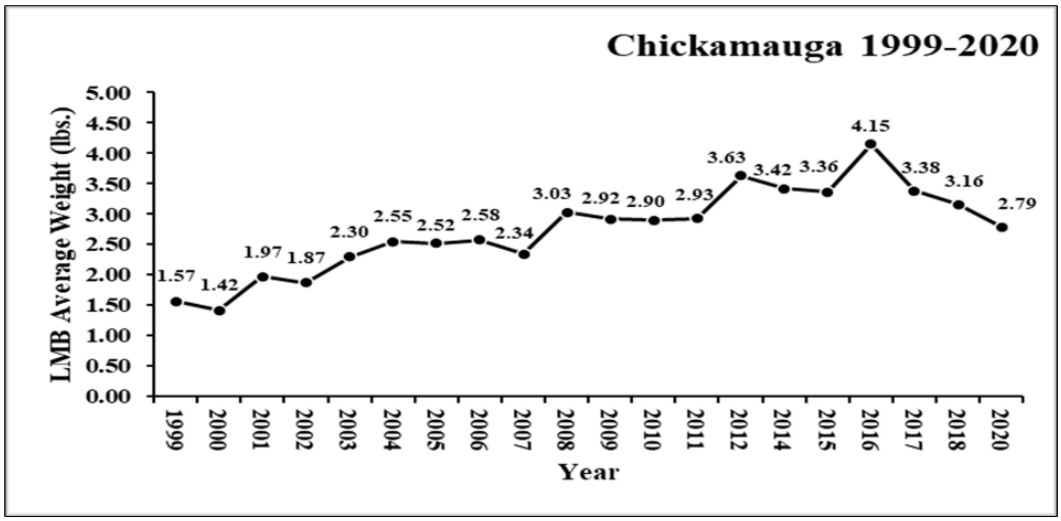


Figure 2. (*Average weight of creeled largemouth bass, Chickamauga Reservoir*).

The average weight for a harvested LMB according to roving creel surveys at Chickamauga in the year 2000 was only 1.42 lbs. However, since the FLMB project, these weights have increased to 4.15 lbs. in 2016 (highest recorded), and down to 2.79 lbs. as recorded during the 2020 creel surveys, although caution may be awarded toward this 2020 figure since fewer fish were recorded due to Covid restrictions that inhibited interviews. Additionally, due to Covid safety protocols, no bass were weighed or measured during the 2021 creel survey. Hopefully positive contributing factors (aquatic vegetation, growth rates, forage availability, etc.) that are currently present on Chickamauga Reservoir will remain and continue to be conducive to a providing a premier largemouth bass fishery. Long term evaluations (electrofishing, creel, tournament results, genetic testing) of this LMB population will be necessary to fully realize and understand the implications of this FLMB stocking program.

On February 13, 2015, the 60 year plus largemouth bass record (14.5 lbs., 1954) in Tennessee was broken by a historic catch at Chickamauga Reservoir. The new record largemouth bass weighing 15 lbs., 3oz. was caught by angler Gabe Keen. The fish was given extensive review by the Region 3 Reservoir Crew and certified the following day. Genetic tests performed later confirmed that this was a 12-year-old fish which was an F1 hybrid (Native LMB X FLMB). There has been much attention and excitement garnished around this fish further promoting the LMB fishery on a national level at Chickamauga.

LMB Genetic and Age/Growth Survey: A total of 253 LMB were fin clipped for genetic testing during the 2022 spring black bass surveys on Chickamauga Reservoir. Otoliths were also taking from these fish for age analysis so age/growth relationships could be compared between LMB genetic classes. This information will guide future stocking regimes (i.e. continue with pure FLMB or go to stocking F1 hybrids between Northern and Florida LMB) as well as compare growth rates from past surveys. The results of the genetics from these fish, performed by Auburn University, have still not been completed at the conclusion of 2022.

Smallmouth bass (SMB): The population density of smallmouth bass at Chickamauga Reservoir has remained stable and probably could be argued that it has increased within the last several years. The upper headwaters and lower end of Chickamauga Reservoir provide the best smallmouth bass habitat and therefore host the greatest numbers of SMB in this reservoir. Targeted nighttime electrofishing

samples have been conducted on Chickamauga Reservoir to evaluate this population in the years 2008, 2010, 2014, and 2018 (See “targeted” SMB table below). CPUE for smallmouth bass for these surveys (years 2008, 2010 & 2014) averaged 20.8 SMB/hour which is similar among all these 3 years and was at 22.6 SMB/hour for the 2018 survey. PSD figures are near the top of the desirable range (70) for all years except 2018 which had a PSD value of 61. Continued targeted electrofishing surveys in the future will be critical to the evaluation of SMB at Chickamauga. The current regulation for SMB at Chickamauga, which is an 18” MLL and 1 SMB/day, has helped sustain and enhance this population thus far. However, it is likely that this SMB population is in danger of being overwhelmed by the influence of Alabama bass that are inhabiting these waters. Alabama bass presence and genetic influence have been confirmed in Chickamauga and neighboring reservoirs (Nickajack and Watts Bar). Future management decisions regarding smallmouth bass in Chickamauga will have to consider ramifications by Alabama bass. See more about Alabama bass presence in Chickamauga in the “spotted bass” narrative below.

Spotted bass (SPB): Over the last ten years, the average catch rate for SPB in electrofishing surveys on Chickamauga Reservoir have been relatively low. This has also been the case for neighboring reservoirs within the TN River system (Watts Bar & Nickajack reservoirs) as well. One possible explanation for this decline could be from a change in water levels due to TVA’s Reservoir Operations Study (ROS), instituted in 2008, which delays achievement of the full summertime pool level to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success for spotted bass by preferred, historic habitat not being available in time for nesting. Another real threat to the native spotted bass populations in Chickamauga Reservoir are the realization of Alabama bass within the reservoir and its tributaries (i.e., Ocoee River). Alabama bass have the potential to outcompete native spotted and smallmouth bass as well as hybridize with these species. During spring electrofishing surveys in 2001, Alabama bass were first documented in Tennessee at Parksville Reservoir, which is located upstream of Chickamauga Reservoir on the Ocoee River. A 6lb. 7 oz. Alabama bass, confirmed by genetics, was caught on July 30, 2010, in the upper reaches of Chickamauga Reservoir in the Ocoee River (below Parksville Dam). This fish was a TN record Alabama bass for a brief period.

The overall CPUE for SPB from Chickamauga via spring electrofishing in 2010 was 2 SPB/hour, 4.4 SPB/hour in 2012, 4.9 SPB/hour in 2014, and 4.0 SPB/hour in 2016. There were not enough spotted bass collected in the 2018 spring electrofishing surveys to warrant any data analysis and only 0.4 SPB/hour realized in the spring 2020 electrofishing surveys (see Spotted bass table below). However, in 2022 spring electrofishing surveys, the overall CPUE for SPB was elevated to 5.3 SPB/hour. This figure could be represented by Alabama bass or hybrids thereof. Substock SPB were also documented (0.55/hour) from these 2022 surveys, which could be Alabama bass or a hybrid as well. Additionally, CPUE for Young-of-Year (YOY) fish from 2008 – 2018 mid-summer seining samples were below average and have exhibited a downward trend over the past decade. In 2017 the CPUE for summer seining surveys was 1.10 SPB/seine haul, which is near average when compared to the past ten years of these surveys. However, caution should be given to this sample by realizing the possibility that some of these “spotted bass” collected in this seining survey may be Alabama bass or at least have their influence. There should still be fair opportunity regarding angling for SPB at Chickamauga Reservoir, especially in the more riverine sections of the river.

The current spotted bass record for the state of TN came from Chickamauga Reservoir on February 22, 2011. This fish weighed 6lbs. 1oz. and the identity was confirmed as a native northern spotted bass by genetic tests. The spotted bass record was held from another Region 3 reservoir, Center Hill, for many years prior to this catch.

Genetic Survey: A total of 17 “spotted bass” were fin clipped for genetic testing during the spring 2022 black bass electrofishing surveys. According to the genetic test results, Alabama bass genes were

represented in 15 of the 17 fin clipped fish. One of the fish was a pure spotted bass and the other was an LMB/SMB hybrid.

Crappie (black and white): Angling for crappie on Chickamauga Reservoir has been very productive for the past several years. Crappie fishing success at Chickamauga has been ranked nationally by media sources as a top destination for crappie fishing in the recent past. Crappie tournaments have also frequented Chickamauga Reservoir due to the notable crappie fishery there. However, current catch rates by anglers, obtained from the latest roving creel surveys, are below the ten-year average at Chickamauga at 1.69 crappie/hour. Fall trapnetting continues to be an excellent predictor of year class strength for mainstem reservoirs within the TN River system. Fall trapnetting surveys conducted in 2022 on Chickamauga Reservoir show that substock black crappie (BC) were represented with catch rates of 0.93 BC/net night, which is below average over the past ten years of like surveys. However, this is up from the 2019 figure of 0.53 BC/net night. White crappie (WC) numbers from the same fall trapnetting surveys in 2021 exhibited a catch rate of 0.73 substock WC/net night which is at the ten-year average for trapnet surveys at Chickamauga. Unfortunately, no YOY white crappie were observed in the 2022 trapnetting surveys. Black crappie routinely makes up most of the total crappie harvest at Chickamauga according to creel surveys. The 2021 Chickamauga creel surveys concluded that an estimated $233,300 dollars (trip expenditures) was expended in pursuit of crappie at Chickamauga. These same 2021 creel surveys recorded a catch rate of 1.69 crappie/hour. No weights were recorded for crappie during the 2021 creel surveys due to Covid safety protocols. Angling pressure recorded for fishermen fishing for crappie at Chickamauga was at a ten year high (2.56 hrs./acre) in 2021. No creel surveys were conducted at Chickamauga in 2019 and creel surveys in 2020 were not conducted all year due to restrictions related to Covid.

Sunfish (bluegill and redear): Anglers pursuing “panfish”, consisting of redear sunfish and bluegill, will find great and consistent opportunities at Chickamauga Reservoir. Redear sunfish regulations currently at Chickamauga are a creel limit of 20 redear/day with no minimum length limit (MLL). Bluegill have no creel or MLL restrictions. Because Chickamauga Reservoir is such a great host to a variety of sunfish species there are good expectations of sustainability and angling success. Restrictions due to Covid safety protocols affected the roving creel interviews and prevented data collections for critical months of historical panfishing opportunities. Therefore pre-2020 creel data will be referenced at this time. Catch rates for “panfish” (bluegill and redear) at Chickamauga in 2021 were at 1.51 panfish/hour according to the roving creel survey, which is well below the ten-year average. Bluegill were well represented in the 2017 mid-summer seining surveys with a catch rate of 22.3 bluegill/seine haul, the highest in the past ten years and even higher in the 2018 surveys at 27 bluegill/seine haul. Redear were observed at a rate of 1.90 redear/seine haul from these same 2018 surveys which is below the ten-year average. No seining surveys have been conducted since 2018. Bluegill (12.9 bluegill/net night) and redear sunfish (1.48 bluegill/net night) were both represented and recorded (See “bluegill” and “redear” table below) from the targeted crappie fall trapnetting surveys conducted to evaluate the 2022 crappie spawning success. Of consideration regarding sunfish spawning success is the fact that full reservoir levels at Chickamauga Reservoir aren’t realized until May 15 which prior to the implementation of TVA’s ROS plan in 2008 was April 15. These one-month delay in achieving summertime pool levels have not allowed redear sunfish to utilize historical, preferred spawning sites. During spring black bass electrofishing surveys, TWRA personnel have observed many historic redear sunfish spawning sites that are not being used because ample water was not available in time for nesting preparations. Redear sunfish and bluegill will continue to be a target for consumptive and sport anglers at Chickamauga Reservoir and consistent angling opportunities are expected, however.

Sauger: Sauger populations can vary considerably due to required flow requirements during spawning times and other critical factors affecting spawning success. Sauger, often called TN's "mystery fish", have been one of the most researched fish species in Tennessee by both TWRA and university studies. Sauger remains one of the most difficult fish to manage for a variety of reasons such as dependency on precise river flows during spawning season, changes to historical spawning sites, environmental preferences and perhaps many unknown factors. Additionally, TWRA hatcheries have not had consistent success in propagating this fish and often sauger present difficulties even with the collection of brood fish. In the distant past, there have been annual stockings of sauger fingerlings to help augment the populations in the TN River impoundments in Region 3 including Chickamauga Reservoir as well as neighboring reservoirs. These stockings were not always realized every year due to various difficulties realized in the hatchery process. According to creel surveys conducted in 2017, 2018, and 2021 at Chickamauga Reservoir, successful catches of sauger were not realized. The creel surveys in 2021 excluded the months of January and February, which have historically been months of realized success for anglers pursuing sauger. In the recent past, the catch rates observed in 2015 were 0.58 sauger/hour which was up from 0.02 sauger/hour in 2014. The average weight for a harvested sauger in 2015 was 1.44 lbs. which is consistent with averages over the past ten years. Fishing success for sauger can be hard to predict because of all the variables (i.e., weather, water flows, access) affecting this fishery during the winter and pre-spring months when sauger are most vulnerable to angling, especially in tailwaters below TN River dams where pursuits of sauger often take place. In 2014 there was a shift from sauger to stocking walleye at Chickamauga by TWRA due to hatchery limitations with propagating sauger and the realized benefits of walleye over sauger from an angling perspective (i.e., walleye get bigger, live longer, and offer more of a year around fishery). Sauger densities are expected to remain low overall with the sole dependency now being with their natural spawning success which is not consistent. It is important to note that no complaints have been received by those who identify themselves as sauger fishermen regarding the change of stocking walleye over sauger.

Walleye: A walleye stocking project was initiated on Chickamauga Reservoir in 2014 and walleye fingerlings have been stocked annually every year since initiation. Most recently, there were 157,518 walleye fingerlings stocked into Chickamauga in 2022. This is a rate of 4.21 walleye/acre. Stocked walleye continue to provide angling opportunities and success, especially in the headwaters of Chickamauga Reservoir, below Watts Bar Dam. The initial Region 3 walleye stocking program was instituted in 2011 upstream in Watts Bar Reservoir and has presumably contributed to walleye in the upper reaches of Chickamauga Reservoir as well through dam passage. Like sauger, walleye are native to the TN River which flows through Chickamauga Reservoir. Confirmed reports of walleye catches at Chickamauga have been on the increase and are expected to continue due to the regular annual stockings of walleye. Walleye on average weighed 2.44 lb. that were harvested by anglers at an average catch rate of 1.07 walleye/hour according to the 2020 roving creel survey. According to the 2021 creel survey, walleye were caught at a lower rate of 0.23 walleye/hour. However, this figure likely misrepresents the actual success as no creel was conducted in the months of January and February which are arguably the best months to catch walleye. The walleye fishery at Chickamauga continues to provide a source for brood fish that have been utilized by various TWRA hatcheries.

Catfish: Chickamauga Reservoir continues to be a destination for those anglers in pursuit of catfish, both sport and commercially. According to creel surveys, fishing for catfish at Chickamauga is typically the second or third most sought-after game fish when intended species are compared within Chickamauga Reservoir. There are three species of catfish targeted by anglers at Chickamauga: blue, channel, and flathead catfish. Roving creel surveys, conducted by TWRA, are the main source of data used to evaluate this fishery. The estimated trip expenditures spent by anglers in pursuit of catfish in 2021 were $195,620. These same anglers expended near average effort in hours (past ten years) in pursuit of catfish at an

estimated 1.04 hours/acre which is below the ten-year average. All available information points toward a very productive catfish fishery in the future at Chickamauga Reservoir. Trends observed from harvest data, also collected by annual roving creel surveys, show an overall increase in blue catfish harvest and an overall decrease in channel catfish harvest on Chickamauga. The table below shows the past ten years of catfish data (catch rates and avg. weights) taken by creel surveys. This table shows good consistency with these values regarding both channel and blue catfish species. No creel surveys were conducted on Chickamauga in 2019 and the 2020 creel survey was limited to pressure counts only (no angler interviews) in the summer months due to restrictions regarding Covid. Much effort is invested annually by commercial fishermen and anglers in pursuit of catfish in Chickamauga. A 2017 catfish study conducted by Tennessee Tech University (TTU) concluded that the catfish fishery was stable in Chickamauga Reservoir. Several reports of trophy blue catfish continue to be forth coming from catfish anglers who fish Chickamauga in the pursuit thereof.

Catch rates (#/hour) & Average weights (lbs.)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	AVG
Chickamauga Channel Cat Catch Rate	0.25	0.1	0.14		0.29	0.65	0.52	0.42	0.41			0.27	**0.35**
Chickamauga Channel Cat Avg weight	3.37	3.2	3.26		3.15	2.87	2.79	3.00	2.93			N/A	**3.07**
Chickamauga Blue Cat Catch Rate	0.96	0.9	1.14		0.96	0.93	0.75	1.05	1.15			0.1	**0.882222**
Chickamauga Blue Cat Avg weight	3.39	3.8	3.08		3.07	3.00	3.24	3.27	4.67			N/A	**3.44**

(*Table. Catfish catch rates and avg weights collected by year-long roving creel surveys at Chickamauga. No creel conducted in years 2013 and 2019*).

Striped bass: Anglers spent (consumer surplus) an estimated $102,400 in 2021 while pursuing striped bass in Chickamauga Reservoir according to an annual roving creel survey conducted there by TWRA. No creel surveys were conducted on Chickamauga Reservoir in 2019 and the creel survey in 2020 was not complete due to restrictive measures related to Covid. The striped bass fishery in Chickamauga is mainly a tailwater fishery at the headwaters of Chickamauga below Watts Bar Dam although there is also successful fishing for striped bass realized in the upper reaches of the Hiwassee River, a major tributary to Chickamauga Reservoir as well as some mid-lake areas and small tributaries. The Hiwassee River, however, provides thermal refuge opportunities for striped bass during the summer months and abundant forage. Striped bass fingerlings have been stocked at a consistent annual basis by TWRA into Chickamauga Reservoirs since 2015 at an average of 3.23/acre. Most recently, there were159,828 striped bass fingerlings stocked into Chickamauga Reservoir in 2022. No striped bass however were stocked into Chickamauga in 2018 due to a shortage of striped bass fingerlings from the state hatcheries. Stockings of striped bass into Chickamauga have not always occurred in the distant past due to fear of interactions with commercial entanglement gear and the availability of these fingerlings. Striped bass stocked in neighboring Watts Bar Reservoir annually do find their way to Chickamauga through dam passage via Watts Bar Dam locks. Striped bass congregate in the Watts Bar tailwaters (Chickamauga headwaters) during various times of the year especially in spring and fall. An abundant forage base of gizzard and threadfin shad are some of the biggest reasons for this assemblage. Skipjack herring, a preferred bait by striped bass anglers, also represent a preferred forage base at Chickamauga for striped bass although populations of this forage species are cyclic. Mean weight of harvested striped bass in 2017 was 13.80 lbs. and 17.08 lbs. in the 2018 creel surveys, which were the most recent years that striped bass weights were recorded during creel surveys. The average catch rate was 0.19 striped bass/hour in 2021. Good fishing for striped bass is expected to remain consistent in Chickamauga Reservoir due to the TWRA stocking program, mainly in the headwaters and upper navigable reaches of the Hiwassee River where striped bass seek out thermal refuges and abundant forage in hot summer months. The majority of the striped bass stockings occur near Watts Bar dam (Chickamauga headwaters) and the Hiwassee River.

Lakewide Creel Results

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	-	544,694	584,054	493,262	619,212	588,713	-	840,394	554,431	-	603,537
Angler Hrs./Acre	-	15.4	16.1	13.6	17.1	16.2	-	23.2	15.3	-	16.7
Angler Trips	-	81,450	87,731	76,055	94,913	89,098	-	67,243	83,938	-	82,918
Value of Fishery (Trip expenitures-creel)											
All Species	-	$2,203,520	$1,731,090	$1,334,740	$2,023,540	$2,214,650	-	$7,326,890	$5,093,060	-	$3,132,499

No angler trip counts from May-September for 2020
No angler trip counts for January & February of 2021

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	-	261,022	274,388	279,631	359,144	370,430	-	395,584	338,319	-	325,503
(hrs./acre)	-	7.37	7.57	7.72	9.91	10.22	-	10.92	9.33	-	9.01
Any Black Bass (hrs.)	-	258,519	262,403	279,631	357,126	36,308	-	60,853	198,535	-	207,625
(hrs./acre)	-	7.30	7.24	7.72	9.86	1.00	-	1.68	5.48	-	5.75
Largemouth Bass (hrs.)	-	2,503	11,985	-	2,018	331,885	-	334,731	136,351	-	136,579
(hrs./acre)	-	0.07	0.33	-	0.06	9.16	-	9.24	3.76	-	3.77
Smallmouth Bass (hrs.)	-	-	-	-	-	2,237	-	-	3,433	-	2,835
(hrs./acre)	-	-	-	-	-	0.06	-	-	0.09	-	0.08
Spotted Bass (hrs.)	-	-	-	-	-	-	-	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	-	-
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-		-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-		-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-		-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-		-	-
Tournament Catch Rate (creel)	-	1.01	0.72	0.70	0.98	0.62	-	0.49	0.58	-	0.73
Non-Tournament Catch Rate (cre	-	0.60	0.72	0.68	0.66	0.50	-	0.33	0.43	-	0.56
Value of Fishery (Trip Expenditures)											
All Black Bass	-	$1,445,980	$1,003,230	$857,960	$1,441,210	$1,546,590	-	$3,650,150		-	$1,657,520
Any Black Bass	-	$1,445,980	$959,340	$857,960	$1,438,660	$165,340	-	$426,410	$1,342,030	-	$947,960
Largemouth Bass	-	$14,770	$43,890	-	$2,550	$1,352,070	-	$3,223,740	$1,018,100	-	$942,520
Smallmouth Bass	-	-	-	-	-	$29,180	-	-	$25,600	-	$27,390
Spotted Bass	-	-	-	-	-	-	-	-	-	-	-

Largemouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	4.80	-	8.38	-	1.46	-	4.55	-	6.55	5.15
CPUE (mid-summer seine)	3.00	3.50	5.80	3.40	0.50	3.40	-	-	-	-	3.27
Density (spring electrofishing)											
PSD	-	78.6	-	62.0	-	78.0	-	83.0	-	81.0	76.5
RSD (preferred)	-	54.8	-	35.0	-	46.0	-	57.0	-	50.0	48.6
CPUE (total)	-	45.2	-	43.6	-	65.8	-	44.4	-	69.5	53.7
CPUE ≥ Stock	-	40.4	-	35.2	-	64.4	-	39.8	-	62.9	48.5
CPUE ≥ MLL (15-inches)	-	18.1	-	12.4	-	29.1	-	22.5	-	30.4	22.5
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	157	-
Length Age-3	-	334	-	-	-	-	-	-	-	327	331
Condition (spring electrofishing)											
Stock to Quality	-	91.7	-	92.5	-	91.3	-	95.2	-	99.9	94.117
Quality to Preferred	-	92.1	-	93.3	-	94.7	-	95	-	91.6	93.3414
Preferred to Memorable	-	100.6	-	107.2	-	93.6	-	92.4	-	103.3	99.424
Memorable to Trophy	-	97.3	-	102.8	-	98.5	-	98	-	100.1	99.34
Mortality (spring electrofishing)											
Total Mortality	-	31.5%	-	-	-	-	-	-	-	33.0%	32.3%
Stocking (Florida LMB)											
#	236,663	76,334	197,920	53,380	73,971	175,625	62,334	174,819	185,460	250,773	148,728
#/Acre	6.69	2.16	5.46	1.47	2.04	4.85	1.72	4.82	5.12	6.71	4.10
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	0.65	0.62	-	0.52	0.54	-	0.38	0.44	-	0.53
Catch Rate, num./hr. (any black bass)	-	0.62	0.74	0.65	0.70	0.40	-	0.39	0.45	-	0.56
Harvest Rate, num./hr. (any black bass)	-	-	0.05	0.01	0.07	0.04	-	0.06	0.04	-	0.05
% Released	-	89.4	92.4	98.2	90.6	93.4	-	75.8	87.4	-	89.6
Mean Weight	-	3.42	3.36	4.15	3.38	3.16	-	2.79	-	-	3.38

Smallmouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.30	2.10	0.30	1.00	-	0.50	-	-	-	-	0.84
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-	0.21	-	-
Catch Rate, num./hr. (any black bass)	-	0.62	0.74	0.65	0.70	0.40	-	0.39	0.45	-	0.56
Harvest Rate, num./hr. (any black bass)	-	0.06	0.05	0.01	0.07	0.04	-	0.06	0.04	-	0.05
% Released	-	100.0	-	98.5	100.0	100.0	-	93.5	97.7	-	98.3
Mean Weight	-	-	-	4.70	-	-	-	3.50	-	-	4.10

Smallmouth Bass (Target Sample)

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	76.0	-	-	-	61.0	-	-	-	-	68.5
RSD (preferred)	-	61.0	-	-	-	28.0	-	-	-	-	44.5
CPUE (preferred)	-	16.3	-	-	-	5.7	-	-	-	-	11.0
CPUE (total)	-	21.5	-	-	-	22.6	-	-	-	-	22.1
CPUE ≥ Stock	-	21.5	-	-	-	21.1	-	-	-	-	21.3
CPUE ≥ Preferred	-	7.5	-	-	-	5.7	-	-	-	-	6.6
CPUE ≥ MLL (18-inches)	-	0.4	-	-	-	0.2	-	-	-	-	0.3
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	95.1	-	-	-	90.8	-	-	-	-	93.0
Quality to Preferred	-	84.4	-	-	-	89.5	-	-	-	-	87.0
Preferred to Memorable	-	85.6	-	-	-	93.0	-	-	-	-	89.3
Memorable to Trophy	-	93.4	-	-	-	92.0	-	-	-	-	92.7
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-

Targeted SMB samples are collected at night unless otherwise noted

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing	-	0.57	-	-	-	-	-	-	-	0.55	0.56
CPUE (mid-summer seine)	-	1.10	1.90	1.40	1.10	0.40	-	-	-	-	1.18
Density (spring electrofishing)											
PSD	-	62.0	-	62.0	-	-	-	-	-	65.0	63.0
RSD (prefered)	-	18.8	-	10.0	-	-	-	-	-	12.0	13.6
CPUE (total)	-	4.9	-	4.0	-	-	-	0.4	-	5.3	3.6
CPUE ≥ Stock	-	2.7	-	4.0	-	-	-	-	-	4.7	3.8
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	160	-
Length Age-3	-	-	-	-	-	-	-	-	-	291	-
Condition (spring electrofishing)											
Stock to Quality	-	101.4	-	99.1	-	-	-	-	-	97.7	99.4
Quality to Preferred	-	94.4	-	91.6	-	-	-	-	-	96.2	94.1
Preferred to Memorable	-	94.7	-	82.2	-	-	-	-	-	86.3	87.7
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	42.0%	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-		-	-
Catch Rate, num./hr. (any black bas	0.86	0.62	0.74	0.65	0.70	0.40	-	0.39	0.45	-	0.60
Harvest Rate, num./hr. (any black b	0.02	0.06	0.05	0.01	0.07	0.04	-	0.06	0.04	-	0.04
% Released	96..8	97.7	-	100.0	100.0	99.7	-	98.1	82.3	-	96.3
Mean Weight	1.90	1.08	-	-	-	1.20	-	1.70	-	-	1.47

Black Crappie

Recruitment (trap-netting)	2013	2014	2015	2016*	2017	2018	2018*	2019*	2020**	2021**	2022**	10 yr. Average
Substock CUPE	1.55	2.52	0.35	7.93	0.03	-	-	0.53	0.98	2.68	0.93	1.94
Density (electrofishing)												
PSD	-	100.0	-	95.0	-	96.0	96.0	99.0	-	-	-	97.2
RSD (preferred)	-	62.0	-	67.0	-	73.0	70.0	50.0	-	-	-	64.4
CPUE (total)	-	3.0	-	309.8	-	-	422.9	390.0	-	-	-	281.4
CPUE ≥ Stock	-	-	-	309.8	-	-	422.9	390.0	-	-	-	374.2
CPUE ≥ MML (10 inches)	-	-	-	201.1	-	-	202.6	170.0	-	-	-	191.2
Growth (electrofishing)												
Length Age-1	-	-	-				-	-	-	-	-	-
Length Age-3	-	-	-				-	-	-	-	-	-
Condition (electrofishing)												
Stock to Quality	-	-	-	103.4	-	70.6	84.7	105.2	-	-	-	91.0
Quality to Preferred	-	-	-	93.4	-	92.5	91.1	106.8	-	-	-	96.0
Preferred to Memorable	-	-	-	89.3	-	89.2	92.8	102.7	-	-	-	93.5
Memorable to Trophy	-	-	-	85.2	-	84.5	94.6	96.6	-	-	-	90.2
Mortality (electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Stocking												
#	-	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)												
Angler Hrs. (all crappie)	-	71,938	64,681	55,061	65,769	57,016	-	-	37,135	92,756	-	63,479
Angler Hrs./Acre	-	2.03	1.78	1.52	1.82	1.57	-	-	1.02	2.56	-	1.76
Fishing Success (creel)												
Catch Rate (any crappie)	-	2.17	2.38	2.48	2.36	2.85	-	-	2.05	1.69	-	2.28
Harvest Rate (any crappie)	-	0.93	1.33	1.24	1.22	1.19	-	-	1.17	0.76	-	1.12
% Released (black crappie)	-	54.7	44.3	51.5	53.7	59.3	-	-	39.7	-	-	50.5
Mean Weight (black crappie)	-	0.76	0.80	0.78	0.77	0.76	-	-	0.77	-	-	0.77
Value of the Fishery (Trip Expenditures - creel)												
All Crappie	-	$157,090	$146,750	$138,670	$172,780	$154,300	-	-	$68,800	$233,300	-	$153,099

Non-target sample unless otherwise noted
* Target sample
** Data collected from trap netting

Blacknose Crappie

Recruitment (trap-netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	
Length Age-3	-	-	-	-	-	-	-	-	-	-	
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	71,938	64,681	55,061	65,769	57,016	-	37,135	92,756	-	63,479
Angler Hrs./Acre	-	2.03	1.78	1.52	1.82	1.57	-	1.02	2.56	-	1.76
Fishing Success (creel)											
Catch Rate (any crappie)	-	2.17	2.38	2.48	2.36	2.85	-	2.05	1.69	-	2.28
Harvest Rate (any crappie)	-	0.93	1.33	1.24	1.22	1.19	-	1.17	0.80	-	1.13
% Released (blacknose crappie)	-	-	0.0	29.5	0.0	-	-	-	-	-	9.8
Mean Weight (blacknose crappie)	-	-	0.80	1.10	1.05	-	-	-	-	-	0.98
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	$157,090	$146,750	$138,670	$172,780	$154,300	-	$68,800	$233,300	-	$153,099

White Crappie

Recruitment (trap-netting)	2013	2014	2015	2016	2017	2018	2019	2020**	2021**	2022	10 yr. Average
Substock CUPE	0.50	-	-	0.73	-	-	1.10	0.65	0.73	-	0.74
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	71,938	64,681	55,061	65,769	57,016	-	37,135	92,756	-	63,479
Angler Hrs./Acre	-	2.03	1.78	1.52	1.82	1.57	-	1.02	2.56	-	1.76
Fishing Success (creel)											
Catch Rate (any crappie)	-	2.17	2.38	2.48	2.36	2.85	-	2.05	1.69	-	2.28
Harvest Rate (any crappie)	-	0.93	1.33	1.24	1.22	1.19	-	1.17	0.8	-	1.13
% Released (white crappie)	-	54.4	48.0	49.5	54.9	66.7	-	46.0	-	-	53.3
Mean Weight (white crappie)	-	0.76	0.77	0.76	0.76	0.80	-	0.84	-	-	0.78
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	$157,090	$146,750	$138,670	$172,780	$154,300	-	$68,800	$233,300	-	$153,099

Non-target sample unless otherwise noted

* Target sample

** Data collected from trap netting

Walleye

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	0.30	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	99.0	100.0	-	-	-	-	99.5
RSD (prefered)	-	-	-	-	33.0	36.0	-	-	-	-	34.5
CPUE (total)	-	-	-	-	10.8	16.1	-	-	-	-	13.5
CPUE ≥ Stock	-	-	-	-	10.8	-	-	-	-	-	10.8
CPUE ≥ MML (15 inches)	-	-	-	-	16.3	-	-	-	-	-	16.3
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	110.4	87.3	-	-	-	-	98.9
Quality to Preferred	-	-	-	-	87.3	86.7	-	-	-	-	87.0
Preferred to Memorable	-	-	-	-	83.1	89.2	-	-	-	-	86.2
Memorable to Trophy	-	-	-	-	81.2	78.1	-	-	-	-	79.7
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	267,247	192,422	107,835	138,833	280,708	186,970	168,770	368,160	157,518	207607
#/Acre	-	7.55	5.30	2.98	3.80	7.74	5.16	4.66	10.16	4.21	5.73
Angler Pressure (creel)											
Angler Hrs.	-	604	4,679	3,446	4,603	6,710	-	5,388	12,493	-	5418
Angler Hrs./Acre	-	0.02	0.13	0.1	0.13	0.19	-	0.15	0.34	-	0.15
Fishing Success (creel)											
Catch Rate (intended)	-	0.28	1.11	0.43	0.59	0.46	-	1.07	0.23	-	0.60
Harvest Rate (intended)	-	0.00	0.60	0.34	0.39	0.27	-	0.53	0.11	-	0.32
% Released	-	100.0	79.7	38.8	45.8	37.2	-	56.7	17.6	-	53.7
Mean Weight	-	-	2.09	1.83	1.87	2.66	-	2.44	-	-	2.18
Value of Fishery (Trip Expenditures - creel)											
Walleye	-	$1,060	$8,340	$10,660	$12,010	$20,150	-	$11,060	$60,800	-	$17,726

Note: 2017 & 2018 were targeted electrofishing samples for brood collection

Sauger

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours	-	2,181	2,943	973	1,455	139	-	-	-	-	1,538
Angler Hours/Acre	-	0.06	0.08	0.03	0.04	0.004	-	-	-	-	0.04
Fishing Success (creel)											
Catch Rate (intended)	-	0.02	0.58	0.00	0.00	0.00	-	-	-	-	0.12
Harvest Rate (intended)	-	0.00	0.32	0.00	0.00	0.00	-	-	-	-	0.06
% Released	-	100.0	41.9	64.4	55.2	100.0	-	83.1	-	-	74.1
Mean Weight	-	-	1.44	1.50	1.18	-	-	1.50	-	-	1.41
Value of Fishery (Trip Expenditures-creel)											
Sauger	-	$14,390	$4,730	$1,750	$4,290	$1,330	-	-	-	-	$5,298

Striped Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-2	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	51,265	100,013	76,912	-	107,300	177,877	148,775	159,828	117,424
#/Acre	-	-	1.40	2.80	2.10	-	3.00	4.90	4.11	4.27	3.23
Angling Pressure (creel)											
Angler Hours	-	12,156	14,089	13,091	2,927	11,243	-	-	11,003	-	10,752
Angler Hours/Acre	-	0.34	0.39	0.36	0.08	0.31	-	-	0.30	-	0.30
Fishing Success (creel)											
Catch Rate (intended)	-	0.87	0.42	0.63	0.62	0.50	-	-	0.19	-	0.54
Harvest Rate (intended)	-	0.01	0.05	0.13	0.00	0.04	-	-	0.07	-	0.05
% Released	-	96.6	88.9	66.3	95.6	94.5	-	100.0	81.8	-	89.1
Mean Weight	-	23.4	14.8	16.9	13.8	17.1	-	-	-	-	17.2
Value of Fishery (Trip Expenditures-creel)											
Striped Bass	-	$186,610	$129,280	$53,340	$29,310	$154,910	-	-	$102,400	-	$109,308

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	10.9	8.0	19.5	12.5	22.3	27.0	-	-	-	-	16.7
Substock CPUE (trap-netting)	-	15.1	6.0	32.4	15.6	-	8.3	3.6	8.3	12.9	12.8
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	16,177	6,896	15,158	18,032	30,652	-	7,494	9,732	-	14,877
Angler Hrs./Acre	-	0.46	0.19	0.42	0.50	0.85	-	0.21	0.27	-	0.41
Fishing Success (creel)											
Catch Rate (any sunfish)	-	6.53	6.64	7.20	6.85	8.59	-	3.89	1.51	-	5.89
Harvest Rate (any sunfish)	-	3.19	3.30	3.85	3.80	4.58	-	1.75	0.35	-	2.97
% Released (bluegill)	-	61.0	62.9	59.2	68.6	65.4	-	64.7	36.3	-	59.7
Mean Weight (bluegill)	-	0.23	0.23	0.23	0.26	0.29	-	0.26	-	-	0.25
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	-	$32,870	$14,340	$28,540	$36,650	$57,380	-	$29,710	$21,410	-	$31,557

Non-target sample unless otherwise noted

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	1.80	0.40	0.40	2.00	5.50	1.90	-	-	-	-	2.00
Substock CPUE (trap-netting)	-	9.65	2.65	8.90	3.30	-	5.68	0.73	6.43	1.48	4.85
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	16,177	6,896	15,158	18,032	30,652	-	7,494	9,732	-	14,877
Angler Hrs./Acre	-	0.46	0.19	0.42	0.50	0.85	-	0.21	0.27	-	0.41
Fishing Success (creel)											
Catch Rate (any sunfish)	-	6.53	6.64	7.20	6.85	8.59	-	3.89	1.51	-	5.89
Harvest Rate (any sunfish)	-	3.19	3.30	3.85	3.80	4.58	-	1.75	0.35	-	2.97
% Released (redear)	-	46.2	41.9	38.5	37.5	39.4	-	-	24.2	-	38.0
Mean Weight (redear)	-	0.33	0.34	0.39	0.35	0.49	-	-	-	-	0.38
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	-	$32,870	$14,340	$28,540	$36,650	$57,380	-	$29,710	$21,410	-	$31,557

Non-target sample unless otherwise noted

Catfish

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	-	90,299	114,126	52,310	78,845	49,195	-	19,404	37,785	-	63,138
Angler Hrs./Acre	-	2.55	3.15	1.44	2.18	1.36	-	0.54	1.04	-	1.75
Fishing Success (creel)											
Catch Rate (any catfish)	-	1.35	1.62	1.31	1.51	1.63	-	1.04	0.47	-	1.28
Harvest Rate (any catfish)	-	0.33	0.67	0.38	0.39	0.12	-	0.19	0.26	-	0.33
% Released (channel)	-	70.8	56.7	60.5	65.3	85.5	-	81.6	100.0	-	74.3
Mean Weight (channel)	-	3.15	2.87	2.79	3.00	2.93	-	3.13	-	-	2.98
Value of Fishery (Trip Expenditures - creel)											
All Catfish	-	$233,300	$264,820	$121,790	$179,420	$133,190	-	$104,010	$195,620	-	$176,021

Lake Sturgeon

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	-	-	-	-	-	1,952	-
#/Acre	-	-	-	-	-	-	-	-	-	0.05	-

Shad

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-		-
Gizzard CPUE	-	-	-	15.4	-	26.3	-	-	-	26.9	22.9
Threadfin CPUE	-	-	-	-	-	460.3	-	-	-	1.45	230.9

Habitat Enhancement - 2022

Type of Work	Details	Quanity	
		New	Renovated
Habitat Enhancement	Richland Creek	6 new sites	35 Mossback Structures
Habitat Enhancement	Grasshopper Creek	8 new sites	70 Mossback Structures

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	None Performed	None Performed
Dissolved Oxygen	None Performed	None Performed
PH	None Performed	None Performed
Conductivity	None Performed	None Performed

Chickamauga Reservoir Headwater (Watts Bar tailwaters)

(2022 Annual Report)

Description

Area: Due to the uniqueness displayed in “tailwater areas”, a more in-depth survey of this area was determined to be a good management tool into the overall evaluation of this reservoir. However, due to drastic differences in flows, habitat, temperature, clarity, etc. these sampling efforts are reported specifically in relation to this “tailwater area” and not the reservoir as a whole. Conditions in this area can fluctuate drastically from day to day as well as hour to hour, thus possibly effecting survey outcomes. It is therefore advised that established long time trends be utilized and considered before making any management observations or recommendations.

This study area is geographically located between Watts Bar Dam and the first boat access area (Pinhook, Meigs Co.).

Counties: Meigs and Rhea

Summary:

Sportfish surveys: Typically, these headwater electrofishing surveys are conducted in the fall of the year. White bass were the most represented gamefish during an electrofishing survey taken at the Chickamauga headwaters in 2022. Overall CPUE for multiple species sampled were the highest recorded in past surveys dating back to the year 2010 (see table below). All three native species of black bass were represented in these surveys. The main forage fish, consisting of gizzard and threadfin shad, were observed and appear to be doing well. Good fishing opportunities exist in this area currently. Walleye and striped bass are a focus for many anglers in this section of the reservoir. No sportfish surveys, in this headwater section, were conducted in 2020 or 2021.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory the TN River reservoirs in Region 3 for their presence. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These ongoing surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam (downriver from Chickamauga Dam) which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for data collections and possible observations. TVA also helped with these surveys initially (summer of 2020) with their own timing and methodologies. A summary of TWRA’s efforts for 2021 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/16/2022 and continuing through 8/23/2022 in Chickamauga Reservoir below Watts Bar Dam. Boat electrofishing was used to survey tailwater areas directly below Watts Bar Dam. The general survey area was located from Pinhook Access Ramp upstream to Watts Bar Dam. One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 1.45 km below the dam moving upstream. The face of the dam and the lock chambers were also surveyed. Standard electrofishing settings were used. Temperatures ranged from 11 to 29 C, the average discharge was 19,034 cfs, and the average tailwater elevation was 682.72 ft. Total surveillance effort in 2022 was 10.45 hours. An additional 5.16 hours of effort below Chickamauga Dam was conducted while electrofishing for hatchery brood fish on three separate occasions in mid-March 2022. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.

At least 12 different species were observed in Chickamauga Reservoir in 2022: Largemouth Bass, Smallmouth Bass, Gizzard Shad, Threadfin Shad, Striped Bass, Skipjack Herring, Gar spp., Lake Sturgeon, Buffalo spp., Sucker spp., Paddlefish, and Freshwater Drum.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys (creel) and brood gamefish collections in Tennessee River reservoirs. Furthermore, a roving creel clerk was surveying on Chickamauga three days per week in 2021. The creel clerk interacts with anglers throughout the reservoir and has had no sightings or reports of any Invasive Carp in Chickamauga. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Furthermore, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020, 2021, and 2022.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014*	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	0.95	-	-	-	1.16	-	-	-	10.98	4.36
Density (fall electrofishing)											
PSD	-	100.0	-	-	-	93.0	-	-	-	87.0	93.3
RSD (preferred)	-	91.0	-	-	-	64.0	-	-	-	60.0	71.7
CPUE (total)	-	15.6	-	-	-	18.6	-	-	-	36.9	23.7
CPUE ≥ Stock	-	17.7	-	-	-	17.4	-	-	-	25.9	20.3
CPUE ≥ MLL (15-inches)	-	12.2	-	-	-	10.9	-	-	-	16.2	13.1
Condition (fall electrofishing)											
Stock to Quality	-	110.2	-	-	-	109.1	-	-	-	134.5	117.9
Quality to Preferred	-	95.4	-	-	-	96.1	-	-	-	99.6	97.0
Preferred to Memorable	-	111.7	-	-	-	106.9	-	-	-	96.3	105.0
Memorable to Trophy	-	112.4	-	-	-	105.5	-	-	-	-	109.0

* Note: Sample taken during genetic sampling period

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	4.72	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	33.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	17.0	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	1.6	-
CPUE (total)	-	-	-	-	-	-	-	-	-	15.5	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	10.7	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	1.6	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	1.8	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	77.3	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	99.1	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	73.8	-

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	1.8	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-

White Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)											
PSD	-	-	-	97.0	-	-	-	-	-	100.0	98.5
RSD (preferred)	-	-	-	94.0	-	-	-	-	-	98.0	96.0
CPUE (total)	-	-	-	21.2	-	-	-	-	-	72.5	46.9
CPUE ≥ Stock	-	-	-	21.2	-	-	-	-	-	72.5	46.9
CPUE ≥ Preferred	-	-	-	19.9	-	-	-	-	-	71.0	45.4
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	99.1	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	94.9	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	96.4	-

Striped Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	82.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	9.0	-
CPUE (total)	-	-	-	-	-	-	-	-	-	10.2	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	10.2	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	1.1	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	96.1	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	93.9	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	62.5	-	17.7	-	-	-	10.8	30.3
Threadfin CPUE	-	-	-	149.6	-	526.1	-	-	-	1243.1	639.6

Chickamauga Angler Attitude Surveys (2021)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, average size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

TWRA's Region 3 Reservoir Fish Management sampled the angling public with attitude surveys in 2021 on three reservoirs in Region 3 that creel surveys were conducted (Center Hill, Dale Hollow, and Chickamauga reservoirs). In 2022, the efforts on the TN River chain of reservoirs, moved to Nickajack Reservoir. Therefore, there were no creel surveys conducted on Chickamauga Reservoir in 2022.

Overall "approval" of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to the most recent surveys. We feel confident that this summary of our "angler attitudes" will provide valuable insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

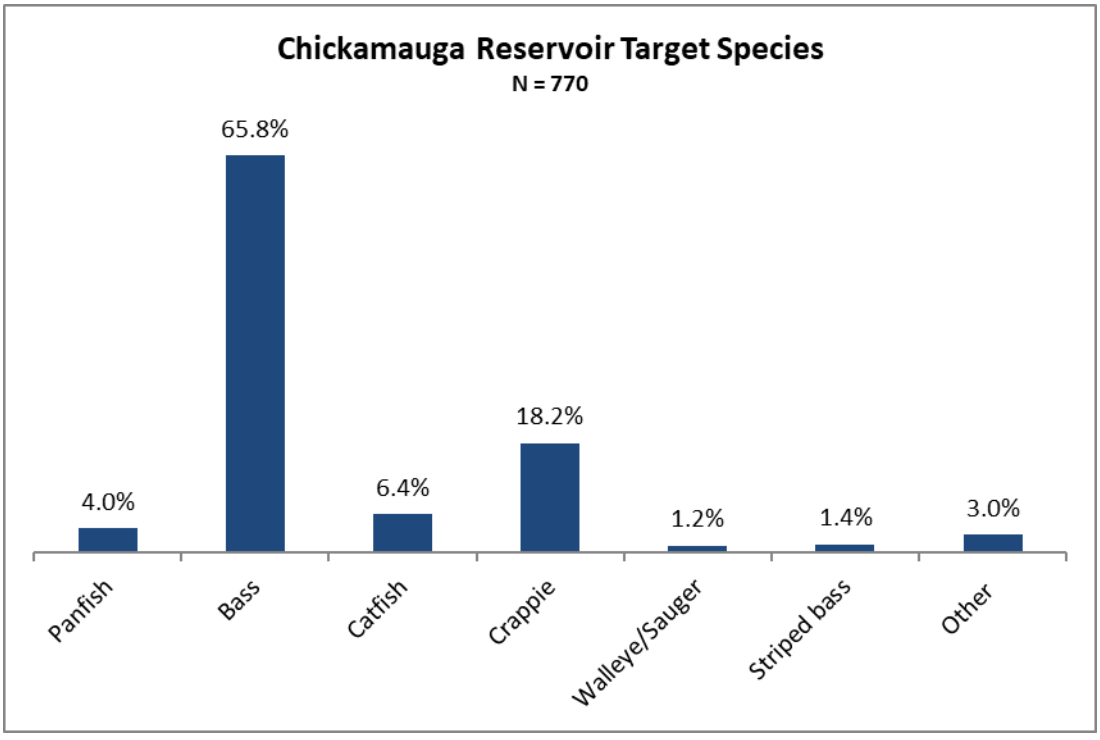
NOTE: Creel interviews in 2021 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing

this data within this annual report. Some exceptions could be realized when comparing it to previous years where these surveys were conducted all 12 months.

No creel surveys were conducted on Chickamauga in 2019 or 2022. The following information is from angler interviews taken in 2021 at Chickamauga Reservoir and is the most current report available at this time.

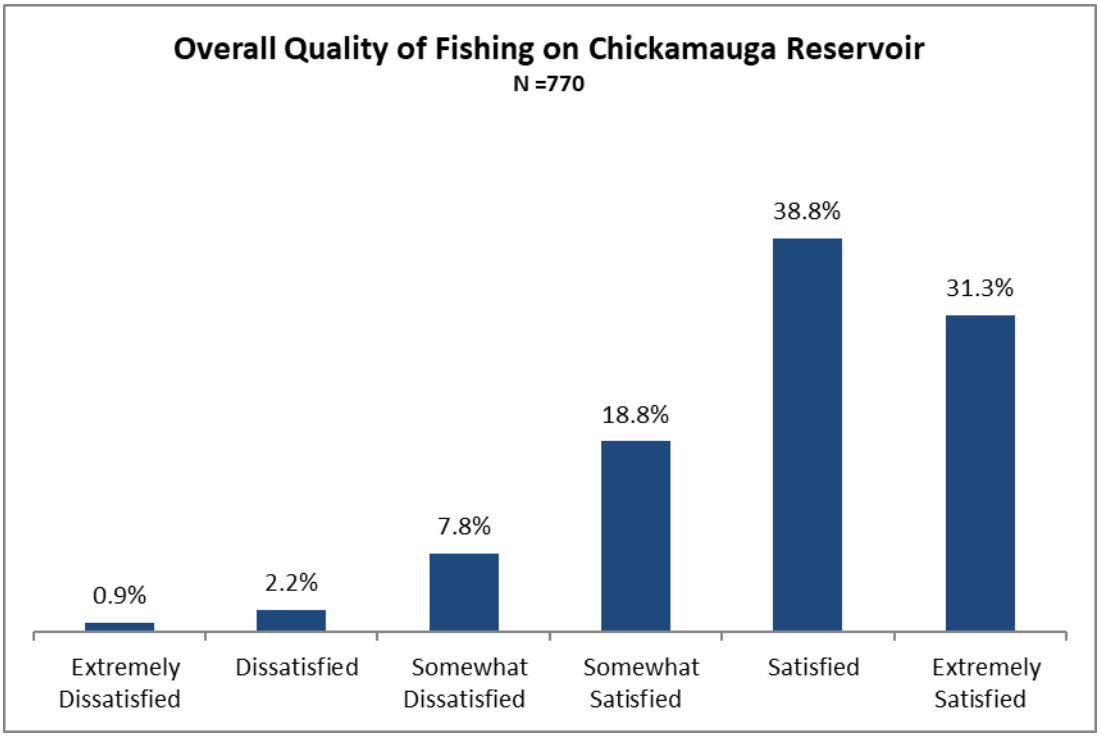
There were a total of 770 anglers, who were fishing at Chickamauga Reservoir, interviewed by a creel clerk for the angler attitude survey in 2021. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Chickamauga was bass (65.8% of creeled anglers) with crappie being a distant second (18.2%) (see graph below).

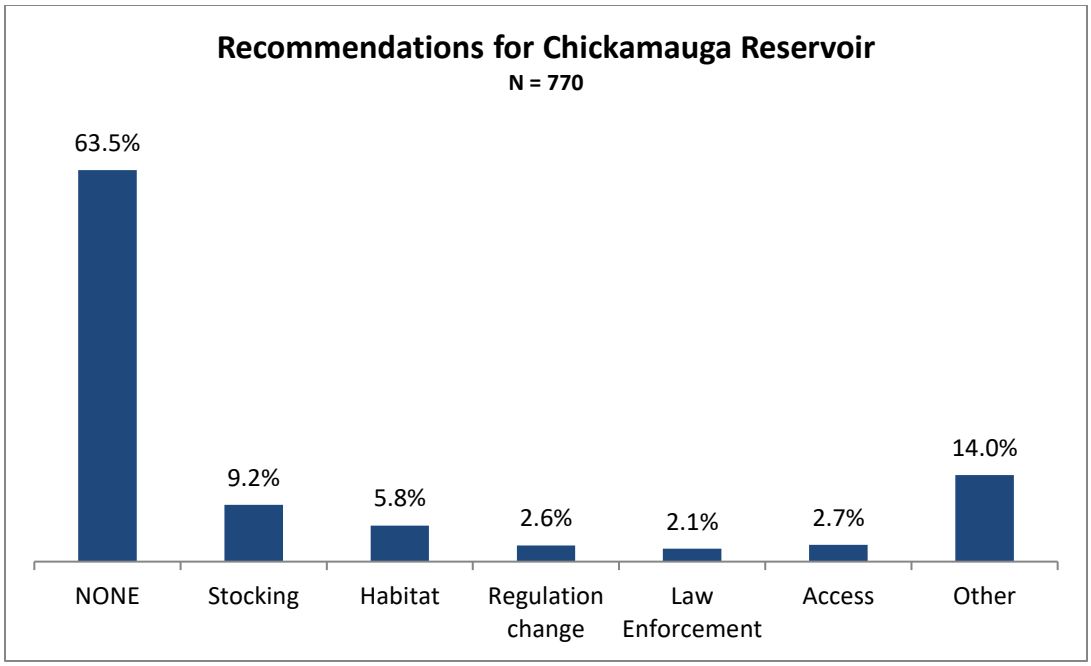


These surveys also revealed that fishermen (n=507) who identified “Bass” as their primary target species, 51.5% of those (261) also fished bass tournaments. On average, these bass tournament fishermen at Chickamauga Reservoir fished an average of 8.5 bass tournaments/year there. This figure is down as compared to previous years, most likely due to the lack of angler interviews conducted in the spring and summer months due to Covid restrictions.

As the graph below depicts, anglers expressed a high satisfaction rating (89.1%) in 2021 overall when asked about the “overall quality of fishing on Chickamauga Reservoir”.



When these anglers, who fish Chickamauga Reservoir, were asked if they had any recommendations for the overall management of Chickamauga Reservoir the large majority (63.5%) had “NONE” (see graph below). “Stocking” and “other” were the categories with the most recommendations of those interviewed who had a concern. Boating access concerns are due in large part to the increased fishing pressure being realized at Chickamauga Reservoir currently. This is due in large part to the national exposure of the great largemouth bass fishing at Chickamauga. A high volume of bass tournaments are present on Chickamauga throughout the year which has overwhelmed the few existing boat ramps at Chickamauga. This situation is further complicated in the winter months when fewer ramps are available due to winter drawdowns leaving some ramps unusable. A Florida largemouth bass (FLMB) stocking program initiated in the year 2000 was the catalyst for the favorable LMB fishing currently experienced at Chickamauga. Crappie fishing here has also been recently ranked high nationally further elevating the influence of anglers at boat ramps. Local anglers have voiced concerns of not having sufficient boat launching sites to facilitate the demand by the angling public. The other concern illustrated in the graph, “stocking”, continues to be a management regime that TWRA implements annually at Chickamauga for a variety of species. Specifically, TWRA stocks FLMB, walleye, and striped bass on a yearly basis into Chickamauga unless TWRA statewide hatcheries realize shortages. These stocked species of fish continue to contribute greatly to the overall fishery at Chickamauga.



Overall, the angler attitudes obtained in 2021 from those fishing at Chickamauga Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA. This high approval rating has been consistent on Chickamauga since these surveys were implemented in the year 2013.

Cordell Hull Reservoir (2022 Annual Report)

Reservoir Facts

Area (acres): 13,920 **Mean Depth (feet):** **Shoreline (miles):** 381

Counties: Smith, Jackson, Clay

Full Pool Elevation (feet-msl): 504 **Winter Pool Elevation (feet-msl):** 499

Dam Completion: 1973

Reservoir Description: Cordell Hull Reservoir is an impoundment on the Cumberland River system and is one of the younger reservoirs when compared to others in the state. Cordell Hull Reservoir is operated by the United States Army Corps of Engineers. This reservoir became a reality in 1973 following the completion of Cordell Hull Dam on Cumberland River mile 313.5 about 5 miles above the city of Carthage, TN. Cordell Hull Reservoir lies within Smith, Jackson, and Clay counties. Towns and communities near Cordell Hull Reservoir are Carthage, Cookeville, Gainesboro, and Celina. At normal summer pool (elevation 504.00) the 72-mile-long reservoir with its 381 miles of shoreline contains 11,960 surface acres of water. During the wintertime, Cordell Hull experiences a drawdown of 5-feet from the summer pool level. Cordell Hull hosts a variety of game fish and opportunities to pursue them. Cordell Hull has varying habitat types (ex. rocky banks, aquatic vegetation, bluffs, points, etc.) as well as great forage bases (ex. gizzard and threadfin shad) that sustain and promote good fisheries. Cordell Hull is in large part riverine with several tributaries and embayments (mostly on mid to lower section) of varying sizes.

Summary: Spring electrofishing surveys were conducted for black bass in Cordell Hull in 2021. These surveys are typically conducted on alternate years thus the next electrofishing survey is planned for the spring of 2023 at Cordell Hull Reservoir. Additionally, a roving creel survey was conducted for the entire year at Cordell Hull in 2017 and most recently in 2022. Before the year 2017, the last creel survey conducted on Cordell Hull was in 2012. Hopefully creel surveys here can be conducted on a minimum of a 5-year rotation. Cordell Hull is stocked annually with striped bass fingerlings raised by TWRA and has also been stocked with crappie and walleye in the recent past and currently (see species tables below).

Status and management of fish species:

Largemouth bass (LMB): Excellent opportunities exist currently for catching largemouth bass in Cordell Hull Reservoir, according to recent spring black bass electrofishing surveys (see largemouth bass table below). A trophy slot limit of 17-23” for LMB at Cordell Hull was removed in 2015, after only being in place for a few years, and replaced with a regulation of 5 lmb/day, 15” minimum length limit (MLL). The trophy slot limit had struggled with public support from the project initiation. Additionally, TWRA’s recent evaluations of the largemouth bass population at Cordell Hull from black bass electrofishing surveys exhibited minimal success. A good forage base of gizzard and threadfin shad have helped sustain this LMB fishery through the years at Cordell Hull. In contrast, beneficial density levels of aquatic vegetation have not remained consistent at Cordell Hull in the past several years. These inconsistencies in aquatic vegetation abundance are due in part to heavy flow regimes during high rainfall events, drought years, and the prolonged effects of the Wolf Creek dam repair project upstream in Kentucky that also influenced water flows. Since much of Cordell Hull Reservoir is riverine, aquatic vegetation is susceptible to eradication due to high flows which uproots vegetation. The opposite is true for drought years which

promote aquatic vegetation growth. Data collected from future TWRA spring electrofishing surveys will continue to help evaluate the LMB fishery at Cordell Hull. The mid-summer seining surveys showed a high yield in 2010 with a CPUE of 22.1 lmb/seine haul, at median levels in 2015 at 13.5 lmb/seine haul, at a ten-year low in 2017 at 0.50 lmb/seine haul and rebounded slightly in 2018 to 4.10 lmb/seine haul. This variation in seine haul CPUE illustrates reproductive success that is highly variable, possibly due to spring water fluctuations during peak spawning times. No seining surveys have been conducted here since 2018. However, overall CPUE for lmb (104.4 lmb/hour) collected during the 2019 spring electrofishing survey was at a ten-year high and admirable when compared to any reservoir in Region 3. These same surveys conducted in 2021 also revealed a high over CPUE of 92.6 largemouth bass/hour. In addition, the substock CPUE for largemouth bass from this same survey was well above average and at a ten year high at a rate of 38.80 substock LMB/hour. If the LMB population densities and their habitat stay in place, a quality LMB fishery should be sustained in Cordell Hull Reservoir for upcoming years. According to the last annual roving creel survey, conducted by TWRA in 2022, fishermen expended an estimated $123,320 in pursuit of “all bass” in Cordell Hull and experienced a catch rate for LMB on the average of 0.50 LMB/hour which is near average when compared to past creel surveys on Cordell Hull Reservoir. The average size of bass harvested has increased in size to an average of 2.59 lbs. (2017) compared to that of the 2012 creel surveys. Due to Covid safety measures, weights were not obtained in the 2022 surveys. Future creel surveys to evaluate the black bass fishery at Cordell Hull are warranted for an overall evaluation of this important fishery.

Smallmouth bass (SMB): Smallmouth bass in Cordell Hull Reservoir are not as prevalent as largemouth bass but their occurrence has remained consistent over the past several years as witnessed by anglers and electrofishing surveys. Smallmouth bass continue to show up in spring electrofishing surveys in specific areas, typically on sloping rocky banks, a preferred habitat of smallmouth bass for spawning. The overall CPUE for the 2019 spring electrofishing survey was 4.8 SMB/hour which is down from 8.2 SMB/hour in like 2017 surveys. No smallmouth bass were collected during the 2018 mid-summer seining samples possibly indicating a poor spawn that year although high catch rates of SMB aren’t usually observed during these surveys at Cordell Hull. No seining surveys have been conducted since 2018. Additionally, no SMB were recorded in the 2022 creel surveys at Cordell Hull. Therefore, Cordell Hull is probably not a destination for smallmouth bass anglers because of low abundance and the location being close to the more popular Dale Hollow Reservoir, but it is anticipated that anglers will have limited possibilities of catching SMB while angling for black bass at Cordell Hull.

Spotted bass (SPB): Spotted bass are not observed in ongoing spring electrofishing data collection surveys. However, pre-impoundment studies showed a population of SPB in rivers (E.g., Roaring River) that would later be incorporated into what is today known as Cordell Hull Reservoir. Possible depletion of preferred spawning areas and habitat due to establishing this reservoir are likely to blame for the apparent absence of spotted bass in Cordell Hull Reservoir.

Crappie (black, white): Crappie fishing in Cordell Hull Reservoir remains average to good overall. According to a year-long roving creel survey conducted in 2022 by TWRA, the average catch rate was 1.11 crappie/hour which was up from these same surveys conducted in 2017. Anglers spent an estimated $33,610 in pursuit of crappie in 2022 at Cordell Hull according to roving creel interviews. Cordell Hull is characterized as being a predominantly white crappie reservoir, most likely due to the consistent turbidity which favors white crappie. However, some “black nose” black crappie and black crappie also appear in anglers’ catches. This is because blacknose crappie were stocked into Cordell Hull Reservoir several years ago by TWRA with fished raised at a hatchery pond located at McClure’s Bend (part of Cordell Hull WMA) and a small pond above Celina, both ponds were adjacent to Cordell Hull Reservoir which allowed direct stocking of these crappie without any transportation. The influence of blacknose crappie genetics at

Cordell Hull, from these stockings, still show up in crappie catches currently at Cordell Hull. Most recently, nearly 60,000 black/blacknose crappie were stocked into Cordell Hull in 2018 and there were also 63,359 black crappie fingerlings stocked there in 2020 by TWRA.

Both fall trapnetting and electrofishing were utilized in 2015 as part of a data collection to evaluate the crappie fishery at Cordell Hull Reservoir. This would allow TWRA fisheries biologists to look at spawning success (trapnetting) as well as population characteristics (electrofishing). White crappie had a minimal representation (0.03 white crappie/net night) during the trapnetting surveys and black crappie were non-existent, reflecting possible poor spawning success for both species of crappie that year. Good numbers of crappie were realized however, during the targeted electrofishing surveys for crappie in 2015 where the CPUE for white crappie (124.6 WC/hr.) were much higher than the black crappie (42.3 BC/hr.). In 2017, another targeted electrofishing survey was conducted at Cordell Hull for crappie. Only white crappie were collected in a representative sample. The overall CPUE for white crappie (41.1 wc/hour) in this 2017 survey were much lower than the 2015 figure of 124.6 wc/hour. It is not unusual for crappie populations in reservoirs to exhibit cyclic densities in yearly abundance as has been recently observed at Cordell Hull. This is typically due to inconsistent spawning success by these species. Fall trapnetting surveys are not conducted on a consistent level at Cordell Hull due to evidence of positive natural recruitment through the years.

Bluegill: Good bluegill fishing opportunities exist for anglers fishing Cordell Hull. Catch rates for “any sunfish” in 2022 were 1.01 sunfish/hour in 2022 which is near average for past creel surveys on Cordell Hull. Past mid-summer seining surveys have been well represented by bluegill from Cordell Hull Reservoir even though they were at a 5-year low in 2017 at 10.6 bluegill/seine haul but that figure increased to 54.4 in 2018 surveys. No seining surveys have been conducted since 2018. Bluegill and longear sunfish continue to exhibit good population densities at Cordell Hull and therefore offer good fishing opportunities.

Sauger: Cordell Hull offers some excellent opportunities for anglers in the pursuit of sauger. Sauger populations are apparently self- sustaining in Cordell Hull since they are not stocked there but remain consistent in angler creels. It is possible however that some sauger migrate upstream via locks in Cordell Hull Dam from neighboring Old Hickory Reservoir which does have an annual sauger stocking program. Cordell Hull is one of the few reservoirs in the state that can boast of such stability when referencing sauger populations. An estimated $69,000 was spent with on trip expenditures in 2012 in pursuit of this fish according to a yearlong roving creel survey and down to $41,900 in 2017 and $40,400 in 2022. Overall catch rates for sauger have remained consistent during the past two creel surveys at Cordell Hull with the most recent catch rate of 0.89 sauger/hour in 2022.

Walleye: A limited amount of walleye are caught in Cordell Hull Reservoir each year. The closely related sauger is more abundant at Cordell Hull and therefore provides a greater opportunity for anglers. The state and world record walleye came from neighboring Old Hickory Reservoir (below Cordell Hull Reservoir) back in 1960 which weighed 25 lbs. Walleye fingerlings were stocked into Cordell Hull during 2014 and 2015 with 113,835 walleye stocked in 2014 and 29,223 walleye stocked in 2015. Another 98,289 walleye fingerlings were stocked in 2021 and 43,549 in 2022. The 2017 creel survey didn’t record any catches of walleye but in the 2022 survey walleye were recorded at a catch rate of 0.19 walleye/hour.

Catfish: Catfishing at Cordell Hull is not as popular as in other reservoirs across the state and in comparison, to other game species of fish within this reservoir. Creel surveys conducted in 2022 showed low catch rates of 0.07 catfish/hour. The 2017 creel surveys expressed an average weight of 2.06 lbs. for catfish caught at Cordell Hull. No weights of catfish were recorded in the 2022 surveys. No other data collections besides creel are utilized to monitor the catfish population at Cordell Hull which is standard for

most reservoirs across the state of Tennessee. Anglers should expect fair success though while pursuing catfish at Cordell Hull.

Striped bass: The state record striped bass weighing 65 lbs. 6 oz. was caught in Cordell Hull Reservoir in the year 2000 by Mr. Ralph H. Dallas. TWRA continues to stock striped bass annually in Cordell Hull Reservoir which is dependent on TWRA hatchery success. In recent times, there were 115,027 striped bass fingerlings stocked into Cordell Hull in 2017 but none were stocked in 2018 or 2020 due to a shortage realized at TWRA hatcheries. There were however 71,637 striped bass fingerlings stocked into Cordell Hull in 2019, 37,968 striped bass fingerlings stocked in 2021, and 45,251 in 2022. Because of the potential for a consistent trophy striped bass fishery at Cordell Hull, TWRA Region 3 Fisheries managers will continue to request these stockings annually. Great numbers of gizzard shad, threadfin shad, and skipjack herring at Cordell Hull continue to provide a forage base very conducive to a trophy striped bass fishery. Skipjack herring are the preferred bait by anglers for striped bass in Cordell Hull Reservoir. Past work on the Wolf Creek Dam in Kentucky, on the upper end of Cordell Hull Reservoir, changed flow regimes within the reservoir. It is thought that this also has had immediate consequences on striped bass behaviors due to changes in river flow regimes and the dependence on thermal refuges by striped bass thus affecting seasonal migrations. This Wolf Creek Dam repair project is now complete and normal reservoir operations have resumed. However, through fishing reports, it is realized that several striped bass stocked by TWRA are making the Ky sections of Cordell Hull their destination. This knowledge should be incorporated regarding future stocking and management decisions regarding striped bass at Cordell Hull. Attempts to gillnet for striped bass have been challenging over past years therefore it is important to gather creel info, when possible, to help evaluate the striped bass population, pressure on this resource, and estimated harvest. Because of TWRA's annual stocking program of striped bass at Cordell Hull, excellent opportunities for angling should persist and at a consistent level. The roving creel survey conducted in 2017 showed an increase in fishing pressure (nearly double) as compared to that concluded in the same 2012 creel survey. Catch rates for striped bass were low in the 2022 creel surveys at 0.05/hour. Some striped bass fishing guides refused to be interviewed by our creel clerk, so catch rates and some other info (i.e., effort, socioeconomics, etc.) are not as robust as they could have been with cooperation from these groups who are benefiting from these stocked resources. According to the 2022 creel survey there was an estimated $159,140 expended in pursuit of this fish. Creel surveys will most likely continue to be the best way to evaluate the striped bass fishery at Cordell Hull as well as the stocking success of striped bass fingerlings that are stocked annually into these waters.

Lakewide Angling Summary

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Angler Hrs.	-	-	-	-	164,271	-	-	-	-	83,314	123,793
Angler Hrs./Acre	-	-	-	-	13.8	-	-	-	-	6.0	9.9
Angler Trips	-	-	-	-	34,372	-	-	-	-	19,065	26,719
Value of Fishery (Trip expenitures-creel)											
All Species	-	-	-	-	$928,150	-	-	-	-	$476,290	$702,220

NOTE: *-10 month survey

Black Bass, Cordell Hull Reservoir

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
All Black Bass (hrs.)	-	-	-	-	85,966	-	-	-	-	34,852	60,409
(hrs./acre)	-	-	-	-	6.20	-	-	-	-	2.50	4.35
Any Black Bass (hrs.)	-	-	-	-	81,868	-	-	-	-	12,713	47,291
(hrs./acre)	-	-	-	-	5.90	-	-	-	-	0.91	3.41
Largemouth Bass (hrs.)	-	-	-	-	3,956	-	-	-	-	20,918	12,437
(hrs./acre)	-	-	-	-	0.00	-	-	-	-	1.50	0.75
Smallmouth Bass (hrs.)	-	-	-	-	142	-	-	-	-	1,221	681.5
(hrs./acre)	-	-	-	-	0.00	-	-	-	-	0.09	0.05
Spotted Bass (hrs.)	-	-	-	-	-	-	-	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	-	-
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	0.60	-	-	-	-	0.54	0.57
Non-Tournament Catch Rate (cre	-	-	-	-	0.40	-	-	-	-	0.57	0.49
Value of Fishery (Trip Expenditures)											
All Black Bass	-	-	-	-	$334,820	-	-	-	-	$123,320	$229,070
Any Black Bass	-	-	-	-	$319,670	-	-	-	-	$42,660	$181,165
Largemouth Bass	-	-	-	-	$14,800	-	-	-	-	$77,570	$46,185
Smallmouth Bass	-	-	-	-	$350	-	-	-	-	$3,090	$1,720
Spotted Bass	-	-	-	-	-	-	-	-	-	-	-

NOTE: * - 10 month creel survey

Largemouth Bass, Cordell Hull Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CPUE (spring electrofishing)	-	0.67	-	5.60	16.40	-	32.60	-	38.80	-	18.81
CPUE (mid-summer seine)	3.50	3.90	13.50	2.50	0.60	4.10	-	-	-	-	4.68
Density (spring electrofishing)											
PSD	-	64.4	-	58.6	67.0	-	67.0	-	59.0	-	63.2
RSD (preferred)	-	22.2	-	35.1	22.0	-	31.0	-	26.0	-	27.3
CPUE (total)	-	43.8	-	75.2	86.4	-	104.4	-	92.6	-	80.5
CPUE ≥ Stock	-	43.1	-	69.6	70.0	-	71.8	-	53.8	-	61.7
CPUE ≥ MLL (15-inches)	-	9.6	-	24.4	19.4	-	22.0	-	13.8	-	17.8
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	155	-	155
Length Age-3	-	-	-	-	-	-	-	-	295	-	295
Condition (spring electrofishing)											
Stock to Quality	-	85.5	-	93.7	93.8	-	97	-	95.1	-	93.0
Quality to Preferred	-	85.9	-	93	93.7	-	98.2	-	93.5	-	92.9
Preferred to Memorable	-	92.6	-	93.9	92.8	-	102.4	-	96.4	-	95.6
Memorable to Trophy	-	99.6	-	102.2	93.8	-	101.7	-	89.2	-	97.3
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	31%	-	31%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	0.58	-	-	-	-	0.50	0.54
Catch Rate, num./hr. (any black bass)	-	-	-	-	0.59	-	-	-	-	0.70	0.65
Harvest Rate, num./hr. (any black bass)	-	-	-	-	0.06	-	-	-	-	0.04	0.05
% Released	-	-	-	-	83.9%	-	-	-	-	88.7%	86.3%
Mean Weight	-	-	-	-	2.59	-	-	-	-	-	2.59

Note: * - 10 month creel survey

Smallmouth Bass, Cordell Hull Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	0.40	1.40	-	0.40	-	0.20	-	0.60
CPUE (mid-summer seine)	0.10	0.10	0.30	1.00	0.00	0.00	-	-	-	-	0.25
Density (spring electrofishing)											
PSD	-	-	-	75.0	50.0	-	68.0	-	65	-	64.5
RSD (preferred)	-	-	-	40.0	21.0	-	18.0	-	35	-	28.5
CPUE (preferred)	-	-	-	0.6	1.4	-	0.8	-	1.2	-	1.0
CPUE (total)	-	1.6	-	5.0	8.2	-	4.8	-	3.6	-	4.6
CPUE ≥ Stock	-	-	-	4.0	6.8	-	4.4	-	3.4	-	4.7
CPUE ≥ Preferred	-	-	-	1.6	1.8	-	0.8	-	1.2	-	1.4
CPUE ≥ MLL (18-inches)	-	-	-	0.6	0.4	-	0.0	-	-	-	0.3
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	244	-	244
Condition (spring electrofishing)											
Stock to Quality	-	-	-	109.2	87.8	-	122.6	-	87.3	-	101.7
Quality to Preferred	-	-	-	82.1	94.6	-	97.2	-	83.8	-	89.4
Preferred to Memorable	-	-	-	80.0	86.6	-	80.9	-	79.7	-	81.8
Memorable to Trophy	-	-	-	72.6	68.6	-	-	-	79.0	-	73.4
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	0.38	-	-	-	-	0.00	0.19
Catch Rate, num./hr. (any black bass)	-	-	-	-	0.59	-	-	-	-	0.7	0.65
Harvest Rate, num./hr. (any black bass)	-	-	-	-	0.06	-	-	-	-	0.04	0.05
% Released	-	-	-	-	93.6%	-	-	-	-	100.0%	96.8%
Mean Weight	-	-	-	-	2.20	-	-	-	-	-	2.20

Note: * - 10 month creel survey

Black Crappie, Cordell Hull Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	100.0	-	-	-	-	-	-	-	100.0
RSD (preferred)	-	-	46.0	-	-	-	-	-	-	-	46.0
CPUE (total)	-	0.4	42.3	0.2	-	-	-	-	-	-	14.3
CPUE ≥ Stock	-	-	100.00	-	-	-	-	-	-	-	100.0
CPUE ≥ MML (10 inches)	-	-	19.2	-	-	-	-	-	-	-	19.2
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	5,248	-	63,359	-	-	34,304
#/Acre	-	-	-	-	-	0.4	-	4.6	-	-	2.5
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	12,555	-	-	-	-	7,714	10,135
Angler Hrs./Acre	-	-	-	-	0.9	-	-	-	-	0.6	0.8
Fishing Success (creel)											
Catch Rate (any crappie)	-	-	-	-	0.67	-	-	-	-	1.11	0.89
Harvest Rate (any crappie)	-	-	-	-	0.24	-	-	-	-	0.56	0.40
% Released (black crappie)	-	-	-	-	58.6%	-	-	-	-	0	29.3%
Mean Weight (black crappie)	-	-	-	-	0.83	-	-	-	-	-	0.83
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	-	-	-	$19,590	-	-	-	-	$33,610	$26,600

Note: * - 10 month creel survey

Blacknose Crappie, Cordell Hull Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	100.0	-	-	-	-	-	-	-	100.0
RSD (preferred)	-	-	0.0	-	-	-	-	-	-	-	0.0
CPUE (total)	-	0.4	15.4	-	-	-	-	-	-	-	7.9
CPUE ≥ Stock	-	-	100.0	-	-	-	-	-	-	-	100.0
CPUE ≥ MML (10 inches)	-	-	4.6	-	-	-	-	-	-	-	4.6
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	54,390	-	-	-	-	54,390
#/Acre	-	-	-	-	-	4.6	-	-	-	-	4.6
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	12,555	-	-	-	-	7,714	10,135
Angler Hrs./Acre	-	-	-	-	0.9	-	-	-	-	0.6	0.8
Fishing Success (creel)											
Catch Rate (any crappie)	-	-	-	-	0.67	-	-	-	-	1.11	0.89
Harvest Rate (any crappie)	-	-	-	-	0.24	-	-	-	-	0.56	0.40
% Released (blacknose crappie)	-	-	-	-	50.7%	-	-	-	-	66.4%	58.6%
Mean Weight (blacknose crappie)	-	-	-	-	0.82	-	-	-	-	-	0.82
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	-	-	-	$19,590	-	-	-	-	$33,610	$26,600

Note: * - 10 month creel survey

White Crappie, Cordell Hull Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	81.5	99.4	-	97.0	-	-	-	-	-	92.6
RSD (preferred)	-	59.3	84.0	-	69.0	-	-	-	-	-	70.8
CPUE (total)	-	11.7	124.6	3.8	41.1	-	1.0	-	-	-	36.4
CPUE ≥ Stock	-	11.7	124.6	-	41.1	-	-	-	-	-	59.1
CPUE ≥ MML (10 inches)	-	7.00	104.6	-	19.1	-	-	-	-	-	43.6
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	85.1	-	-	107.0	-	-	-	-	-	96.1
Quality to Preferred	-	85.7	-	-	108.0	-	-	-	-	-	96.9
Preferred to Memorable	-	87.1	-	-	103.6	-	-	-	-	-	95.4
Memorable to Trophy	-	96.3	-	-	155.7	-	-	-	-	-	126.0
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	12,555	-	-	-	-	7,714	10,135
Angler Hrs./Acre	-	-	-	-	0.9	-	-	-	-	0.6	0.8
Fishing Success (creel)											
Catch Rate (any crappie)	-	-	-	-	0.67	-	-	-	-	1.11	0.89
Harvest Rate (any crappie)	-	-	-	-	0.24	-	-	-	-	0.56	0.40
% Released (white crappie)	-	-	-	-	48.6%	-	-	-	-	34.7%	41.7%
Mean Weight (white crappie)	-	-	-	-	0.81	-	-	-	-	-	0.81
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	-	-	-	$19,590	-	-	-	-	$33,610	$26,600

Note: * - 10 month creel survey

Sauger, Cordell Hull Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours	-	-	-	-	18,682	-	-	-	-	9,216	13,949
Angler Hours/Acre	-	-	-	-	1.3	-	-	-	-	0.7	1.0
Fishing Success (creel)											
Catch Rate (intended)	-	-	-	-	0.62	-	-	-	-	0.89	0.76
Harvest Rate (intended)	-	-	-	-	0.26	-	-	-	-	0.21	0.24
% Released	-	-	-	-	48.6%	-	-	-	-	79.6%	64.1%
Mean Weight	-	-	-	-	1.67	-	-	-	-	-	1.67
Value of Fishery (Trip Expenditures-creel)											
Sauger	-	-	-	-	$44,900	-	-	-	-	$40,400	$42,650

Note: * - 10 month creel survey

Walleye, Cordell Hull Reservoir

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	0.1	-	-	-	-	-	-	-	-	0.1
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	113,835	29,223	-	-	-	-	-	98,289	43,549	71,224
#/Acre	-	8.2	2.1	-	-	-	-	-	7.1	3.1	5.1
Angler Pressure (creel)											
Angler Hrs.	-	-	-	-	2,736	-	-	-	-	1,140	1,938
Angler Hrs./Acre	-	-	-	-	0.2	-	-	-	-	0.01	0.11
Fishing Success (creel)											
Catch Rate (intended)	-	-	-	-	0.00	-	-	-	-	0.19	0.10
Harvest Rate (intended)	-	-	-	-	0.00	-	-	-	-	0.14	0.07
% Released	-	-	-	-	52.6%	-	-	-	-	69.2%	60.9%
Mean Weight	-	-	-	-	1.53	-	-	-	-	-	1.53
Value of Fishery (Trip Expenditures - creel)											
Walleye	-	-	-	-	$7,870	-	-	-	-	$8,850	$8,360

Note: * - 10 month creel survey

White Bass, Cordell Hull Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours (white bass)	-	-	-	-	7,245	-	-	-	-	2,126	4,686
Angler Hours/Acre	-	-	-	-	0.5	-	-	-	-	0.2	0.4
Fishing Success (creel)											
Catch Rate (white bass)	-	-	-	-	0.64	-	-	-	-	0.90	0.77
Harvest Rate (white bass)	-	-	-	-	0.64	-	-	-	-	0.36	0.50
% Released (white bass)	-	-	-	-	4.8%	-	-	-	-	86.3%	45.6%
Mean Weight (white bass)	-	-	-	-	0.86	-	-	-	-	-	0.86
Value of Fishery (Trip expenditures-creel)											
White Bass	-	-	-	-	$15,790	-	-	-	-	$12,190	$13,990

Note: * - 10 month creel survey

Striped Bass, Cordell Hull Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	0.1	-	-	-	-	-	-	0.1
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-2	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	75,559	86,015	47,161	65,918	115,007	-	71,637	-	37,968	45,251	68,065
#/Acre	5.4	6.2	3.4	5.5	8.3	-	5.2	-	2.7	3.3	5.0
Angling Pressure (creel)											
Angler Hours	-	-	-	-	5,574	-	-	-	-	7,335	6,455
Angler Hours/Acre	-	-	-	-	0.4	-	-	-	-	0.5	0.5
Fishing Success (creel)											
Catch Rate (intended)	-	-	-	-	0.02	-	-	-	-	0.05	0.04
Harvest Rate (intended)	-	-	-	-	0.01	-	-	-	-	0	0.01
% Released	-	-	-	-	71.7%	-	-	-	-	100.0%	85.9%
Mean Weight	-	-	-	-	18.5	-	-	-	-	-	18.5
Value of Fishery (Trip Expenditures-creel)											
Striped Bass	-	-	-	-	$115,280	-	-	-	-	$159,140	$137,210

Note: * - 10 month creel survey

Sunfish, Cordell Hull Reservoir

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Bluegill CPUE (mid-summer seine)	22.90	56.90	87.40	30.60	10.60	54.40	-	-	-	-	43.80
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	-	-	-	9,081	-	-	-	-	5,050	7,066
Angler Hrs./Acre	-	-	-	-	0.7	-	-	-	-	0.4	0.6
Fishing Success (creel)											
Catch Rate (any sunfish)	-	-	-	-	1.30	-	-	-	-	1.01	1.16
Harvest Rate (any sunfish)	-	-	-	-	0.53	-	-	-	-	0.26	0.40
% Released (bluegill)	-	-	-	-	39.3%	-	-	-	-	100.0%	69.7%
Mean Weight (bluegill)	-	-	-	-	0.34	-	-	-	-	-	0.34
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	-	-	-	-	$17,460	-	-	-	-	$17,630	$17,545

Note: * - 10 month creel survey

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Redear CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Redear CPUE (electrofishing)	-	-	-	-	-	-	4.20	-	2.00	-	3.10
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	-	-	-	9,081	-	-	-	-	5,050	7,066
Angler Hrs./Acre	-	-	-	-	0.7	-	-	-	-	0.4	0.5
Fishing Success (creel)											
Catch Rate (any sunfish)	-	-	-	-	1.30	-	-	-	-	1.01	1.16
Harvest Rate (any sunfish)	-	-	-	-	0.53	-	-	-	-	0.26	0.40
% Released (redear)	-	-	-	-	-	-	-	-	-	0	0
Mean Weight (redear)	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	-	-	-	-	$17,460	-	-	-	-	$17,630	$17,545

Note: * - 10 month creel survey

Catfish, Cordell Hull Reservoir

Catfish

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Angler Hrs. (all catfish)	-	-	-	-	9,377	-	-	-	-	5,340	7,359
Angler Hrs./Acre	-	-	-	-	0.7	-	-	-	-	0.4	0.6
Fishing Success (creel)											
Catch Rate (any catfish)	-	-	-	-	0.51	-	-	-	-	0.07	0.29
Harvest Rate (any catfish)	-	-	-	-	0.50	-	-	-	-	0.07	0.29
% Released (channel)	-	-	-	-	33.0%	-	-	-	-	16.5%	24.8%
Mean Weight (channel)	-	-	-	-	2.06	-	-	-	-	-	2.06
Value of Fishery (Trip Expenditures - creel)											
All Catfish	-	-	-	-	$26,400	-	-	-	-	$32,640	$29,520

Note: * - 10 month creel survey

Shad, Cordell Hull Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	5.2	-	5.2
Gizzard CPUE	-	119.2	-	84.7	76.3	-	46.6	-	45.8	-	74.5
Threadfin CPUE	-	13.2	-	0.6	57.1	-	18.6	-	15.6	-	21.0

Lake Sturgeon, Cordell Hull Reservoir

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	630	1,911	4,615	-	5,329	2,746	3,046
#/Acre	-	-	-	-	0.05	0.14	0.33	-	0.38	0.20	0.22

Habitat Enhancement, Cordell Hull Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Fish Attractors	None		

Water Quality Monitoring, Cordell Hull Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	none taken	none taken
Dissolved Oxygen	none taken	none taken
PH	none taken	none taken
Conductivity	none taken	none taken

Cordell Hull Angler Attitude Surveys (2022)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, average size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

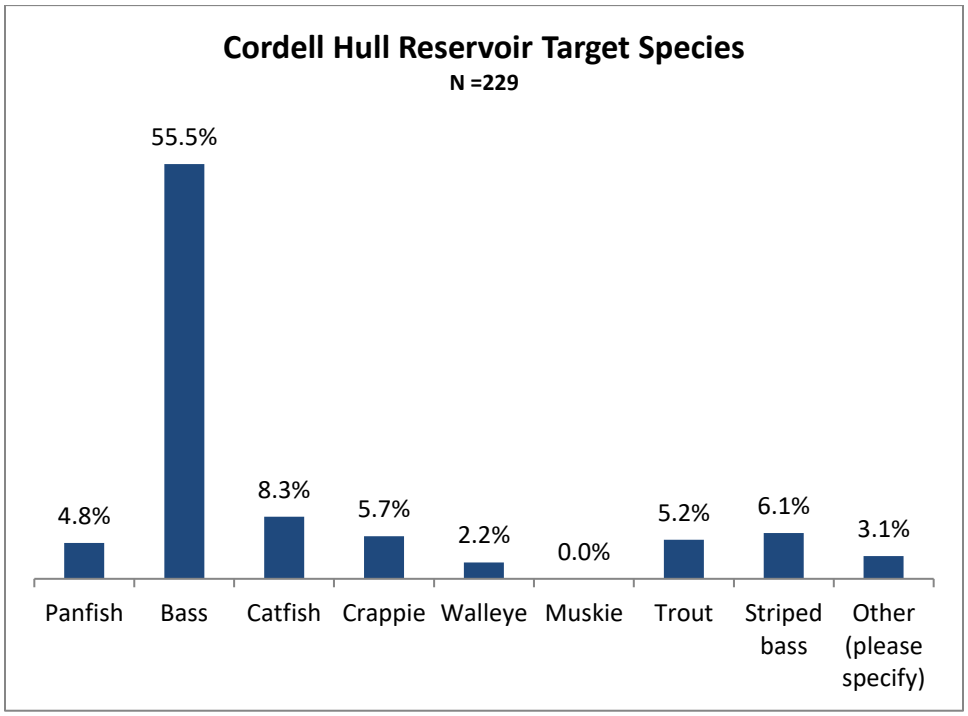
TWRA sampled our angling public with attitude surveys in 2022 on two reservoirs in Region 3 that creel surveys were conducted (Cordell Hull and Nickajack reservoirs). NO creel survey has been conducted at Cordell Hull since 2017. Overall “approval” of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to these 2022 surveys. We feel confident that this summary of our “angler attitudes” will provide valuable insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

A year-long, roving creel survey was conducted on Cordell Hull in 2022. The last roving creel survey there was in 2017. Therefore, the results from the 2022 Angler Attitude Survey conducted at Cordell Hull Reservoir are as follows:

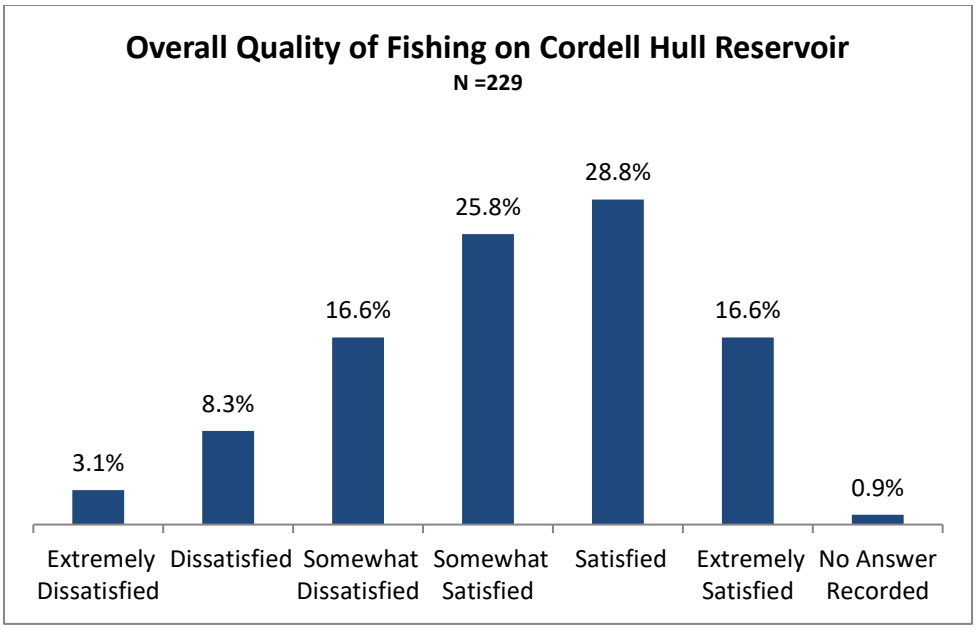
There were a total of 255 anglers who were fishing at Cordell Hull Reservoir interviewed by a creel clerk for the angler attitude survey in 2022. As duplicated interviews with the same person were removed from the 255 total, there were a total of 229 interviews used to gather data. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Cordell Hull was bass (55.5%) with catfish (8.3%) being a distant second followed closely by crappie anglers (5.7%), see graph below.

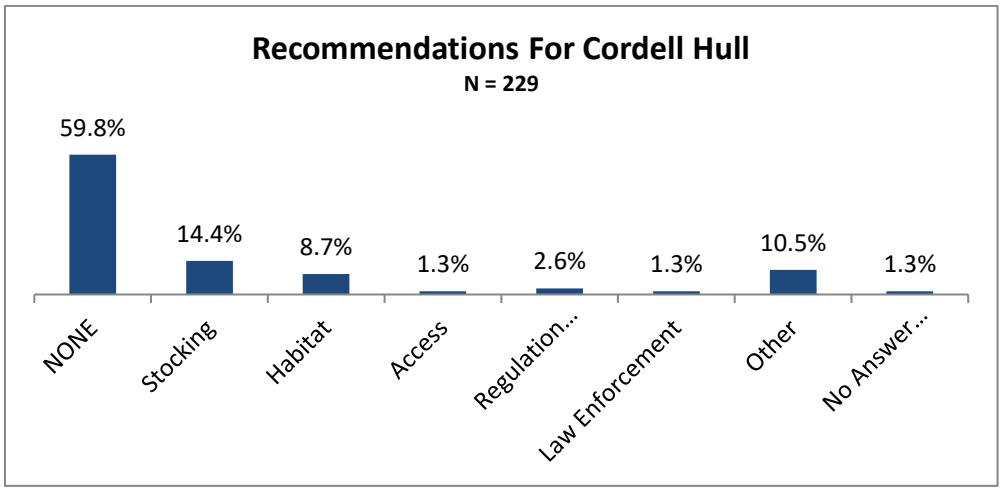


These surveys also revealed that fishermen (n=127) who identified “Bass” as their primary target species, 35.4% of those (n=4.5) also fished bass tournaments. On average, these bass tournament fishermen at Cordell Hull Reservoir fished an average of 12.4 bass tournaments/year which is down slightly from the 2017 surveys of 13.7 tournaments/year.

As the graph below depicts, anglers expressed an overall satisfaction rate of 71.2% when asked about the “overall quality of fishing on Cordell Hull Reservoir”. This was figure was down from the 2017 survey in which 93.4% expressed a satisfactory rating.



When these anglers who fish Cordell Hull Reservoir were asked if they had any recommendations for the overall management of Cordell Hull Reservoir the majority (59.8%) had “NONE” (see graph below). The request for “stocking” (14.4%) was of the greatest concern which included “stocking more crappie” and “stocking more fish” in general. In recent years, black crappie, walleye, and striped bass have been stocked into Cordell Hull (see species tables in this report).



Overall, the angler attitudes obtained in 2022 from those fishing at Cordell Hull Reservoir are ones that exhibit an overall approval for the current fish management of this reservoir by TWRA. Hopefully, another annual roving creel survey will be conducted at Cordell Hull soon (~5 yrs.).

Dale Hollow Reservoir (2022 Annual Report)

Reservoir Facts

Area (acres): 27,700 **Mean Depth (feet):** **Shoreline (miles):** 620

Counties: Clay, Pickett, Overton, and Fentress Counties, TN also in Clinton and Cumberland Counties, KY.

Full Pool Elevation (feet-msl): 651 **Winter Pool Elevation (feet-msl):** 631

Dam Completion: 1943

Summary:

Dale Hollow Reservoir was created in 1943 by the completion of Dale Hollow Dam on the Obey River under the authority of the US Army Corps of Engineers (USACE) who is also the current operating authority of the dam. Dale Hollow Dam is located approximately three miles east of Celina, Tennessee on the Obey River, 7.3 miles above its juncture with the Cumberland River at river mile 380.0. The dam impounds a length of 61 miles of the Obey River with 620 miles of shoreline, and 27,700 surface acres of water. Dale Hollow Reservoir encompasses Clay, Pickett, Overton, and Fentress counties in Tennessee and Clinton and Cumberland counties in Kentucky. Dale Hollow has long been home to the famous state record (and world record) smallmouth bass caught in 1955 by Mr. D. L. Hayes which weighed 11lbs. and 15 ounces. This world class smallmouth bass continues to captivate the thoughts of anglers regarding the reality and possibilities of what a great smallmouth bass fishery exists at Dale Hollow.

NOTE: Creel interviews in 2021 were once again compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program although pressure counts were performed at Dale Hollow during these two months. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions could be realized when comparing it to previous years where these surveys were conducted all 12 months. No creel survey was conducted at Dale Hollow in 2022. A year-long roving creel survey at Dale Hollow is anticipated for 2023.

Status and management of fish species:

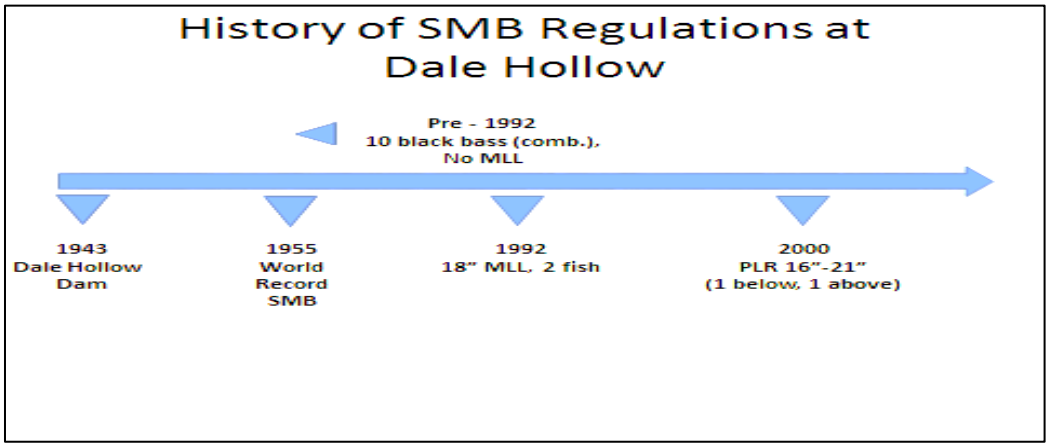
Largemouth bass (LMB): Fishing success for largemouth bass has remained stable over the past years at Dale Hollow and at an elevated status overall. However, according to a roving creel survey at Dale Hollow in 2019, catch rates for LMB by anglers were the lowest when compared to the past ten years at a catch rate of 0.19 LMB/hour. That same catch rate rebounded in 2020 to 1.13 LMB/hr., the highest in the past ten years (see Table below). The average weight of harvested LMB in 2020 was 2.83 lbs. which is slightly above the ten-year average. The presence of various species of aquatic vegetation and available forage have greatly contributed to promoting and sustaining this fishery through the years. Of concern for this population are the high values for PSD and RSD 15 values for LMB in Dale Hollow Reservoir which indicates a population heavily weighted by larger fish and possible recruitment problems. This unbalance as displayed by PSD and RSD values has been consistent in Dale Hollow over the past three decades.

Spring electrofishing surveys were conducted at Dale Hollow in 2021 and are also scheduled there for the spring of 2023. Spring electrofishing surveys are typically conducted every other year at Dale Hollow. Results from the spring electrofishing surveys for LMB at Dale Hollow in 2015, 2017, and 2019 were exceptional on many levels. For example, the overall CPUE for LMB was 32.7 LMB/hour in 2015 and 32.6 LMB/hour in 2017, 36.4 LMB/hour in 2019 and to a ten year high in 2021 at 41.4 LMB/hour. The ten-year average CPUE for all sizes is 33.6 LMB/hour. Overall, these recent figures were by far the highest catch rates from electrofishing in the past ten years (see Table below). The CPUE (25.8 LMB/hour) for LMB ≥ 15", which is the minimum length limit (MLL) for LMB at Dale Hollow, was also the highest figure as compared over the past 10 years. Substock CPUE recorded in the 2019 spring electrofishing survey was the lowest in the past ten years with a value of 0.38 LMB/hour possibly signaling a poor year class. However, this same figure was up to 1.60 substock LMB/hour in 2021 which is above the ten-year average. The mid-summer seining surveys, which are used to aid in evaluation of spawning success, showed a catch rate of 0.60 LMB/seine haul in 2018 which is about average over the past 10 years. No seining surveys have been conducted since 2018. Hopefully the right conditions will remain in place to sustain and enhance this vibrant largemouth bass population that is currently in place at Dale Hollow.

Smallmouth bass (SMB): Decades after Dale Hollow Reservoir was created it continues to be a destination for many anglers, both in and out of state, who are in pursuit of great SMB fishing opportunities. The state/world record smallmouth bass caught in 1955 at Dale Hollow by David Hayes weighing 11lb. 15oz. still stands today. This world record smallmouth bass was caught only 12 years after Dale Hollow Dam was complete in 1943 and thus Dale Hollow Reservoir established. This record fish got all the benefits that a new, productive reservoir had to offer. Smallmouth bass anglers at Dale Hollow consistently verify their long-time commitment and support of the smallmouth bass fishery at Dale Hollow as is evident by the trips and expenditures recorded in the pursuit of smallmouth bass there. Creel surveys lend evidence to the facts (see table below) regarding estimated expenditures by anglers in pursuit of SMB at Dale Hollow.

As with any species among varying reservoirs, the success of the SMB population at Dale Hollow is dependent upon a multitude of circumstances and influences, some of which are controllable (E.g., fishing regulations) and some of which are not (E.g., environmental factors, fishing pressure). Only three major smallmouth bass fishing regulations have governed this fishery at Dale Hollow since the reservoir was created (See chart below).

Listed below are the regulation installations regarding smallmouth bass management at Dale Hollow:



Listed below are the most notable events regarding SMB regulations at Dale Hollow:

- **Pre 1992:** 10 black bass in combo (spotted bass, smallmouth bass, largemouth bass) daily creel limit, No minimum length limit (MLL).
- **1986:** Special survey conducted at the request of some of the Dale Hollow boat dock owners concerning the proposition of an 18-inch minimum size limit for smallmouth bass. Of 805 fishermen that were interviewed, 675 (83.9%) were opposed to the 18" minimum size limit and 130 (16.1%) were in favor of the proposal, thus no action was taken on the 18" minimum size limit. This would be re-visited in 1992.
- **1992**: Due to changes in the SMB population and public opinion, a new SMB regulation of 2 SMB/18" minimum was implemented. A public survey showed a majority support with 69.7% of creeled fishermen between March 1, 1991, to September 30, 1991, supported this regulation. Also, a petition delivered to the Region 3 office on September 16, 1991, had ~800 signatures in support of this regulation citing a decrease in "6 lb." size bass (largemouth and smallmouth) because of presumed "heavy fishing pressure". The original proposal by TWRA was 1 SMB per day/18" minimum.
- **2000**: SMB protected length limit (PLR, Protected Length Range 16-21" allow one fish below 16" and one fish above 21") was implemented. This regulation is still in place currently. The 18" minimum size limit that was established in 1992 had worked well but its effectiveness was waning thus not protecting enough fish. Data showed that several SMB were being harvested once they exceeded the 18" minimum length limit resulting in a "cropping off" of this adult population and thus not being eligible to contribute to this fishery. Increased fishing pressure at Dale Hollow Reservoir on the SMB resource was having a big impact. This new protected slot limit offered protection for a wider class of quality and trophy SMB while also protecting the best spawners.
- **2016**: A specific evaluation, initiated by a member of the Tennessee Fish and Wildlife Commission, was conducted during the months of January through May in 2016 to measure fishers' support for the smallmouth bass PLR regulation in place at Dale Hollow Reservoir. This information was gathered through the established roving creel survey at Dale Hollow. The results showed, based on 506 smallmouth bass anglers who were polled while fishing at Dale Hollow, that nearly 77% supported the current PLR regulation. Additionally, the Dale Hollow Lake Marina Owners Association wrote an overwhelming letter of support for the SMB PLR regulation to the director of TWRA. Finally, the ongoing data collected by TWRA Region 3 reservoir management also supported the PLR and the long-term success of this regulation. Therefore, TWRA had no recommendations for changes of the current SMB management practices at Dale Hollow then or at the current time.
-

The current protected length limit (PLR) has and continues to accomplish what it was intended to do, which is to protect SMB between 16 and 21 inches from harvest while still allowing these fish to be caught by anglers and released that fall into this length range.

Prior to the current PLR, the 18" minimum/ 2 SMB day regulation (existing in the years 1992-2000) was showing signs that not enough SMB over 18" were available for angling opportunities. This was most likely due to the harvest (i.e., tournament mortality & consumption) of SMB by anglers once the SMB surpassed the 18-inch minimum size. The impact on the SMB resource became greater as SMB fishing pressure increased at Dale Hollow. Additionally, studies carried out in Tennessee have shown that SMB are much more susceptible to mortality associated with angling induced stress as compared to other black bass species like largemouth and spotted bass. This fact again illustrates the importance and some of the challenges associated with the management of SMB. It is also worth noting that the current PLR

regulation at Dale Hollow would provide an increased protection if Alabama bass were illegally introduced to Dale Hollow. Alabama bass have been realized in other TN reservoirs within Region 3 (Chickamauga, Parksville, Watts Bar & Nickajack Reservoirs) on the TN River. Alabama bass would have dire consequences on native SMB populations as has been observed in northern Georgia reservoirs, eastern North Carolina, and Tennessee's Parksville Reservoir, which is the epicenter for Alabama bass introduction in Tennessee.

Smallmouth bass fishing on Dale Hollow Reservoir continues to offer some of the best opportunities anywhere, nationwide. According to the creel surveys conducted in 2020, catch rates for anglers were 0.39 SMB/hour, which is near average for Dale Hollow as compared to the past ten years. The mid-summer seining surveys in 2013 yielded a 10 year high with a catch rate of 2.20 SMB/seine haul, this same value was half that in 2015 (1.10 SMB/seine haul) and down further in 2016 to 1.00 SMB/seine haul, 0.60 SMB/seine haul in 2017, and 0.40 in 2018. No seining surveys have been conducted since 2018. A spring black bass electrofishing survey was conducted at Dale Hollow in 2021. From this survey, CPUE for sub stock size smallmouth bass were about average at a rate of 1.40 SMB/hour. Additionally, the overall CPUE for SMB were below the ten-year average at 16.6 SMB/hour from these 2021 spring electrofishing surveys. Also, the condition factors (Wrs) for all size classes of SMB observed were better than previous surveys for all category sizes. Based on the information from these surveys the SMB population at Dale Hollow promises to offer excellent angling opportunities for those seeking SMB. Spring black bass electrofishing surveys are conducted every other year at Dale Hollow therefore the next one is scheduled for 2021. The targeted smallmouth bass surveys which are typically done in late March to early April typically offer a better collection of pertinent smallmouth bass data.

Spotted bass (SPB): Catch rates from creel surveys for spotted bass continue to decline to an undetectable level in 2019 and 2020. The reasons are unknown but similar declines are also being noted on TN River impoundments within the same Region 3 district. There is no minimum length limit on spotted bass currently at Dale Hollow. There are no reasons perceived that prevent the spotted bass fishery from offering consistent success as in years past. Despite the lack of reason, observations by TWRA reservoir biologists reveal that the quality and quantity of spotted bass in Dale Hollow have decreased over the past ten years. Catch rates for young of year spotted bass from summer seining efforts in 2017 showed a catch rate of 1.4 SPB/seine haul and 1.70 in 2018 which is near average when compared to most recent years. No seining surveys have been conducted since 2018. Not enough spotted bass were captured during the 2021 spring electrofishing surveys to generate any reputable data. Increased evaluations of the spotted bass population at Dale Hollow may be warranted soon. Spring blackbass electrofishing surveys are conducted every other year at Dale Hollow; the next on is scheduled for 2023.

Genetic testing: A genetic survey was done at Dale Hollow in 2019 with a goal of determining the genetic make-up of spotted bass. Specifically, TWRA was seeking to find out if any Alabama bass influence was present at Dale Hollow. Thankfully, all fish (n=30) collected were determined to be native spotted bass with NO Alabama bass genes present. Most spotted bass were collected from the upper reservoir reaches of the Obey River as representative numbers were hard to acquire elsewhere within the reservoir.

Crappie (black and white): White crappie populations in Dale Hollow Reservoir are not as prevalent as the black crappie populations, including blacknose crappie. This is likely related to water clarity as black crappie prefer clear water over turbid water. Dale Hollow is known for its crystal-clear water characteristic. According to historical surveys though, white crappie were the dominant species of crappie in Dale Hollow in the early 1970's. TWRA currently stocks black and blacknose crappie into Dale Hollow annually, which is another reason for the dominance of black/blacknose crappie at Dale Hollow. It is estimated (creel surveys) that crappie anglers expended a total value of $517,290 in 2021 on Dale Hollow

Reservoir. This is far above the ten-year average. This could possibly be explained by elevated fishing pressure due to Covid regimes and more participation on the water by anglers. According to a roving creel survey conducted in 2021 by TWRA, the catch rates by anglers for crappie were at a rate of 1.27 crappie/hour which is near the ten-year average. Crappie spawning success is very limited on Dale Hollow and that is not expected to change due to limitations in preferable spawning habitat. Fall trapnetting is not a viable form of sampling due to the steep banks that are representative of Dale Hollow. Conclusive evidence, gained through years of data, reveal poor natural crappie year classes at Dale Hollow. Crappie fishing success on Dale Hollow is expected to remain consistent however thanks to the continued annual stocking program of blacknose and black crappie by TWRA. TWRA stocked 85,416 black crappie fingerlings into Dale Hollow during the fall of 2022.

Redear sunfish: Fishing success for redear sunfish on Dale Hollow Reservoir remains good with some very nice fish being caught yearly. The month of May typically offers the best opportunities which correlates to spawning times for redear. Reports from fishermen confirm the quality of the redear fishery here, often catching redear sunfish around and exceeding the one-pound size. According to creel surveys, harvest rates and mean weights (0.63 lb. in 2021) associated with redear sunfish remain near average when compared to the last ten years. Catch rates by anglers for “panfish” (redear or bluegill) were near average at 2.3 panfish/hour according to recent creel surveys.

Bluegill: Fishing success for bluegill should continue to be promising in Dale Hollow Reservoir. Mid-summer seining surveys showed above average reproduction of bluegill in 2018 at 10.20 bluegill/seine haul, the second highest recorded in the past ten years. Catch rates and harvest rates for “any sunfish” (mainly bluegill and redear sunfish) by anglers remain consistent according to annual roving creel surveys.

Walleye: The creel surveys conducted in 2021 indicate that there was a total value of $174,040 expended by walleye anglers on Dale Hollow Reservoir. This economic figure is near the five-year average. In 2017 the catch rate for walleye from creel surveys had declined to a rate of 0.06 walleye/hour. This catch rate rebounded to 0.25 walleye/hour in the 2019 creel surveys but down again in 2020 to 0.14 walleye/hour but up to 0.21 walleye/hour in 2021 creel surveys (see Walleye table). The average weight of harvested walleye was 3.81 lbs. in 2021. Annual stockings of walleye have promoted consistency by enhancing successful year classes of walleye at Dale Hollow. In 2022, TWRA stocked 126,229 (3.8 walleye/acre) walleye fingerlings into Dale Hollow and an above average stocking in 2021(13.3/acre) of 368,160 walleye fingerlings which is well above the typical 5 walleye/acre stocking rate realized at Dale Hollow and the highest in the past ten years. Hopefully with some added natural reproduction realized from walleye populations and additional enhancement with stockings, fishing success in Dale Hollow should remain very good for walleye. Ample forage bases comprised of threadfin and gizzard shad as well as alewife awaits walleye. Since alewife are present in Dale Hollow and the associated negative influence on walleye’s natural spawning production, it will be critical to stock walleye into Dale Hollow on an annual basis. Walleye support a very important fishery at Dale Hollow which is utilized throughout the year by a variety of fishing methods.

Catfish: Anglers in pursuit of catfish in Dale Hollow Reservoir compromise a smaller percentage of the intended angling public there. Both channel and flathead catfish inhabit Dale Hollow Reservoir. The overall success for catfish harvest remains consistent at Dale Hollow. The average weight of catfish captured in the 2020 creel survey was 5.20 lbs. which is near the average size as compared to the past ten years. Angling pressure for catfish is low when compared to other game fish within this reservoir. Trot lines and limb lines are popular methods for catching catfish at Dale Hollow.

Muskie: TWRA records show that TWRA personnel stocked “several” musky into Dale Hollow Reservoir between the years of 1952-1958 that were relocated from naturally occurring streams in Tennessee. Additionally, from 1958-1965 more musky were stocked into Dale Hollow that were acquired from Wisconsin. Despite there not being any other records of musky stockings at Dale Hollow since these reports, musky still exist in Dale Hollow today thus indicating a limited population existing by natural reproduction. Reports of anglers catching musky (often large) do surface, typically caught while fishing for other species (i.e., trolling for walleye), and TWRA fisheries personnel have encounters via electrofishing from time to time with musky, but not often. Due to the small representation of musky at Dale Hollow, very little is known about population size, habitat preference and preferred spawning locations.

Lakewide Angling Summary

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	298,648	283,231	269,329	275,005	226,753	214,349	258,998	505,161	468,280	-	311,084
Angler Hrs./Acre	12.8	12.2	11.6	11.9	9.5	7.7	9.4	18.2	20.2	-	12.6
Angler Trips	46,463	45,441	41,113	41,725	37,399	35,798	42,407	35,078	64,001	-	43,269
Value of Fishery (Trip expenitures-creel)											
All Species	$2,422,100	$2,340,910	$1,561,830	$1,411,500	$1,324,330	$1,517,620	$1,637,440	$1,598,750	$3,349,950	-	$1,907,159

Black Bass, Dale Hollow Reservoir

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	162,233	164,986	165,119	187,472	136,140	135,713	147,564	135,051	219,266	-	161,505
(hrs./acre)	6.99	7.11	7.12	8.1	5.87	4.90	5.33	4.88	7.92	-	6.47
Any Black Bass (hrs.)	70,785	73,491	76,303	84,906	56,824	61,889	73,136	78,033	124,519	-	77,765
(hrs./acre)	3.05	3.17	3.29	3.70	2.45	2.23	2.64	2.82	4.50	-	3.09
Largemouth Bass (hrs.)	3,669	7,889	6,240	3,347	3,786	1,519	1,581	1,229	3,239	-	3,611
(hrs./acre)	0.16	0.34	0.27	0.14	0.16	0.06	0.06	0.04	0.12	-	0.15
Smallmouth Bass (hrs.)	87,779	83,042	82,576	99,219	75,530	72,166	72,847	55,625	90,392	-	79,908
(hrs./acre)	3.78	3.58	3.56	4.28	3.26	2.61	2.63	2.01	3.26	-	3.22
Spotted Bass (hrs.)	-	564	-	-	-	139	-	164	1,116	-	495.75
(hrs./acre)	-	0.02	-	-	-	0.00	-	0.01	0.04	-	0.02
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	0.53	0.67	0.62	0.35	0.34	0.51	0.92	0.55	0.45	-	0.55
Non-Tournament Catch Rate (cre	0.33	0.44	0.38	0.35	0.40	0.43	0.47	0.39	0.42	-	0.40
Value of Fishery (Trip Expenditures)											
All Black Bass	$1,125,410	$1,132,180	$1,235,620	$1,152,390	$1,029,500	$1,205,630	$1,161,420	$1,343,640	$2,452,410	-	$1,315,356
Any Black Bass	$451,700	$404,960	$558,230	$430,970	$299,810	$423,800	$478,430	$856,280	$1,389,680	-	$588,207
Largemouth Bass	$13,270	$47,660	$27,990	$24,350	$16,430	$13,520	$20,630	$3,610	$17,040	-	$20,500
Smallmouth Bass	$660,440	$679,010	$649,400	$697,070	$713,260	$767,990	$662,360	$483,200	$1,032,960	-	$705,077
Spotted Bass	-	$550	-	-	-	$320	-	$550	$12,730	-	$3,538

Largemouth Bass, Dale Hollow Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	1.37	-	2.10	-	0.38	-	1.60	-	1.36
CPUE (mid-summer seine)	1.30	0.40	1.20	0.10	0.90	0.60	-	-	-	-	0.75
Density (spring electrofishing)											
PSD	91	-	95	-	82	-	92	-	85	-	89
RSD (preferred)	61	-	73.9	-	63	-	68	-	65	-	66.2
CPUE (total)	24.6	-	32.9	-	32.6	-	36.4	-	41.4	-	33.6
CPUE ≥ Stock	24.6	-	31.6	-	30.5	-	36	-	39.8	-	32.5
CPUE ≥ MLL (15-inches)	18.5	-	23.3	-	19.6	-	24.6	-	25.8	-	22.4
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	173	-	173
Length Age-3	-	-	-	-	-	-	-	-	348	-	348
Condition (spring electrofishing)											
Stock to Quality	98.1	-	114.6	-	90.7	-	98.6	-	97	-	99.8
Quality to Preferred	90.2	-	94.3	-	95.3	-	98.8	-	94.9	-	94.7
Preferred to Memorable	88.7	-	92.2	-	92.6	-	99.1	-	93.4	-	93.2
Memorable to Trophy	66.6	-	87.0	-	88.9	-	102.2	-	93.8	-	87.7
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	26%	-	26%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.86	0.75	0.47	0.31	0.81	0.23	0.19	1.13	0.39	-	0.57
Catch Rate, num./hr. (any black bass)	0.52	0.68	0.54	0.27	0.42	0.45	0.56	0.47	0.36	-	0.47
Harvest Rate, num./hr. (any black bass)	0.07	0.16	0.12	0.06	0.07	0.09	0.09	0.05	0.12	-	0.09
% Released	83.6%	80.2%	79.9%	69.2%	74.5%	76.3%	77.2%	68.4%	58.9%	-	74.2%
Mean Weight	2.60	2.59	2.85	2.68	2.67	2.95	2.73	2.83	2.73	-	2.74

Smallmouth Bass, Dale Hollow Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	0.95	-	2.20	-	0.57	-	1.33	-	1.40	-	1.29
CPUE (mid-summer seine)	2.20	0.90	1.10	1.00	0.60	0.40	-	-	-	-	1.03
Density (spring electrofishing)											
PSD	72.0	-	64.7	-	47.0	-	80.0	-	82	-	69.1
RSD (preferred)	53.0	-	45.5	-	38.0	-	69.0	-	63	-	53.7
CPUE (preferred)	3.1	-	1.8	-	2.3	-	15.4	-	1.2	-	4.8
CPUE (total)	23.8	-	21.6	-	6.7	-	23.8	-	16.6	-	18.5
CPUE ≥ Stock	22.9	-	19.4	-	6.1	-	22.4	-	15.2	-	17.2
CPUE ≥ Preferred	11.1	-	8.8	-	3.8	-	15.4	-	9.6	-	9.7
CPUE ≥ MLL (18-inches)	1.9	-	2.4	-	1.5	-	4.6	-	3.0	-	2.68
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	112	-	112
Length Age-3	274	-	-	-	-	-	-	-	310	-	292
Condition (spring electrofishing)											
Stock to Quality	96.2	-	112.2	-	93.8	-	89.9	-	91.2	-	96.7
Quality to Preferred	92.1	-	88.9	-	103.6	-	95.7	-	89.5	-	94.0
Preferred to Memorable	78	-	81.9	-	89.9	-	90.5	-	92.4	-	86.5
Memorable to Trophy	77.7	-	77.9	-	80.9	-	87.3	-	88.3	-	82.4
Mortality (spring electrofishing)											
Total Mortality	41.0%	-	-	-	-	-	-	-	20%	-	30.5%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.25	0.39	0.41	0.32	0.37	0.54	0.52	0.39	0.46	-	0.41
Catch Rate, num./hr. (any black bass)	0.52	0.68	0.54	0.27	0.42	0.45	0.56	0.47	0.36	-	0.47
Harvest Rate, num./hr. (any black bass)	0.07	0.16	0.12	0.06	0.07	0.09	0.09	0.05	0.12	-	0.09
% Released	95.1%	97.4%	97.6%	97.9%	94.3%	97.0%	95.3%	95.8%	93.0%	-	95.9%
Mean Weight	1.62	2.14	2.03	1.85	2.11	2.39	3.02	3.43	2.64	-	2.36

Smallmouth Bass (Targeted), Dale Hollow Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	0.95	-	0.30	2.02	1.09	-	-	-	-	-	1.09
Density (electrofishing)											
PSD	85	-	94	95	95	-	-	-	-	-	92.3
RSD (preferred)	52	-	87.9	81	81	-	-	-	-	-	75.5
CPUE (preferred)	2.4	-	0.4	1.6	11.7	-	-	-	-	-	4.0
CPUE (total)	29.4	-	13.3	2.5	15.5	-	-	-	-	-	15.2
CPUE ≥ Stock	28.4	-	13	25.4	14.4	-	-	-	-	-	20.3
CPUE ≥ Preferred	14.4	-	11.5	20.6	11.7	-	-	-	-	-	14.6
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	277	-	-	-	-	-	-	-	-	-	277
Condition (electrofishing)											
Stock to Quality	81.5	-	118.4	88.5	85.5	-	-	-	-	-	93.5
Quality to Preferred	81.8	-	87.9	87.3	108.0	-	-	-	-	-	91.3
Preferred to Memorable	87.8	-	92.3	89.4	87.5	-	-	-	-	-	89.3
Memorable to Trophy	86.8	-	85.7	88.8	85.4	-	-	-	-	-	86.7
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-

Spotted Bass, Dale Hollow Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019*	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	7.14	-	-	-	7.14
CPUE (mid-summer seine)	3.40	2.00	1.50	0.90	1.40	1.70	-	-	-	-	1.82
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	18.0	-	-	-	18.00
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	4.4	-	-	-	-	-	11.9	-	-	-	8.2
CPUE ≥ Stock	-	-	-	-	-	-	4.8	-	-	-	4.8
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	81.8	-	-	-	81.8
Quality to Preferred	-	-	-	-	-	-	82.9	-	-	-	82.9
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	0.56	-	-	-	1.20	-	0.00	0	-	0.44
Catch Rate, num./hr. (any black bass)	0.52	0.68	0.54	0.27	0.42	0.45	0.56	0.47	0.36	-	0.47
Harvest Rate, num./hr. (any black bas	0.07	0.16	0.12	0.06	0.07	0.09	0.09	0.05	0.12	-	0.09
% Released	79.8%	72.9%	78.1%	74.9%	88.8%	71.8%	92.0%	87.6%	100.0%	-	82.9%
Mean Weight	1.48	1.30	1.16	1.20	2.80	1.33	1.00	2.50	-	-	1.60

Note: * - Targeted electrofishing sample for genetics

Black Crappie, Dale Hollow Reservoir

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*	10 yr. Average
Recruitment (electrofishing)											
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	75,906	97,329	141,976	43,530	85,416	88,831
#/Acre	-	-	-	-	-	2.7	3.5	5.1	1.6	3.1	3.2
Angler Pressure (creel)											
Angler Hrs. (all crappie)	26,502	30,968	33,702	28,425	27,536	29,747	38,545	62,070	102,647	-	42,238
Angler Hrs./Acre	1.14	1.34	1.45	1.23	1.19	1.07	1.39	2.24	3.71	-	1.64
Fishing Success (creel)											
Catch Rate (any crappie)	1.06	0.86	0.43	1.12	0.74	0.75	1.04	2.67	1.27	-	1.10
Harvest Rate (any crappie)	0.38	0.44	0.15	0.46	0.37	0.45	0.51	1.00	0.60	-	0.48
% Released (black crappie)	67.7%	37.8%	72.7%	43.0%	18.1%	21.0%	33.3%	43.8%	41.2%	-	42.1%
Mean Weight (black crappie)	0.94	0.95	1.01	0.85	1.08	1.2	1.01	0.93	0.99	-	1.00
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$91,450	$99,790	$100,480	$75,450	$97,440	$94,970	$111,150	$166,650	$517,290	-	$150,519

Note: * - A portion of the crappie stocked was "BNC".

Blacknose Crappie, Dale Hollow Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	179,636	213,110	161,442	178,421	199,451	89,053	67,177	16,159	66,874	-	130,147
#/Acre	6.5	7.7	5.8	6.4	7.2	3.2	2.4	0.6	2.4	-	4.7
Angler Pressure (creel)											
Angler Hrs. (all crappie)	26,502	30,968	33,702	28,425	27,536	29,747	38,545	62,070	102,647	-	42,238
Angler Hrs./Acre	1.14	1.34	1.45	1.23	1.19	1.07	1.39	2.24	3.71	-	1.64
Fishing Success (creel)											
Catch Rate (any crappie)	1.06	0.86	0.43	1.12	0.74	0.75	1.04	2.67	1.27	-	1.10
Harvest Rate (any crappie)	0.38	0.44	0.15	0.46	0.37	0.45	0.51	1.00	0.6	-	0.48
% Released (blacknose crappie)	48.4%	36.7%	55.2%	28.4%	23.6%	36.2%	43.2%	54.3%	36.6%	-	40.3%
Mean Weight (blacknose crappie)	0.96	1.11	1.4	0.88	1.18	1.26	1.1	1.02	1.02	-	1.10
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$91,450	$99,790	$100,480	$75,450	$97,440	$94,970	$111,150	$166,650	$517,290	-	$150,519

White Crappie, Dale Hollow Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	26,502	30,968	33,702	28,425	27,536	29,747	38,545	62,070	102,647	-	42,238
Angler Hrs./Acre	1.14	1.34	1.45	1.23	1.19	1.07	1.39	2.24	3.71	-	1.64
Fishing Success (creel)											
Catch Rate (any crappie)	1.06	0.86	0.43	1.12	0.74	0.75	1.04	2.67	1.27	-	1.10
Harvest Rate (any crappie)	0.38	0.44	0.15	0.46	0.37	0.45	0.51	1.00	0.60	-	0.48
% Released (white crappie)	100.0%	100.0%	38.0%	64.8%	-	62.7%	57.6%	72.4%	70.4%	-	70.7%
Mean Weight (white crappie)	-	-	0.86	0.59	-	1.28	0.92	0.88	0.76	-	0.88
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$91,450	$99,790	$100,480	$75,450	$97,440	$94,970	$111,150	$166,650	$517,290	-	$150,519

Walleye, Dale Hollow Reservoir

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	194,342	211,035	240,860	190,857	215,107	247,078	175,423	126,229	368,160	104,847	207,394
#/Acre	7	7.6	8.7	6.9	7.8	8.9	6.3	4.6	13.3	3.8	7.5
Angler Pressure (creel)											
Angler Hrs.	37,904	23,935	20,842	16,716	23,329	19,619	35,779	10,000	41,379	-	25,500
Angler Hrs./Acre	1.63	1.03	0.9	0.72	1.01	0.71	1.29	0.36	1.49	-	1.02
Fishing Success (creel)											
Catch Rate (intended)	0.15	0.36	0.16	0.15	0.06	0.3	0.25	0.14	0.26	-	0.20
Harvest Rate (intended)	0.14	0.17	0.14	0.12	0.05	0.18	0.21	0.08	0.25	-	0.15
% Released	8.2%	66.0%	9.3%	14.4%	18.8%	42.3%	15.8%	24.1%	3.9%	-	22.5%
Mean Weight	3.71	4.22	3.39	3.99	3.82	3.88	3.65	4.65	3.81	-	3.90
Value of Fishery (Trip Expenditures - creel)											
Walleye	$99,970	$82,340	$74,000	$62,050	$82,000	$86,240	$161,110	$40,600	$174,040	-	$95,817

White bass, Dale Hollow Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
PSD	-	-	-	100	-	-	-	-	-	-	100
RSD (preferred)	-	-	-	66	-	-	-	-	-	-	66
CPUE (total)	-	-	-	0.6	-	-	-	-	-	-	0.6
CPUE ≥ Stock	-	-	-	0.6	-	-	-	-	-	-	0.6
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	99.6	-	-	-	-	-	-	99.6
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	107.4	-	-	-	-	-	-	107.4
Memorable to Trophy	-	-	-	95.2	-	-	-	-	-	-	95.2
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours (white bass)	-	-	1,090	1,659	1,226	1,115	1,659	1,229	3,203	-	1,597
Angler Hours/Acre	-	-	0.05	0.07	0.05	0.04	0.06	0.04	0.12	-	0.06
Fishing Success (creel)											
Catch Rate (white bass)	-	-	0.88	1.09	1.37	1.15	1.55	2.17	0.78	-	1.28
Harvest Rate (white bass)	-	-	0.88	1.05	1.37	1.15	1.55	1.67	0.78	-	1.21
% Released (white bass)	-	-	0.0%	12.5%	0.0%	4.0%	0.0%	20.7%	0.0%	-	5.3%
Mean Weight (white bass)	-	-	2.08	2.38	2.77	2.87	2.39	1.50	2.40	-	2.34
Value of Fishery (Trip expenditures-creel)											
White Bass	-	-	$1,970	$2,360	$1,170	$5,620	$1,820	$2,060	$23,150	-	$5,450

Sunfish, Dale Hollow Reservoir

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	3.10	2.60	1.60	4.40	3.50	10.20	-	-	-	-	4.23
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	45,167	33,221	22,756	22,047	21,351	15,213	14,837	7,727	20,058	-	22,486
Angler Hrs./Acre	1.95	1.43	0.98	0.95	0.92	0.55	0.54	0.28	0.72	-	0.92
Fishing Success (creel)											
Catch Rate (any sunfish)	1.67	2.57	2.93	1.49	2.36	3.25	2.45	2.14	2.3	-	2.35
Harvest Rate (any sunfish)	1.08	1.64	2.03	0.98	1.68	1.87	1.59	1.94	1.24	-	1.56
% Released (bluegill)	48.4%	55.0%	33.7%	37.4%	38.9%	46.9%	45.3%	33.9%	50.8%	-	43.4%
Mean Weight (bluegill)	0.40	0.44	0.42	0.47	0.42	0.48	0.47	0.46	1.12	-	0.52
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	$198,260	$64,550	$64,960	$59,340	$48,140	$60,380	$47,980	-	$54,650	-	$74,783

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	-	-	-	-	-	-	12.4	-	-	-	12.4
Redear CPUE (electrofishing)	0.00	-	-	0.20	-	-	-	-	-	-	0.10
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	45,167	33,221	22,756	22,047	21,351	15,213	14,837	7,727	20,058	-	22,486
Angler Hrs./Acre	1.95	1.43	0.98	0.95	0.92	0.55	0.54	0.28	0.72	-	0.92
Fishing Success (creel)											
Catch Rate (any sunfish)	1.67	2.57	2.93	1.49	2.36	3.25	2.45	2.14	2.3	-	2.35
Harvest Rate (any sunfish)	1.08	1.64	2.03	0.98	1.68	1.87	1.59	1.94	1.24	-	1.56
% Released (redear)	23.1%	23.5%	22.0%	22.9%	21.1%	45.5%	30.1%	0.8%	36.2%	-	25.0%
Mean Weight (redear)	0.48	0.5	0.51	0.55	0.55	0.6	0.68	0.52	0.63	-	0.56
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	$198,260	$64,550	$64,960	$59,340	$48,140	$60,380	$47,980	-	$54,650	-	$74,783

Catfish, Dale Hollow Reservoir

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	6,135	8,951	7,417	6,107	7,100	4,829	7,481	-	7,112	-	6,892
Angler Hrs./Acre	0.26	0.39	0.32	0.26	0.31	0.17	0.27	-	0.26	-	0.28
Fishing Success (creel)											
Catch Rate (any catfish)	0.32	0.44	0.44	0.16	0.23	0.24	0.3	-	0.28	-	0.30
Harvest Rate (any catfish)	0.32	0.44	0.44	0.16	0.23	0.24	0.3	-	0.28	-	0.30
% Released (channel)	0.9%	2.1%	1.8%	11.1%	4.5%	3.5%	1.2%	0.0%	0.0%	-	2.8%
Mean Weight (channel)	4.2	5.24	5.54	5.00	5.39	5.44	4.36	5.20	5.32	-	5.08
Value of Fishery (Trip Expenditures - creel)											
All Catfish	$16,060	$27,040	$20,240	$13,290	$11,310	$13,030	$12,060	-	$13,590	-	$15,828

Muskie, Dale Hollow Reservoir

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours	-	179	-	-	160	359	-	-	-	-	233
Angler Hours/Acre	-	0.01	-	-	0.01	0.01	-	-	-	-	0.01
Fishing Success (creel)											
Catch Rate (intended)	-	0.00	-	-	0.00	0.00	-	-	-	-	0.00
Harvest Rate (intedned)	-	0.00	-	-	0.00	0.00	-	-	-	-	0.00
% Released	-	100%	-	-	-	-	-	-	-	-	100%
Mean Weight	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures-creel)											
Muskullunge	-	$420	-	-	$1,570	$2,500	-	-	-	-	$1,497

Shad, Dale Hollow Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	12.1	-	16.4	-	14.3
Gizzard CPUE	-	45.0	-	-	31.4	-	5.7	-	13.4	-	23.9
Threadfin CPUE	-	-	-	-	65.1	-	1.3	-	37.3	-	34.6

Habitat Enhancement, Dale Hollow Reservoir

		Quanity	
Type of Work	**Details**	**New**	**Renovated**
None performed			

Water Quality Monitoring, Dale Hollow Reservoir

Parameter	**Sampling Period**	**Water Quality**
Temperature	None performed	none performed
Dissolved Oxygen	None performed	none performed
PH	None performed	none performed
Conductivity	None performed	none performed

Dale Hollow Reservoir Headwater Report 2022 (Obey River)

Description

Area: The Dale Hollow Headwater sampling area is located on the East Fork of the Obey River starting at Comptom Bottom Access Area located in Fentress County, Tennessee and moving upstream. This area is known to locals for its excellent white bass and walleye fishing in the spring as these species make their spawning runs there. The substrate is rocky and sandy in areas with shallow gravel flats which is suitable for these species to spawn.

Counties: Pickett and Fentress Counties

Summary: This 2021 survey was conducted in the fall of the year, specifically October 27, 2021. All three species of black bass that are present in Dale Hollow Reservoir were captured during this headwater survey. As the tables below illustrate, largemouth bass were the most numerous in these electrofishing surveys. Overall condition factors (Wr's) were slightly lower than typical reservoir wide spring black bass electrofishing surveys although much of this can be explained by a spring vs. fall collection time and correlated elevated gonad weights in the spring. Of special note is the good representation of spotted bass in this area which is not witnessed in reservoir wide surveys where spotted bass numbers have declined in recent years. Gizzard shad were the most represented of forage base fishes.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	1.60	-	1.60
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	85	-	85
RSD (preferred)	-	-	-	-	-	-	-	-	24	-	24
CPUE (total)	-	-	-	-	-	-	-	-	18.9	-	18.9
CPUE ≥ Stock	-	-	-	-	-	-	-	-	17.3	-	17.3
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	4.2	-	4.2
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	78.8	-	78.8
Quality to Preferred	-	-	-	-	-	-	-	-	76.2	-	76.2
Preferred to Memorable	-	-	-	-	-	-	-	-	82.4	-	82.4
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	1.6	-	1.6
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	8.6	-	8.6
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	-	-	-	-	-	16.9	-	16.9
Threadfin CPUE	-	-	-	-	-	-	-	-	-	-	-

Angler Attitude Surveys (2021)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

TWRA sampled the angling public with attitude surveys in 2020 on four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Dale Hollow, Parksville, and Watts Bar reservoirs).

Overall “approval” of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to these 2020 surveys. We feel confident that this summary of our “angler attitudes” will provide valuable insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

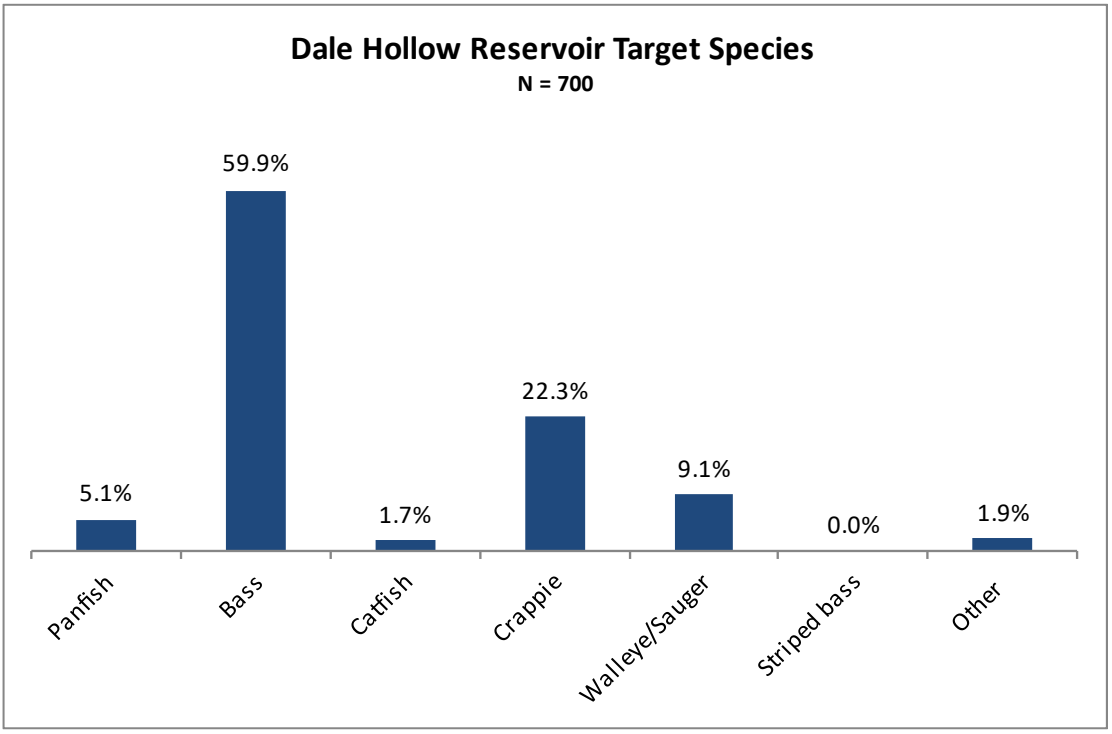
NOTE: Creel interviews in 2021 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public during certain time frames and per data gathering measures. Specifically, this meant no creel interviews for the months of January and February within the Region 3 reservoir program although pressure counts were performed at Dale Hollow during these two months. Additionally, no fish lengths or weights were recorded to reduce interaction between the creel clerk and anglers. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions could be realized when comparing it to previous years

where these surveys were conducted all 12 months. An annual roving creel survey is scheduled for Dale Hollow during the year of 2023.

Results from the Angler Attitude Survey conducted at Dale Hollow Reservoir are as follows:

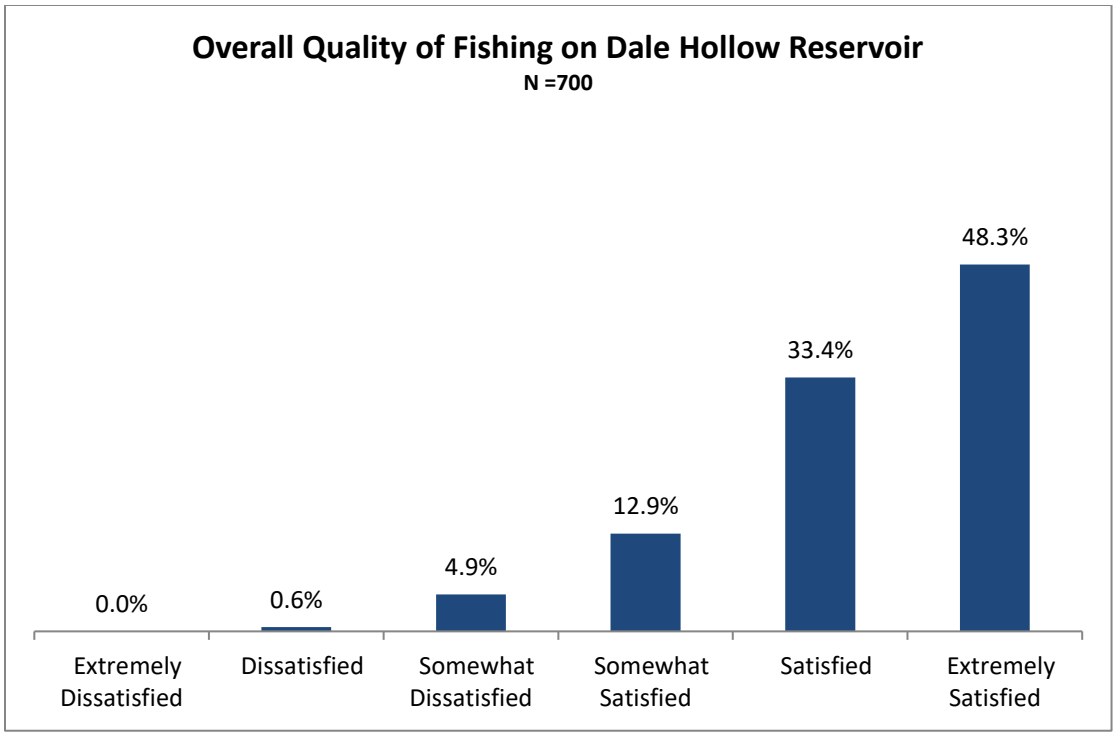
There were a total of 856 anglers interviewed while fishing at Dale Hollow Reservoir in 2021, 700 of these interviews were not repetitive per any one individual. This was known by asking the individual had they participated in this survey previously during this calendar year. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Dale Hollow in 2021 was bass (59.9%) followed by crappie (22.3%), and next walleye at 9.1%, (see graph below).

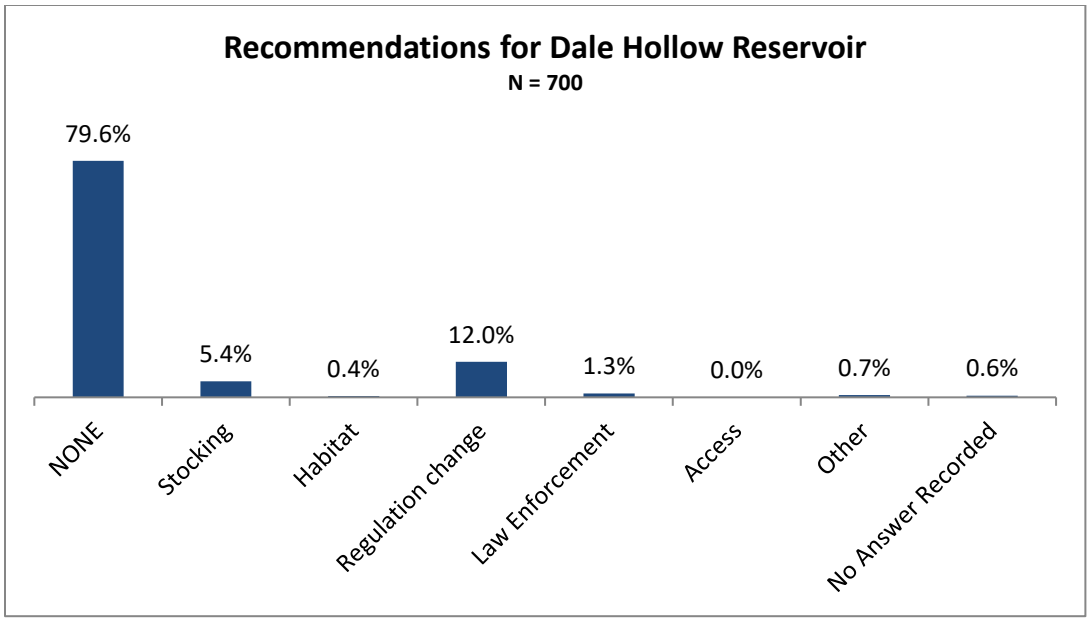


These surveys also revealed that fishermen who identified “Bass” (n=419) as their primary target species, 41.1% of these bass anglers also fished bass tournaments. On average, these bass tournament fishermen at Dale Hollow Reservoir fished an average of 7.2 bass tournaments/year at Dale Hollow Reservoir during 2021.

As the graph below depicts anglers expressed a high “satisfaction” rating (94.5%) overall when asked about the “overall quality of fishing on Dale Hollow Reservoir”.



When anglers fishing Dale Hollow Reservoir were asked if they had any recommendations for the overall management of the fishery at Dale Hollow, the large majority (79.6%) had “NONE” (see graph below). Of the remaining anglers who did have an opinion they voiced concerns towards “Regulation changes” of varied interests compromised most of those suggestions. TWRA region 3 reservoir management is very satisfied with the established success that the current smallmouth bass protected slot limit has provided, enhanced, and sustained the valuable smallmouth bass fishery at Dale Hollow. Also, the topic of “stocking” was expressed by those interviews. TWRA annually stocks black and blacknose crappie, walleye, and trout into Dale Hollow Reservoir.



Overall, the angler attitudes obtained in 2021 from those fishing at Dale Hollow Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA. This high level of approval has been consistent since these surveys were initiated in the year 2013.

Great Falls Reservoir (2022 Annual Report)

Reservoir Facts

Area (acres): 2,110 **Mean Depth (feet):** **Shoreline (miles):** 120

Counties: Warren, White and Van Buren

Full Pool Elevation (feet-msl): 805 **Winter Pool Elevation (feet-msl):** 778

Dam Completion: 1916

Reservoir Description: Great Falls is a small reservoir (2,110 surface acres) that has a longer tenure when compared to most other impoundments across the state of Tennessee. The main operations for Great Falls Reservoir are controlled by the Tennessee Valley Authority (TVA). Great Falls dam was completed in 1916, making this reservoir on the Caney Fork River a reality. Great Falls Reservoir is located upstream and adjacent to Center Hill Reservoir and is within Warren, White and Van Buren counties. Towns that are near Great Falls are McMinnville, Sparta, and Cookeville. Rock Island State Park is near the reservoir, at its headwaters, and offers a good place for vacationing. Great Falls Reservoir continues to offer opportunities for many local anglers seeking black bass and crappie fishing endeavors among other species of fish. The extreme upper tributaries of the reservoir (i.e., Collins River) provides anglers with excellent opportunities for landing a musky as well. Some musky, although low in abundance, can be found within the main body of the reservoir. Because Great Falls Reservoir is mostly riverine and comprises a major drainage of bordering areas it is highly susceptible to dramatic water fluctuations and associated sediment load influences. Successful year reproduction of black bass and crappie are highly impacted many times in the spring due to these water level fluctuations. Spring electrofishing for blackbass and other species, creel surveys, and previous mid-summer seining surveys help TWRA monitor gamefish populations at Great Falls. Boating access to Great Falls is limited due to a small number of access areas there.

Status and management of fish species:

NOTE: Highly variable spring water level fluctuations at Great Falls Reservoir occur often and have negative influences regarding the spawning success of various gamefish like black bass species and crappie. Because of the small size and riverine characteristics of Great Falls, it is susceptible to being heavily impacted by significant rain fall events. The results of these events are severe water fluctuations, increased flow, and associated turbidity.

Largemouth bass (LMB): Results from spring blackbass electrofishing surveys, conducted in 2015 and 2017, yielded low catch rates of substock LMB CPUE's (4.0 LMB/hour & 3.0 LMB/hour respectively) as compared to the past ten years. These same figures from 2019 were at an all-time low of 1.5 substock LMB/hour but up slightly in 2021 surveys to 2.25 LMB/hour. No electrofishing surveys were conducted on Great Falls in 2022 because these are conducted bi-annually. Therefore, the next like survey will be scheduled for the spring of 2023. Spring electrofishing surveys conducted in 2015 revealed an overall CPUE of 44.5 LMB/hour which was the highest observed in the past ten years. This same survey conducted in 2021 had a CPUE of 35.0 LMB/hour, which is almost average when compared to the past ten years and up from a ten year low realized in the 2019 surveys at 23.5 LMB/hour. PSD and RSD15 values have consistently remained in the desired range(s) over the past ten years confirming an LMB population that is in balance. The results of the 2017 spring electrofishing surveys indicated a largemouth population with more adults $\geq$15" than in previous years but also a stable representation of the PSD category in recent surveys which should indicate a good future for LMB abundance. The conditions

factors (WRs) for LMB were satisfactory as well depicting an ample forage base. Because these condition factors were obtained in the spring, these Wr values are likely elevated due on gonadal elevations during spawning times. Both shoreline habitat (woody debris) and ample forage have promoted and sustained the LMB fishery at Great Falls despite the struggles with spawning success due unsettled spring water levels. The current LMB regulation of 15" minimum length limit (MLL) established in 2011, will hopefully offset perceived increases in fishing pressure at Great Falls. Thanks to a TWRA year-long roving creel survey, conducted in 2014, there is now baseline data established that can be compared to with future creel surveys regarding indices like angling pressure, harvest, species composition, and socioeconomics. According to that inaugural 2014 creel survey, the mean weight for largemouth bass caught by anglers was 1.92 lbs. with an average catch rate of 0.49 bass/hour for "any black bass". Largemouth bass fishing in Great Falls Reservoir should remain fair to good in the upcoming years. Hopefully another roving creel survey can be conducted at Great Falls in the future.

Smallmouth bass (SMB): There are not enough smallmouth bass in Great Falls Reservoir to warrant any scientific reporting.

Spotted Bass (SPB): Fishing for spotted bass in Great Falls Reservoir is probably not an intended species due to small population numbers, especially when compared to largemouth bass population numbers there. However, fair expectations of catching a spotted bass can be expected by anglers while fishing for largemouth bass. The mid-summer seining surveys indicate good years of reproduction in 2008, 2009, and 2010. Unfortunately, these same mid-summer seining surveys showed very low catch rates for young of the year spotted bass in the years 2011-2013 as well and no catches in 2014, 2016 and 2017. In 2015, SPB were collected in these seining surveys at a rate of 14.0 SPB/seine haul and half that in the 2018 seining surveys. No seining surveys have been conducted since 2018. Highly variable water level fluctuations in the spring at Great Falls will continue to be of concern and a limiting factor for favorable spawning conditions as have been revealed by these mid-summer seining surveys. Spring electrofishing surveys performed in 2015 had a ten-year low CPUE at 5 SPB/hour but in 2017 this figure rose to 16.3 SPB/hour but again down in 2019 to 13.0 SPB/hour and this same figure was 10.8 in 2021. Various data collections show a high variability with associated CPUE for spotted bass at Great Falls Reservoir over the past ten years. Data from the 2014 creel survey showed that the mean weight of harvested spotted bass from Great Falls was 0.91 lbs.

Genetic Testing (SPB): In April of 2019, spotted bass (n=30) were collected from Great Falls Reservoir to study genetic integrity of these fish. Specifically, the objective was to determine if the native spotted bass population there had any evidence of Alabama bass influence. Thankfully **NO** Alabama bass genes were represented and 28 of these fish were representative of the native spotted bass strain that occurs throughout Tennessee. Of note, however, were two fish from this sample that were hybrids, sharing genes from two different species of black bass (SMB x SPB, LMB x SPB).

Crappie: Crappie fishing success remains stable on Great Falls Reservoir. White crappie are the dominant species of crappie in Great Falls. Since white crappie prefer more turbid waters over clear, this could explain the bias towards white crappie being the dominant species of crappie at Great Falls Reservoir. A targeted electrofishing survey for crappie was conducted in 2014. Abundance and condition factors were favorable for crappie surveyed. The 2014 roving creel survey showed that on average anglers caught crappie at an average of 1.15 crappie/hour with the mean weight being 0.91 lbs., which is comparable to other crappie reservoirs in Region 3. Anglers also expended $27,610 in trip expenditures in pursuit of crappie at Great Falls in 2014.

Blacknose black crappie (BNC) were stocked into Great Falls Reservoir during the years 2011 through 2014 and this project was evaluated in 2014 by electrofishing and a yearlong roving creel survey by

TWRA. The creel survey in 2014 and electrofishing surveys yielded no BNC despite those recent stockings. Therefore, hopes of establishing a BNC fishery at Great Falls through these stocking efforts have been unfounded. Due to the absence of BNC in these data surveys, no more requests for BNC stocking allocations will be submitted at this time. A trapnetting effort was expended in the fall of 2017 to evaluate crappie spawning success at Great Falls and to look for evidence once again of blacknose crappie. However, an extremely heavy rain event compromised these efforts and only 3 substock blacknose crappie were collected.

Bluegill: A high occurrence of young of the year bluegill was realized in the 2013, 2014, and 2015 mid-summer seining samples. The CPUE for this same seining survey was the high in 2017 at 32.0 bluegill/seine haul but even higher in 2018 at 45.5 bluegill/seine haul. No seining surveys have been conducted since 2018. However, it is not expected for Great Falls Reservoir to be a top destination for bluegill fishermen due to logistics and nearby competition by larger reservoirs (i.e., Center Hill). A catch rate by anglers of 1.76 sunfish/hour with an average weight of 0.34 lb. was realized in 2014 according to creel surveys. Bluegill will find a variety of habitat available for spawning and refuge at Great Falls. Bluegill spawning success will also be vulnerable to water fluctuations there as have been realized by data and observations from spring blackbass electrofishing surveys. Bluegill are likely a consistent contributor as a forage fish to several gamefish species at Great Falls.

Walleye: Walleye were stocked several years ago (2005 and previous) by TWRA into Great Falls Reservoir in hopes of establishing a walleye fishery there. Gill netting surveys, geared at evaluating this project, never realized any walleye, however. No confirmed catches of walleye by anglers have been confirmed at Great Falls Reservoir either according to the 2014 creel survey conducted there. Therefore, walleye are not currently stocked at Great Falls. TWRA reservoir fisheries biologists feel that Great Falls would be a great host for walleye populations due to the walleye habitat, riverine environment, and ample forage. Below Great Falls Dam is one of the best walleye populations in Region 3, especially in the spring when walleye gather here for spawning. This area is known as the “blue hole”, specifically in the Caney Fork headwaters of Center Hill Reservoir, and provides excellent fishing opportunities for walleye as well provides a source for TWRA hatcheries to collect walleye brood. Future considerations for stocking walleye into Great Falls may be warranted.

Catfish: Angler effort and catch rates were both low pertaining to catfishing success at Great Falls Reservoir according to the 2014 creel surveys conducted by TWRA. Both channel catfish and flathead catfish provide anglers with opportunity at Great Falls. Several rocky banks, available forage, and preferred river current will give catfish opportunities to remain at favorable levels here.

Lakewide Angling Summary

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	-	36,448	-	-	-	-	-	-	-	-	36,448
Angler Hrs./Acre	-	17.3	-	-	-	-	-	-	-	-	17.3
Angler Trips	-	7,947	-	-	-	-	-	-	-	-	7,947
Value of Fishery (Trip expenitures-creel)											
All Species	-	$91,070	-	-	-	-	-	-	-	-	$91,070

Black Bass, Great Falls Reservoir

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	-	13,181	-	-	-	-	-	-	-	-	13,181
(hrs./acre)	-	6.25	-	-	-	-	-	-	-	-	6.25
Any Black Bass (hrs.)	-	12,768	-	-	-	-	-	-	-	-	12,768
(hrs./acre)	-	6.05	-	-	-	-	-	-	-	-	6.05
Largemouth Bass (hrs.)	-	413	-	-	-	-	-	-	-	-	413
(hrs./acre)	-	0.2	-	-	-	-	-	-	-	-	0.2
Smallmouth Bass (hrs.)	-	-	-	-	-	-	-	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	-	-
Spotted Bass (hrs.)	-	-	-	-	-	-	-	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	-	-
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	0.50	-	-	-	-	-	-	-	-	0.50
Non-Tournament Catch Rate (cre	-	0.50	-	-	-	-	-	-	-	-	0.50
Value of Fishery (Trip Expenditures)											
All Black Bass	-	$40,210	-	-	-	-	-	-	-	-	$40,210
Any Black Bass	-	$39,160	-	-	-	-	-	-	-	-	$39,160
Largemouth Bass	-	$1,050	-	-	-	-	-	-	-	-	$1,050
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	-	-	-	-	-

Largemouth Bass, Great Falls Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	7.00	-	4.00	-	3.00	-	1.50	-	2.25	-	3.55
CPUE (mid-summer seine)	-	-	8.50	7.50	4.50	1.50	-	-	-	-	5.50
Density (spring electrofishing)											
PSD	54.0	-	64.0	-	74.0	-	73.0	-	73.0	-	67.6
RSD (preferred)	12.0	-	17.9	-	23.0	-	25.0	-	24.0	-	20.4
CPUE (total)	32.3	-	44.5	-	42.5	-	23.5	-	35.0	-	35.6
CPUE ≥ Stock	25.3	-	40.5	-	39.5	-	22.0	-	32.8	-	32.0
CPUE ≥ MLL (15-inches)	3.0	-	7.3	-	9.3	-	5.8	-	7.8	-	6.6
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	160	-	160
Length Age-3	-	-	-	-	-	-	-	-	339	-	339
Condition (spring electrofishing)											
Stock to Quality	93.0	-	86.6	-	88.3	-	89.4	-	88.3	-	89.1
Quality to Preferred	86.1	-	90.6	-	94.4	-	89.2	-	89.6	-	90.0
Preferred to Memorable	83.7	-	91.4	-	86.1	-	90.3	-	89.1	-	88.1
Memorable to Trophy	89.7	-	90.9	-	86.8	-	-	-	-	-	89.1
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	28%	-	28%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	0.29	-	-	-	-	-	-	-	-	0.29
Catch Rate, num./hr. (any black bass)	-	0.49	-	-	-	-	-	-	-	-	0.49
Harvest Rate, num./hr. (any black bass)	-	0.08	-	-	-	-	-	-	-	-	0.08
% Released	-	91.4%	-	-	-	-	-	-	-	-	91.4%
Mean Weight	-	1.92	-	-	-	-	-	-	-	-	1.92

Spotted Bass, Great Falls Reservoir

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	2.25	-	1.25	-	1.25	-	1.50	-	1.75	-	1.60
CPUE (mid-summer seine)	3.00	-	14	-	0	7.00	-	-	-	-	6.00
Density (spring electrofishing)											
PSD	38.0	-	27.0	-	47.0	-	70.0	-	47.0	-	45.8
RSD (prefered)	6.0	-	0.0	-	7.0	-	20.0	-	6.0	-	7.8
CPUE (total)	6.3	-	5.0	-	16.3	-	13.0	-	10.8	-	10.3
CPUE ≥ Stock	4.0	-	3.8	-	15.0	-	11.5	-	9.0	-	8.7
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	117	-	117
Length Age-3	-	-	-	-	-	-	-	-	278	-	278
Condition (spring electrofishing)											
Stock to Quality	102.1	-	90.1	-	91.4	-	94.2	-	101.5	-	95.9
Quality to Preferred	96.2	-	100.8	-	93.6	-	93.6	-	88.7	-	94.6
Preferred to Memorable	41.8	-	-	-	88.4	-	92.0	-	87.6	-	77.5
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	31%	-	31%
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-	-	-	-
Catch Rate, num./hr. (any black bass)	-	0.49	-	-	-	-	-	-	-	-	0.49
Harvest Rate, num./hr. (any black bass)	-	0.08	-	-	-	-	-	-	-	-	0.08
% Released	-	82.9%	-	-	-	-	-	-	-	-	82.9%
Mean Weight	-	0.91	-	-	-	-	-	-	-	-	0.91

Black Crappie, Great Falls Reservoir

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	1.0	4.1	2.8	-	1.0	-	-	-	-	-	2.2
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	23,328	-	-	-	-	-	-	-	-	-	23,328
#/Acre	12.7	-	-	-	-	-	-	-	-	-	12.7
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	-	-	-	-	-	-	-
Angler Hrs./Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate (any crappie)	-	1.15	-	-	-	-	-	-	-	-	1.15
Harvest Rate (any crappie)	-	0.69	-	-	-	-	-	-	-	-	0.69
% Released (black crappie)	-	37.5%	-	-	-	-	-	-	-	-	37.5%
Mean Weight (black crappie)	-	1.01	-	-	-	-	-	-	-	-	1.01
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	$27,610	-	-	-	-	-	-	-	-	$27,610

White Crappie, Great Falls Reservoir

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Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	100	100	-	100	-	-	-	-	-	100.0
RSD (preferred)	-	88	78	-	70	-	-	-	-	-	78.7
CPUE (total)	4.5	31.8	6.8	-	5.8	-	-	-	-	-	12.2
CPUE ≥ Stock	-	31.8	6.8	-	5.8	-	-	-	-	-	14.8
CPUE ≥ MML (10 inches)	-	28.1	5.3	-	3.3	-	-	-	-	-	12.2
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	99.9	91.7	-	84.5	-	-	-	-	-	92.0
Quality to Preferred	-	108.7	90.3	-	88.4	-	-	-	-	-	95.8
Preferred to Memorable	-	100.5	90.7	-	89.8	-	-	-	-	-	93.7
Memorable to Trophy	-	96.2	93.9	-	90.9	-	-	-	-	-	93.7
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	-	-	-	-	-	-	-
Angler Hrs./Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate (any crappie)	-	1.15	-	-	-	-	-	-	-	-	1.15
Harvest Rate (any crappie)	-	0.69	-	-	-	-	-	-	-	-	0.69
% Released (white crappie)	-	47.6%	-	-	-	-	-	-	-	-	47.6%
Mean Weight (white crappie)	-	0.91	-	-	-	-	-	-	-	-	0.91
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	$27,610	-	-	-	-	-	-	-	-	$27,610

Sunfish, Great Falls Reservoir

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	32.50	21.00	18.00	8.00	32.00	45.50	-	-	-	-	26.17
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	2,890	-	-	-	-	-	-	-	-	2,890
Angler Hrs./Acre	-	1.4	-	-	-	-	-	-	-	-	1.4
Fishing Success (creel)											
Catch Rate (any sunfish)	-	1.76	-	-	-	-	-	-	-	-	1.76
Harvest Rate (any sunfish)	-	1.00	-	-	-	-	-	-	-	-	1.00
% Released (bluegill)	-	38.1%	-	-	-	-	-	-	-	-	38.1%
Mean Weight (bluegill)	-	0.34	-	-	-	-	-	-	-	-	0.34
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	-	$6,160	-	-	-	-	-	-	-	-	$6,160

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Redear CPUE (electrofishing)	-	-	-	-	-	-	5.30	-	1.25	-	3.28
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	2,890	-	-	-	-	-	-	-	-	2,890
Angler Hrs./Acre	-	1.4	-	-	-	-	-	-	-	-	1.4
Fishing Success (creel)											
Catch Rate (any sunfish)	-	1.76	-	-	-	-	-	-	-	-	1.76
Harvest Rate (any sunfish)	-	1.00	-	-	-	-	-	-	-	-	1.00
% Released (redear)	-	-	-	-	-	-	-	-	-	-	-
Mean Weight (redear)	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	-	$6,160	-	-	-	-	-	-	-	-	$6,160

Catfish, Great Falls Reservoir

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	-	1,536	-	-	-	-	-	-	-	-	1,536
Angler Hrs./Acre	-	0.73	-	-	-	-	-	-	-	-	0.73
Fishing Success (creel)											
Catch Rate (any catfish)	-	0.04	-	-	-	-	-	-	-	-	0.04
Harvest Rate (any catfish)	-	0.04	-	-	-	-	-	-	-	-	0.04
% Released (channel)	-	0.0%	-	-	-	-	-	-	-	-	0.0%
Mean Weight (channel)	-	4.17	-	-	-	-	-	-	-	-	4.17
Value of Fishery (Trip Expenditures - creel)											
All Catfish	-	$1,690	-	-	-	-	-	-	-	-	$1,690

Shad, Great Falls Reservoir

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	-	36.8	-	7	-	8.5	-	17.4
Threadfin CPUE	-	-	-	-	-	-	2.5	-	-	-	2.5

Habitat Enhancement, Great Falls Reservoir

Type of Work	Details	Quantity	
		New	Renovated
none performed			

Water Quality Monitoring, Great Falls Reservoir

Parameter	Sampling Period	Water Quality
Temperature	none performed	none performed
Dissolved Oxygen		
PH		
Conductivity		

Guntersville Reservoir (2022 Annual Report)

Reservoir Facts

Area (acres): 67,900 (~2,500 acres in TN) **Mean Depth (feet):** 15

Shoreline (miles): 949

Counties: Marion County, TN, Marshall, and Jackson in Alabama

Total Fishing Effort (angler hours): N/A **Total Value by Anglers:** N/A

Reservoir Description: There are only approximately 2,500 acres of Guntersville Reservoir located in Tennessee. This is out of a total of 67,900 acres which largely resides in the state of Alabama. The TN portion of Guntersville Reservoir is mostly a tailwater area (below Nickajack Dam) with associated tailwater characteristics (i.e., river flows, riprap banks, and consistent congregations of baitfish like shad). The Sequatchie River empties into the Tennessee River in this section of TN waters which also offers a unique fishery at its mouth and within. For example, the bowfin fish has been observed near the mouth of the Sequatchie River and is the only place that TWRA reservoir personnel have observed this species in Region 3 reservoirs. The TWRA Reg 3 streams crew has validated the presence of bowfin up in the Sequatchie River as well. Several gamefish species can be caught the TN portion of Guntersville Reservoir, such as largemouth bass, spotted bass, smallmouth bass, striped bass, sauger, bluegill, redear sunfish, crappie, and catfish. Good populations of forage exist in this area like gizzard and threadfin shad as well as skipjack herring. Several drum and buffalo fishes call this area home as well. Fishing regulations for the TN section of Guntersville can be different than statewide so make sure to check those in the TWRA Fishing Guide. No fish are currently stocked into this section of Guntersville.

Data Collection Summary: Since there are only approximately 2,500 acres of the 67,900 acres that make up Guntersville Reservoir located in Tennessee, there are no management recommendations at this time for most gamefish. However, it is recommended that data collection surveys continue to be conducted by TWRA as deemed necessary to survey the fish populations in this upper reach of Guntersville. Seasonal creel info would be helpful in evaluating angling pressure, target species and fishing success, etc. in this section of Guntersville. This could be accomplished by conducting angler attitudes at the boat ramp directly below Nickajack Dam. Electrofishing surveys are typically conducted in the fall and make up most of the data used for evaluating this fishery at the current time.

Finally, it will be critical to monitor this section of our TN River system for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam which is where the current state record (90 lbs.) was caught back in 2005. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These surveys were conducted by TWRA, and electrofishing was used as the method for possible observations. TVA also helped with these surveys with their own timing and methodologies. A summary of TWRA's efforts for 2021 is described below.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory our TN River reservoirs for their presence. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for possible observations. TVA also conducted like surveys initially (2020) with their own timing and methodologies. A summary of TWRA's efforts for 2022 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/29/2022 and continuing through 8/22/2022 in Guntersville Reservoir below Nickajack Dam. Boat electrofishing was used to survey tailwater areas directly below Nickajack Dam. The general survey area was located from Nickajack Dam downstream to the mouth of the Sequatchie River. One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 3.10 km below the dam moving upstream. The face of the dam and the lock chambers were also surveyed. Standard electrofishing settings were used. Temperatures ranged from 13 to 30 C, the average discharge was 17,226 cfs, and the average tailwater elevation was 595.6 ft. Total surveillance effort in 2022 was 18.40 hours. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.
At least 14 different species were observed in Guntersville Reservoir in 2022; Gizzard Shad, Buffalo sp., Longnose Gar, Spotted Gar, Striped Bass, Largemouth Bass, Freshwater Drum, Black Crappie, Skipjack Herring, Threadfin Shad, Paddlefish, Bluegill, and Blue Catfish.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys and brood gamefish collections in Tennessee River reservoirs. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Furthermore, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020, 2021, nor 2022.

Status and management of fish species:

Largemouth bass: Due to the riverine type of environment present below Nickajack Dam (Guntersville headwaters, ~2,500 acres in TN) largemouth bass do not typically inhabit this for spawning purposes as they prefer more sluggish waters. This is further proven by our mid-summer seining surveys that have shown very low representation of LMB young of the year (Y-O-Y). In 2017 these mid-summer seining surveys yielded low catch rates and no representation in like 2018 surveys. However, anglers fishing for LMB should experience good success due to the abundance of forage (gizzard and threadfin shad) typically present in this area. Overall CPUE (13.9 LMB/hour) for the 2022 electrofishing surveys were slightly below the current 10-year average from Guntersville of 11.3 LMB/hour. On a positive note, this 2022 sample of LMB was represented by both LMB $\geq$ 15” and substock classes. (See LMB table below). Additionally, largemouth bass were the most represented native black bass species collected in the 2022 electrofishing surveys.

Smallmouth bass (SMB): This tailwater is not expected to be a major destination for smallmouth bass fishing as are other tailwaters upstream on the TN River (E.g., Watts Bar, Chickamauga). However, smallmouth bass had a good representation of 9.0 SMB/hour overall CPUE in the 2022 electrofishing surveys. Smallmouth bass were represented in the 2018 mid-summer seining surveys at a rate of 0.5 SMB/seine haul and non-existent in these same surveys conducted in 2017. Currently there is a one fish/18-inch minimum length limit on SMB in the TN section of Guntersville Reservoir. This regulation is consistent upstream along the TN River to Watts Bar Dam thus incorporating Nickajack and Chickamauga reservoirs down to the Alabama state line.

Spotted bass (SPB): Based on recent surveys, fair success is expected for anglers in pursuit of spotted bass. Spotted bass representation was at a 10-year low when comparing electrofishing surveys in this area. The habitat in this section of Guntersville Reservoir should be conducive to spotted bass as are

other TN River tailwater areas. Overall catch rates for SPB from electrofishing surveys in 2012 displayed an increase from like surveys conducted in 2010. The overall CPUE for SPB during the 2018 electrofishing surveys were 15.3 SPB/hour and this same figure was 6.0 SPB/hour in 2022 (See SPB table below). Spotted bass populations in neighboring TN reservoirs within Region 3 have been experiencing downward trends in population abundance according to our spring electrofishing and creel surveys. This may very well hold true for this section of Guntersville as well. In 2015, SPB were represented in higher numbers (6 SPB/seine haul) in the mid-summer seining surveys than over the past ten years but non-existent in the 2016, 2017, and 2018 surveys. There is a possibility that any “spotted bass” collected in these Guntersville headwaters could be the invasive Alabama bass, or a hybrid thereof, that have been documented (via genetic tests) in the two reservoirs upstream, Nickajack and Chickamauga reservoirs.

Crappie: Guntersville (TN section) crappie regulations are reflective of the reservoir wide Alabama regulation of 30 fish/day at a minimum length limit (MLL) of 9 inches. In contrast, other reservoirs in Region 3 have a 10-inch MLL at 15 crappie/day creel limit. Since such a small section (~2500 acres) of Guntersville is in TN, there are no recommendations for crappie management in this section of Guntersville Reservoir.

Bluegill: As with most of the TN River, bluegill fishing remains stable and the same is expected in this section of Guntersville Reservoir. The Sequatchie River enters the TN River a short distance downstream of Nickajack Dam and presumably offers good sunfish fishing opportunities based on preferred habitat available up the Sequatchie River which is navigable by boat. Rocky shorelines with laydowns on the main river below the dam also offer preferred habitat for a host of gamefish including bluegill.

Sauger: Variable and limited reports of sauger fishing success are heard on a yearly basis. It is assumed that a limited sauger fishery will exist in this section of Guntersville Reservoir as well as other TN Reservoir tailwaters in Region 3. Currently, there are no angler surveys to evaluate fishing pressure or success here. No stocking plans for sauger or walleye exists for this Guntersville headwater area at the current time.

Catfish: Where creel surveys are conducted on tailwater areas on the TN River in Region 3 (Ft. Loudon, Watts Bar and Chickamauga), catfish populations remain consistent as does the fishing success. Due to the similarities in habitat and water quality at Nickajack tailwaters (Guntersville headwaters) compared to other noted TN tailwaters, the same expectations for catfishing success should be realized. Anglers in pursuit of catfish have a consistent presence at the ramp below Nickajack Dam and are utilizing the upper section of Guntersville to target catfish.

Striped bass: Reports of successful striped bass fishing trips are not uncommon for anglers fishing the headwaters of Guntersville Reservoir. Ample forage of shad and the fact that striped bass can migrate to this area through dam passage, from Nickajack Reservoir above, will probably keep a consistent, but limited fishery, present there. This striped bass population should exist on a minimal basis though since striped bass are not stocked in these waters. Striped bass populations in TN reservoirs would be dependent on stocking, which doesn’t occur in Guntersville. It is possible however, during years of favorable water flow, that striped bass could realize a minimal amount of natural spawning success in some TN River tailwaters, but this would be limited and undependable.

Forage Base: Both gizzard and threadfin shad were represented in the 2022 electrofishing surveys. Gizzard shad were represented at much higher numbers than threadfin during this survey.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	2.55	-	0.45	0.73	-	-	3.20	1.73
Density (fall electrofishing)											
PSD	-	-	-	56.0	-	62.0	83.0	-	-	73.0	68.5
RSD (preferred)	-	-	-	28.0	-	35.0	56.0	-	-	45.0	41.0
CPUE (total)	-	-	-	12.8	-	11.2	7.3	-	-	13.9	11.3
CPUE ≥ Stock	-	-	-	10.3	-	10.7	6.6	-	-	10.7	9.6
CPUE ≥ MLL (15-inches)	-	-	-	2.8	-	4.3	3.7	-	-	5.0	4.0
Condition (fall electrofishing)											
Stock to Quality	-	-	-	98.8	-	98.2	91.6	-	-	96.1	96.2
Quality to Preferred	-	-	-	94.8	-	90.3	85.6	-	-	96.9	91.9
Preferred to Memorable	-	-	-	101.8	-	93.9	96.2	-	-	96.6	97.1
Memorable to Trophy	-	-	-	99.6	-	94.7	104.3	-	-	99.8	99.6

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	3.74	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	40.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	20.0	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	0.94	-
CPUE (total)	-	-	-	-	-	-	-	-	-	9.0	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	4.81	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	0.94	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	90.2	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	91.9	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	3.65	-	-	2.20	-	-	0.94	2.26
Density (fall electrofishing)											
PSD	-	-	-	18.0	-	39.0	74.0	-	-	20.0	37.8
RSD (preferred)	-	-	-	9.0	-	21.0	39.0	-	-	-	23.0
CPUE (total)	-	-	-	12.7	-	15.3	10.6	-	-	6.0	11.1
CPUE ≥ Stock	-	-	-	9.0	-	13.5	8.4	-	-	5.1	9.0
Condition (fall electrofishing)											
Stock to Quality	-	-	-	101.5	-	102.4	93.8	-	-	106.1	100.9
Quality to Preferred	-	-	-	97.5	-	81.2	89.7	-	-	84.0	88.1
Preferred to Memorable	-	-	-	98.5	-	79.6	91.5	-	-	-	89.8

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	11.5	-	14.1	-	-	-	75.2	33.6
Threadfin CPUE	-	-	-	7.9	-	-	-	-	-	6.0	6.9

Nickajack Reservoir (2022 Annual Report)

Reservoir Facts:

Area (acres): 10,370 **Mean Depth (feet):** **Shoreline (miles):** 192

Counties: Hamilton and Marion

Reservoir Description: Nickajack Reservoir is a mainstem impoundment of the Tennessee River (Tennessee River Mile 424.7) that was impounded in 1967 and replaced the former and expired Hales Bar Dam which was built by private interests in 1913. Hales Bar Dam was located upstream from the current Nickajack Dam location. Nickajack Reservoir extends 46 miles upstream from the dam to Chickamauga Dam. At full summer pool (633.5 feet above sea level), Nickajack Reservoir covers an area of 10,370 acres while claiming 192 miles of shoreline. The reservoir offers wide expanses of water, and the spectacular scenery of the Tennessee River Gorge is known as the “Grand Canyon of Tennessee”. The operating authority for Nickajack Reservoir is the Tennessee Valley Authority (TVA). Nickajack is in the southeastern area of TN where a major portion of it is bordered by the city of Chattanooga. Nickajack Dam is located in New Hope, TN, near the Alabama state line.

Summary of Reservoir Characteristics and Collection methods: Due to the morphological characteristics of Nickajack Reservoir, the lower end of the reservoir is where bi-annual, spring-time electrofishing surveys are conducted for black bass and crappie. The upper two-thirds of Nickajack is mostly riverine with continuing sections of rip rap lining both sides. The lower end of the reservoir has more coves associated with lazy water, making it more conducive to black bass and crappie fishing. Better habitat variety for gamefish (E.g., laydowns, stumps, bluffs, aquatic vegetation, rip rap) also exists on the lower end of the reservoir.

Additionally, specific headwater surveys are also conducted on Nickajack (See Nickajack “headwater report” within this report) to evaluate fish species there as well. These headwater/tailwater areas are unique fisheries because of habitat types and the correlated utilization by several species of fish.

In addition to other means of fish data collections there was also a year-long roving creel survey conducted on Nickajack Reservoir during the year 2017 and most recently in 2022. This information provides insight to many aspects of the fishery such as fishing pressure, harvest, catch rates, and socioeconomics. Information regarding the weights of fish were not captured during the 2022 creel surveys.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory our TN River reservoirs for their presence. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for possible observations. TVA also conducted their own surveys initially (2020) with their own timing and methodologies. A summary of TWRA’s efforts for 2022 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/29/2022 and continuing through 8/22/2022 in Nickajack Reservoir below Chickamauga Dam. Boat electrofishing was used to survey tailwater areas directly below Chickamauga Dam. The general survey area was located from Chickamauga Dam downstream to the C.B Robinson Bridge (Dupont Pkwy). One run was completed by 2

boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 2.10 km below the dam moving upstream. The face of the dam, lock chambers, a section of North Chickamauga Creek, and a small pocket upstream of South Chickamauga Creek were also surveyed. North Chickamauga Creek was sampled from the mouth, upstream to the 153 Bridge (approximately 500 km). Standard electrofishing settings were used. Temperatures ranged from 11 to 30 C, the average discharge was 18,130 cfs and the average tailwater elevation was 634. 32 ft. Total surveillance effort in 2022 was 13.46 hours. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.
At least 10 different species were observed in Nickajack Reservoir in 2022; Buffalo spp., Longnose Gar, Spotted Gar, Gizzard Shad, Threadfin Shad, Skipjack Herring, Redear Sunfish, Sucker spp., Channel Catfish, and Freshwater Drum.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys and brood gamefish collections in Tennessee River reservoirs. Furthermore, a roving creel clerk was surveying Nickajack Reservoir on an average of three days per week in 2022. This position interacts with anglers throughout the reservoir and has had no sightings or reports of any Invasive Carp in Chickamauga. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Furthermore, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020, 2021 nor 2022.

Status and management of fish species:

Largemouth bass (LMB): Spring black bass electrofishing surveys were conducted at Nickajack in 2022 by TWRA. These are typically conducted every other year on this reservoir. Therefore, the next electrofishing survey at Nickajack is scheduled for the spring of 2024.

Past spring electrofishing surveys have shown low numbers of substock LMB for certain years (See LMB table below). However, the 2022 surveys had a figure of 15.67 substock LMB/hour. The overall CPUE for LMB however has been consistent over the past ten years of electrofishing surveys. The most recent figure from the 2022 electrofishing surveys (138.0 LMB/hour) was above the ten-year average of 105.0 LMB/hour. This figure was less than half the 2022 figure in the year 2014 which was at 66.3 LMB/hour. Historically, Nickajack Reservoir has been categorized by high catch rates for LMB when compared to other Tennessee reservoirs. A variety of suitable habitat (rocky shoreline, humps, woody debris, and consistent aquatic vegetation presence on the lower end of the reservoir) has provided an environment favorable to LMB as well as other fish species. Although, slight concerns exist regarding perceived low recruitment, good fishing success for LMB is expected in Nickajack Reservoir at the current time. Currently there is a 15-inch minimum size limit (MLL) for LMB at Nickajack Reservoir with a daily creel limit of 5, which is also the statewide regulation for LMB. The CPUE for LMB $\geq$ 15” in the spring 2022 electrofishing surveys was 47.3 LMB/hour which is above average when compared to the past ten years. The CPUE for substock LMB was the second highest in ten years at 15.67 substock LMB/hour which was also over double the ten-year average. Overall conditions (Wr’s) for all sizes of LMB collected were satisfactory indicating a healthy population with ample forage which is typically the case for LMB at Nickajack as well as other species of fish.

In 2015 a Florida largemouth bass (FLMB) stocking program was launched in Nickajack Reservoir. There were three main stocking sites selected (Sullivan’s Bend, Rankin Cove-Marion Co. Park, and Nickajack

Cave embayment) and annual stockings of FLMB fingerlings will be repeated for the next several years at these locations by TWRA. Vegetation presence and other favorable bass habitat were present at these stocking locations. Ongoing data surveys (i.e., electrofishing, genetics, bass tournament results and creel) will be conducted during this project to evaluate its success. Distributed among these three specified sites were a total of 91,052 FLMB fingerlings stocked into Nickajack in 2015 Most recently, there were 133.686 FLMB fingerlings stocked in 2022. All years of FLMB stockings are listed in LMB table below.

Information from the roving creel survey in 2017 showed that the average size largemouth bass caught weighed 2.91 lbs. which is near average when compared to past creel surveys on Nickajack. Those anglers who were fishing for “black bass” caught them at an average catch rate of 0.91 bass/hour. Another annual roving creel survey was conducted on Nickajack Reservoir in 2022 but no weights were collected. The overall catch rate for “any black bass” was 0.77 bass/hour from this 2022 survey. Largemouth bass made up 32.7% of the species composition that were caught in Nickajack in 2022. Of largemouth bass that were caught, 97.2% were released. Additionally, bass fishermen made up 51.9% of the anglers who were interviewed.

Smallmouth bass (SMB): During the most recent spring black bass electrofishing surveys at Nickajack Reservoir, smallmouth bass were minimally represented (1.7 SMB/hour) at the historic electrofishing sites conducted on the lower end of Nickajack Reservoir. This low representation of SMB on the lower end of Nickajack is typical. In contrast, near the headwaters of Nickajack Reservoir (Chickamauga tailwaters), several smallmouth bass are caught by anglers, with some being of the trophy status. Smallmouth bass were also observed during multiple SMB targeted electrofishing surveys there. This riverine environment with rocky habitat and ample amounts of forage, have proven to be conducive to a good and sustainable smallmouth bass fishery in this tailwater of Chickamauga Reservoir. Excellent fishing opportunities for SMB exist in the headwaters of this reservoir basically year around, peaking in the cooler months. The Region 3 Reservoir crew specifically conducts data surveys in this tailwater area (See Nickajack headwater report) to better evaluate the smallmouth bass fishery in Nickajack as well as other species present there. Additionally, SMB were only observed at a CPUE of 0.50 SMB/seine haul from the 2017 mid-summer seining surveys, conducted throughout the reservoir, and none were collected in 2018. No seining surveys have been conducted since 2018. Smallmouth bass made up 12.2% of the species composition that was caught on Nickajack in 2022 according to the annual roving creel survey.

Spotted bass (SPB): According to the bi-annual electrofishing surveys on Nickajack Reservoir, spotted bass numbers have declined as is evident with the past ten years of surveys. This is especially evident on the lower end of the reservoir where they were historically present in reputable, consistent numbers as verified by spring electrofishing surveys. The realization of low representation of spotted bass is also true for other reservoirs on the TN River within Region 3 for reasons not clearly understood. It is possible that water flows and shifts in preferred and available habitat may have warranted some overall movements and declines of spotted bass. The delayed summer pool fill (one month later - May 15 instead of the previous April 15) of TN River reservoirs in Region 3 as part of a decision by TVA and the Reservoir Operations Study (ROS) may be a good candidate for negatively affecting spotted bass spawning success. This ROS plan was instituted in 2008. Electrofishing surveys are also conducted at the Nickajack headwaters (Chickamauga tailwaters) where a fair presence of spotted bass (possibly Alabama bass) exists. The overall CPUE from the electrofishing surveys have gone from a high of 34 SPB/hour in the year 2002 to a low representation of 4 SPB/hour in 2010, 1 SPB/hour in 2012 and zero in the years 2014, 2016, and 2018. There was an overall CPUE of 2.3 SPB/hour in 2020 and 3.0 SPB/hour in spring electrofishing surveys recorded. Caution should be given to any current SPB identification at Nickajack since Alabama bass influence is present in Nickajack Reservoir according to recent genetic tests there

collected by TWRA. Electrofishing surveys are also conducted at the Nickajack headwaters (Chickamauga tailwaters) where a fair presence of spotted bass, possibly Alabama bass or a mixture thereof, exists. Anglers targeting spotted bass should concentrate in the upper section of this reservoir. Currently there is a more liberal 15 spotted bass/day creel limit, no MLL in a specified area on the upper end of Nickajack Reservoir (Chickamauga Dam downstream to mouth of South Chickamauga Creek) as compared to most region and statewide regulations. This regulation was originally proposed by smallmouth bass anglers who fished this specific area and felt that the abundance of spotted bass were negatively affecting smallmouth bass there due to competition for food and habitat. The perception by anglers was that spotted bass were too numerous and therefore a more liberal limit was needed to help reduce spotted bass numbers. TWRA honored this request although creel surveys and observations show a limited amount of harvest of these bass despite this less restrictive creel limit.

Genetic testing: The presence of Alabama bass were confirmed through genetic tests performed by taking fin clips from “spotted bass” on the upper end (below Chickamauga Dam) of Nickajack in 2017. These fish were collected as part of the Nickajack headwater survey conducted in 2017. Of the 20 “spotted bass” collected in this genetic survey, 18 of those had some representation of Alabama bass. Only one true spotted bass out of the twenty was identified! Careful consideration should be given in identifying any “spotted bass” appearing fish from these waters without genetic confirmation since the native spotted bass and Alabama bass so closely resemble each other.

Crappie (black and white): A consistent crappie population exists in Nickajack Reservoir. Like largemouth bass, the best suitable habitat for crappie is found within the lower end of the reservoir where the water is more sluggish and more woody debris habitat can be found verses the more riverine characteristics of the upper end of Nickajack Reservoir. Fair to good fishing for crappie is expected annually at Nickajack. Nickajack Reservoir doesn’t experience as drastic of a winter-time drawdown as other TN River impoundments upstream (E.g., Chickamauga and Watts Bar reservoirs, 5-6 ft winter drawdowns). Therefore, the negative effects of springtime reservoir pool fluctuations are not as prevalent, comparatively speaking, and are therefore more conducive to better spawning success for crappie, and bass. However, because it is riverine in nature, during high rainfall events the river flow on much of the reservoir can be quite drastic, influencing water elevation fluctuations and water flow.

Fall trapnetting surveys were conducting at Nickajack Reservoir for the first time in the fall of 2014 where both white and black crappie were represented. The substock CPUE for both were very similar with black crappie being 1.60 BC/net night and white crappie at 1.53 WC/net night. Annual trapnetting surveys for crappie at Nickajack are not warranted at this time. According to past roving creel surveys conducted in 2012 on Nickajack, the catch rate by anglers in pursuit of “any crappie” on Nickajack was very good at 4.21 crappie/hour. This same catch rate fell to 2.56 crappie/hour during the creel survey conducted in 2017 and down further in 2022 to 0.73 crappie/hour which is comparable to other TN reservoirs. Anglers expended an estimated amount of $21,530 while pursuing crappie on Nickajack in 2022 according to the annual roving creel survey that year. Some black crappie were captured in our spring black bass surveys in 2020 and that information is in the crappie table below. This was not a targeted crappie effort however and no white crappie were collected.

Redear: The redear sunfish population in Nickajack continues to provide great opportunities for anglers, reservoir wide. Past electrofishing surveys showed a good population of redear sunfish distributed from the 4 to 10-inch range. Several areas of suitable spawning habitat and desired food coexist in the reservoir which typically yields consistent year classes of redear sunfish. According to a roving creel survey conducted in 2011, the average catch rate for “sunfish” (redear/bluegill) was 5 redear/hour but down in 2012 to 2.18 redear2/hour. These same type roving creel surveys revealed a catch rate of 1.85 sunfish/hour in 2022. Redear presence in the 2014 mid-summer seining surveys were low at 0.30

redear/seine haul, 0.50 redear/seine haul in 2015, and back to 0.30 in 2016, 2017, and 2018 surveys. No seining surveys have been conducted since 2018. Fall trapnetting surveys (targeting crappie) conducted in 2014 realized a catch rate of 134.5 redear/net night lending evidence of favorable redear spawning conditions. Trapnetting surveys are not conducted annually at Nickajack Reservoir. In 2018, TWRA stocked 63,999 redear fingerlings into Nickajack Reservoir. Continued excellent opportunities should exist for anglers in pursuit of redear sunfish at Nickajack.

Bluegill: There is an excellent population of bluegill in Nickajack Reservoir. Angler pursuit and success for bluegill at Nickajack are expected to remain consistent throughout the year. Multiple areas of bluegill habitat exist throughout Nickajack Reservoir. Bluegill are highly regarded as a fish for consumption by anglers who fish Nickajack, as well as other reservoirs. Mid-summer seining surveys are usually dominated by bluegill presence. The mid-summer seining samples conducted in 2014 revealed bluegill catch rates were at a decade low however at 1.30 bluegill/seine haul but still higher than redear sunfish for this same survey. In 2016, bluegill CPUE's rebounded in these summer seining surveys to a catch rate of 16.50 bluegill/seine haul and in 2017 realized a CPUE of 19.50 bluegill/seine haul. These same summer seining surveys had a CPUE of 7.80 bluegill/seine haul in 2018 which is near average when compared to the past ten years. No seining surveys have been conducted since 2018. Fall trapnetting surveys conducted in 2014, targeting crappie, showed a bluegill presence of 22.75 bluegill/net night which is a much lower representation than that of redear sunfish from the same collection. Trapnetting surveys are not conducted annually on Nickajack Reservoir. According to a roving creel survey conducted in 2011, the average catch rate for "sunfish" (redear/bluegill) was 5 sunfish/hour but down in 2012 to 2.18 sunfish/hour. These same type roving creel surveys revealed a catch rate of 1.85 sunfish/hour in 2022.

Sauger: Sauger are not stocked in Nickajack Reservoir at the current time, nor have they been in many years. Sauger, which are native to the TN River, do exist in Nickajack, however. Sauger also migrate via dam passage between reservoirs that have been stocked in the past. Neighboring Chickamauga Reservoir (upstream) has received sauger stockings in the distant past but not currently due to a switch in stocking regimes to the sauger's cousin, walleye, in 2014. The lack of consistent propagation in the hatchery system and therefore availability of sauger fingerlings is the biggest limitation for including Nickajack, as well as other viable reservoirs, with annual stockings of sauger. Without a consistent creel survey, it is impossible to determine the current angling success rate of anglers pursuing sauger. A yearlong roving creel survey was conducted on Nickajack in 2017 and 2022 with no sauger recorded in any of the interviews conducted. Due to the proven necessity of stocking sauger annually for sustaining sauger populations, and the lack of that currently, fishing success for sauger in Nickajack Reservoir will be limited and dependent upon successful natural year classes. Reports of walleye catches are becoming more common on the upper reaches of Nickajack most likely influenced by walleye stockings in neighboring upstream Chickamauga Reservoir. Nickajack did however receive the first stocking of walleye in 2021(see walleye info below).

Walleye: Due to the realized success of the walleye stocking projects in upstream reservoirs, (Chickamauga and Watts Bar); walleye fingerlings were also stocked into Nickajack Reservoir for the first time in 2021. There were a total of 52,979 walleye fingerlings stocked in this initial stocking. Most recently, there were 42,550 walleye fingerlings stocked into Nickajack in 2022. Due to the historic success of sauger in Nickajack, it is likely that walleye will exhibit the same success there. Going forward, Nickajack Reservoir will be on a stocking allocation request to be stocked with walleye on an annual basis. The realization of this request will depend on hatchery production and priorities of stockings as compared to other reservoirs based on several determining factors.

Catfish: Although TWRA doesn't conduct targeted catfish studies at Nickajack Reservoir, the utilization of creel data form roving surveys give good insight to this fishery. However, creel surveys are not conducted

every year at Nickajack Reservoir. Creel surveys reveal catch rates, angling pressure, average sizes of catfish caught, species compositions, and other dynamics. Commercial fishing reports regarding catfish harvest at Nickajack are also beneficial to the overall evaluation of this fishery. Additionally, fishing reports from anglers and guides are consistent in reference to the success of this catfish fishery. Blue, channel, and flathead catfish all inhabit Nickajack Reservoir. As with other Tennessee reservoirs in this region of the state, fishing success for catfish and angler pursuit is expected to remain favorable. In 2012, catfish anglers expended an estimated $74,190 and $88,600 in 2017 in pursuit of “catfish” while experiencing an average catch rate of 1.40 catfish/hour in 2012, 1.56 catfish/hour in 2017, and 0.91 catfish/hour in 2022 according to annual roving creel surveys conducted during those two years by TWRA. The headwaters of Nickajack Reservoir (Chickamauga tailwaters) are very productive in terms of catfishing success by anglers pursuing them. Below is a table reflecting creel data for both channel and blue catfish caught at Chickamauga. Specifically, the data represents the average catch rate and size of each species over the past ten years. Years with no data are reflective of years with no creel surveys. Overall, the figures expressed in this table show consistency with these two species of catfish. Due to Covid restricted operations in 2022, personnel were not able to evaluate fish in boats for much of the year and therefore there were no recordings to distinguish between blue catfish and channel catfish. However, the overall catch rate for “any catfish” recorded during this 2022 creel survey was 0.91 catfish/hour.

Catch rates (#/hour) & Average weights (lbs.)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVG
Nickajack Channel Cat Catch Rate		0.07	0.12					0.35			**0.18**
Nickajack Channel Cat Avg weight		2.43	2.93					2.99			**2.78**
Nickajack Blue Cat Catch Rate		0.97	1.26					1.12			**1.12**
Nickajack Blue Cat Avg weight		2.81	3.17					3.71			**3.23**

Striped bass: A striped bass fishery exists in Nickajack Reservoir even though they are not stocked there. Migration of striped bass through dams from reservoirs that have striped bass stocking programs can explain this existence (i.e., Chickamauga and Watts Bar reservoirs upstream). Also, it is possible that a limited amount of natural reproduction may occur during years with appropriate flow within Nickajack’s long riverine system. However, any natural spawning success is not anticipated to be consistent or provide a large contribution to striped bass year classes. Ample forage bases of shad (gizzard and threadfin) and skipjack herring, especially in the headwater section preferred by striped bass, help nourish and sustain striped bass present there. Success regarding angling for striped bass is expected at Nickajack Reservoir but likely will not be as productive as annually stocked reservoirs. A year-long roving creel survey conducted in 2017 showed a catch rate of 0.78 striped bass/hour by anglers. Another year-long roving creel survey was conducted in 2022 but no striped bass were recorded during the creel interviews.

Lakewide Creel Results

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	-	-	-	-	193,428	-	-	-	-	131,899	162,664
Angler Hrs./Acre	-	-	-	-	18.65	-	-	-	-	12.80	15.73
Angler Trips	-	-	-	-	30,591	-	-	-	-	22,230	26,411
Value of Fishery (Trip expenitures-creel)											
All Species	-	-	-	-	$548,970	-	-	-	-	$850,800	699,885

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	-	-	-	-	111,783	-	-	-	-	92,103	101,943
(hrs./acre)	-	-	-	-	10.78	-	-	-	-	8.88	9.83
Any Black Bass (hrs.)	-	-	-	-	111,783	-	-	-	-	68,468	90,126
(hrs./acre)	-	-	-	-	10.78	-	-	-	-	6.60	8.69
Largemouth Bass (hrs.)	-	-	-	-	-	-	-	-	-	16,191	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	1.56	-
Smallmouth Bass (hrs.)	-	-	-	-	-	-	-	-	-	7,113	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	0.69	-
Spotted Bass (hrs.)	-	-	-	-	-	-	-	-	-	331	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	0.03	-
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (creel)	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	2.09	-	-	-	-	1.26	1.68
Non-Tournament Catch Rate (creel)	-	-	-	-	0.87	-	-	-	-	0.69	0.78
Value of Fishery (Trip Expenditures)											
All Black Bass	-	-	-	-	$337,700	-	-	-	-	$646,520	$492,110
Any Black Bass	-	-	-	-	$337,700	-	-	-	-	$498,640	$418,170
Largemouth Bass	-	-	-	-	-	-	-	-	-	$105,120	-
Smallmouth Bass	-	-	-	-	-	-	-	-	-	$40,670	-
Spotted Bass	-	-	-	-	-	-	-	-	-	$2,090	-

Largemouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	0.67	-	17.00	-	2.33	-	1.00	-	15.67	7.33
CPUE (mid-summer seine)	3.30	2.80	2.80	2.50	2.00	1.00	-	-	-	-	2.40
Density (spring electrofishing)											
PSD	-	75.0	-	76.0	-	92.0	-	97.0	33.0	84.0	76.2
RSD (preferred)	-	39.0	-	34.0	-	42.0	-	61.0	2.0	41.0	36.5
CPUE (total)	-	66.3	-	103.7	-	115.0	-	102.0	-	138.0	105.0
CPUE ≥ Stock	-	48.7	-	86.7	-	112.7	-	101.0	-	122.3	94.3
CPUE ≥ MLL (15-inches)	-	15.4	-	28.7	-	46.0	-	59.3	-	47.3	39.3
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	91.7	-	89.4	-	95.1	-	96.9	92.7	92.9	93.1
Quality to Preferred	-	85.4	-	92.0	-	96.5	-	96.1	95.8	98.4	94.0
Preferred to Memorable	-	88.3	-	91.1	-	96.1	-	93.9	40.2	89.8	83.2
Memorable to Trophy	-	112.7	-	92.8	-	93.5	-	103.2	-	78.3	96.1
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	52,698	55,806	79,685	51,488	122,234	56,411	133,686	78,858
#/Acre	-	-	-	5.08	5.38	7.68	5.00	11.80	5.44	12.89	7.61
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-	-	0.50	-
Catch Rate, num./hr. (any black bass)	-	-	-	-	0.91	-	-	-	-	0.77	0.84
Harvest Rate, num./hr. (any black bass)	-	-	-	-	0.02	-	-	-	-	0.04	0.03
% Released	-	-	-	-	95.7	-	-	-	-	97.2	96.45
Mean Weight	-	-	-	-	2.91	-	-	-	-	-	-

Note: Stocked fish are FLMB

Note: Data collected in 2021 was a targeted genetics sample for ≤ 14 in. LMB, effort was not recorded

Smallmouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.30	-	0.80	0.50	0.50	-	-	-	-	-	0.53
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	1.7	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-	-	0.55	-
Catch Rate, num./hr. (any black bass)	-	-	-	-	0.91	-	-	-	-	0.77	0.84
Harvest Rate, num./hr. (any black bass)	-	-	-	-	0.02	-	-	-	-	0.04	0.03
% Released	-	-	-	-	97.8	-	-	-	-	96.5	97.2
Mean Weight	-	-	-	-	5.40	-	-	-	-	-	-

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	6.50	-	3.80	5.00	0.80	-	-	-	-	-	4.03
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	2.3	-	3.0	2.7
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	-	-	-	0.38	-
Catch Rate, num./hr. (any black bass)	-	-	-	-	0.91	-	-	-	-	0.77	0.84
Harvest Rate, num./hr. (any black bass)	-	-	-	-	0.02	-	-	-	-	0.04	0.03
% Released	-	-	-	-	100.0	-	-	-	-	97.3	98.7
Mean Weight	-	-	-	-	-	-	-	-	-	-	-

Black Crappie

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	1.60	-	-	-	-	-	-	-	-	1.60
Substock CPUE (summer seining)	-	-	-	1.00	-	-	-	-	-	-	1.00
Density (electrofishing)											
PSD	-	-	-	100.0	-	100.0	-	100.0	-	-	100.0
RSD (preferred)	-	-	-	79.0	-	100.0	-	100.0	-	-	93.0
CPUE (total)	-	-	-	26.9	-	17.7	-	18.3	-	-	21.0
CPUE ≥ Stock	-	-	-	26.9	-	17.7	-	18.3	-	-	21.0
CPUE ≥ MML (10 inches)	-	-	-	21.2	-	17.3	-	18.3	-	-	18.9
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	89.7	-	-	89.7
Quality to Preferred	-	-	-	96.1	-	-	-	-	-	-	96.1
Preferred to Memorable	-	-	-	93.7	-	93.4	-	90.8	-	-	92.7
Memorable to Trophy	-	-	-	90.0	-	87.8	-	89.7	-	-	89.2
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	7,815	-	-	-	-	3,948	5,882
Angler Hrs./Acre	-	-	-	-	0.75	-	-	-	-	0.38	0.57
Fishing Success (creel)											
Catch Rate (any crappie)	-	-	-	-	2.56	-	-	-	-	0.73	1.65
Harvest Rate (any crappie)	-	-	-	-	1.55	-	-	-	-	0.54	1.05
% Released (black crappie)	-	-	-	-	46.2	-	-	-	-	-	-
Mean Weight (black crappie)	-	-	-	-	0.62	-	-	-	-	-	-
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	-	-	-	$32,540	-	-	-	-	$20,790	$26,665

White Crappie

Recruitment (trap-netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	1.53	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	-	-	-	-	7,815	-	-	-	-	3,948	5,882
Angler Hrs./Acre	-	-	-	-	0.75	-	-	-	-	0.38	0.57
Fishing Success (creel)											
Catch Rate (any crappie)	-	-	-	-	2.56	-	-	-	-	0.73	1.65
Harvest Rate (any crappie)	-	-	-	-	1.55	-	-	-	-	0.54	1.05
% Released (white crappie)	-	-	-	-	47.5	-	-	-	-	-	-
Mean Weight (white crappie)	-	-	-	-	0.71	-	-	-	-	-	-
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	-	-	-	-	$32,540	-	-	-	-	$20,790	$26,665

Walleye

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2020*	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)												
PSD	-	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-		-	-	
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)												
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Stocking												
#	-	-	-	-	-	-	-	-	-	52,979	42,550	47,765
#/Acre	-	-	-	-	-	-	-	-	-	5.11	4.10	4.61
Angler Pressure (creel)												
Angler Hrs.	-	-	-	-	-	-	-	-	-	-	-	-
Angler Hrs./Acre	-	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)												
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
% Released	-	-	-	-	-	-	-	-	-	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)												
Walleye	-	-	-	-	-	-	-	-	-	-	-	-

Striped Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-2	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours	-	-	-	-	823	-	-	-	-	281	552
Angler Hours/Acre	-	-	-	-	0.08	-	-	-	-	0.03	0.05
Fishing Success (creel)											
Catch Rate (intended)	-	-	-	-	0.78	-	-	-	-	0.00	0.39
Harvest Rate (intended)	-	-	-	-	0.00	-	-	-	-	0.00	0.00
% Released	-	-	-	-	100.0	-	-	-	-	100.0	100.0
Mean Weight	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures-creel)											
Striped Bass	-	-	-	-	$17,960	-	-	-	-	$680	$9,320

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	10.80	1.30	7.80	16.50	19.50	7.80	-	-	-	-	10.62
Substock CPUE (trap-netting)	-	22.75	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	-	-	-	5,258	-	-	-	-	3,338	4,298
Angler Hrs./Acre	-	-	-	-	0.51	-	-	-	-	0.32	0.42
Fishing Success (creel)											
Catch Rate (any sunfish)	-	-	-	-	6.06	-	-	-	-	1.85	3.96
Harvest Rate (any sunfish)	-	-	-	-	3.35	-	-	-	-	0.71	2.03
% Released (bluegill)	-	-	-	-	67.8	-	-	-	-	100.0	83.9
Mean Weight (bluegill)	-	-	-	-	0.25	-	-	-	-	-	-
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	-	-	-	-	$13,210	-	-	-	-	$16,890	$15,050

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	4.00	0.30	0.50	0.30	0.30	0.30	-	-	-	-	0.95
Redear CPUE (electrofishing)	-	-	-	-	-	-	-	-	-	-	-
Substock CPUE (trap-netting)	-	134.50	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	-	-	-	-	5,258	-	-	-	-	3,338	4,298
Angler Hrs./Acre	-	-	-	-	0.51	-	-	-	-	0.32	0.42
Fishing Success (creel)											
Catch Rate (any sunfish)	-	-	-	-	6.06	-	-	-	-	1.85	3.96
Harvest Rate (any sunfish)	-	-	-	-	3.35	-	-	-	-	0.71	2.03
% Released (redear)	-	-	-	-	38.1	-	-	-	-	100.0	69.1
Mean Weight (redear)	-	-	-	-	0.44	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	-	-	-	-	$13,210	-	-	-	-	$16,890	$15,050

Catfish

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	-	-	-	-	35,601	-	-	-	-	23,327	29,464
Angler Hrs./Acre	-	-	-	-	3.43	-	-	-	-	2.25	2.84
Fishing Success (creel)											
Catch Rate (any catfish)	-	-	-	-	1.53	-	-	-	-	0.91	1.22
Harvest Rate (any catfish)	-	-	-	-	0.40	-	-	-	-	0.00	0.20
% Released (channel)	-	-	-	-	67.9	-	-	-	-	-	-
Mean Weight (channel)	-	-	-	-	2.99	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)											
All Catfish	-	-	-	-	$88,600	-	-	-	-	$126,280	$107,440

Lake Sturgeon

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	-	-	-	-	-	64	-
#/Acre	-	-	-	-	-	-	-	-	-	0.006	-

Shad

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	18.7	-	18.3	-	8.0	-	4.3	12.3
Threadfin CPUE	-	-	-	-	-	-	-	-	-	-	-

Habitat Enhancement - 2022

Type of Work	Details	Quanity	
		New	Renovated
None Performed			

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	Non Performed	Non Performed
Dissolved Oxygen	Non Performed	Non Performed
PH	Non Performed	Non Performed
Conductivity	Non Performed	Non Performed

Nickajack Angler Attitude Surveys (2022)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, average size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

TWRA's Region 3 Reservoir Fish Management sampled the angling public with attitude surveys in 2022 on two reservoirs in Region 3 that creel surveys were conducted (Cordell Hull and Nickajack reservoirs).

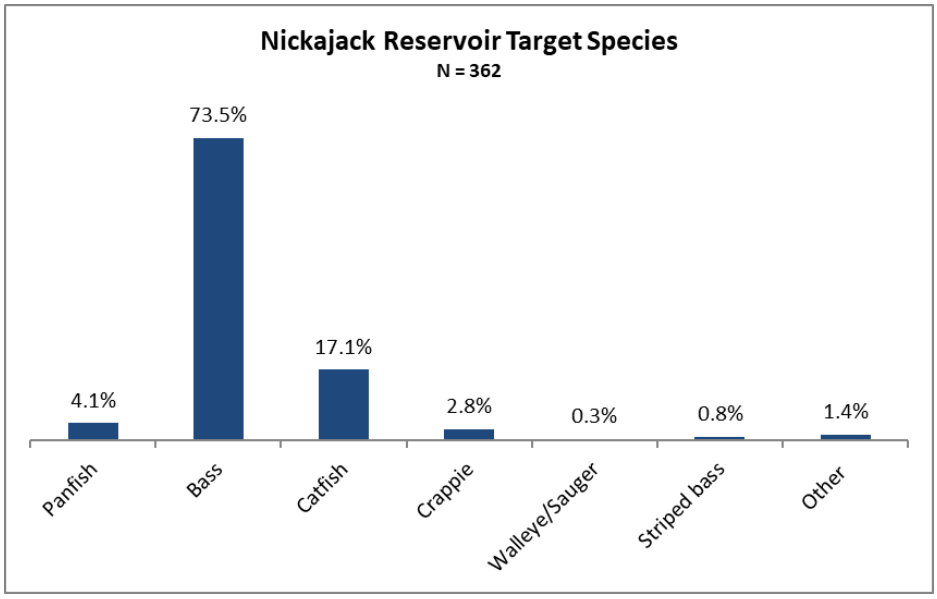
Overall "approval" of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to the most recent surveys. We feel confident that this summary of our "angler attitudes" will provide valuable insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

No creel surveys have been conducted on Nickajack Reservoir since 2017. The following information is from angler interviews taken in 2022 at Nickajack Reservoir:

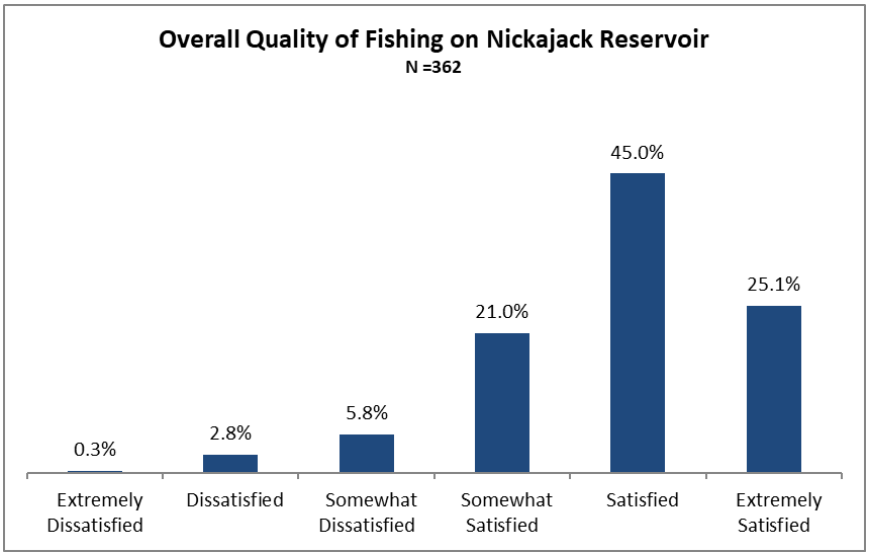
There were a total of 362 anglers who were fishing at Nickajack Reservoir interviewed by a creel clerk for the angler attitude survey in 2022. This was a year-long roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Nickajack was bass (73.5%) with catfish being a distant second (17.1%) (see graph below).



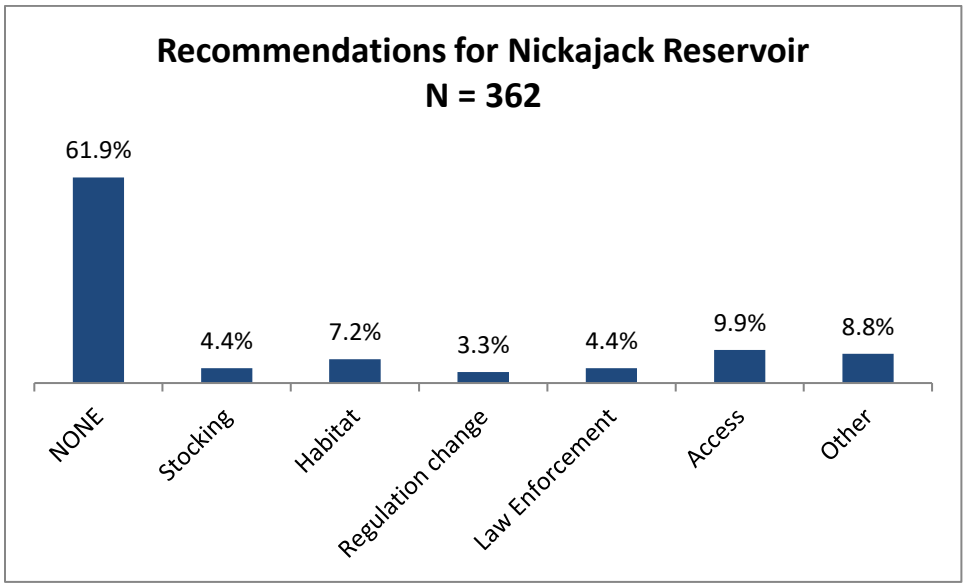
These surveys also revealed that anglers who identified “Bass” as their primary target species (n=266), 59.0% of those (n=157) also fished bass tournaments. On average, these bass tournament fishermen at Nickajack Reservoir fished an average of 10.2 bass tournaments/year there. This figure near average when compared to other reservoirs in the state where bass tournaments occur.

As the graph below depicts, anglers expressed a high satisfaction rating (91.1%) in 2022 overall when asked about the “overall quality of fishing on Nickajack Reservoir”.



When these anglers, who fish Nickajack Reservoir, were asked if they had any recommendations for the overall management of Nickajack Reservoir the large majority (61.9%) had “NONE” (graph below).

“Habitat” and “boating access” were the categories with the most recommendations of those interviewed who had a concern/recommendation. Boating access concerns are a common theme across various reservoirs within Region 3. TWRA strives to maintain agency ramps while providing access. Habitat work is conducted on a 5-year rotation. This typically involves adding and/or refurbishing fish attractor buoy sites. These sites are available on the TWRA website.



Overall, the angler attitudes obtained in 2022 from those fishing at Nickajack Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA. This high approval rating has been consistent on Nickajack since these surveys were implemented in the year 2013.

Nickajack Reservoir Headwater (2021 Annual Report)

Description

Area: Due to the uniqueness displayed in “tailwater areas”, a more in-depth survey was determined to be a good management tool into the overall evaluation of reservoirs established on the TN River. Unique characteristics exist in these tailwater areas and exhibit differences in flows, habitat, temperature, clarity, etc. as compared to the reservoirs as a whole. Thus, these sampling efforts are reported specifically in relation to this “tailwater area” and not the reservoir. Since conditions in this area can fluctuate drastically from day to day as well as hour to hour, thus possibly effecting survey outcomes, it is advised that established long time trends be utilized and considered before making any management observations or recommendations.

This study area typically exists between Chickamauga Dam downstream to the area of South Chickamauga Creek.

Counties: Hamilton

Summary:

Sport fish surveys: Most of the data collections are aimed at black bass and to a lesser extent striped bass at the current time within this location. No sportfish surveys were conducted in 2020 or 2021. There as a fall electrofishing survey conducted in 2022. All 3 native black bass species were represented with largemouth bass being the most dominant. Spotted bass were also well represented which could be representing Alabama bass or a hybrid mix thereof. This was the only recording of smallmouth bass within the past ten years when surveys were taken. Condition factors for all black bass were good but smallmouth bass exhibited the lowest values among the three black bass species.

Forage Base: Both gizzard and threadfin shad were represented in the 2022 survey. Threadfin shad were collected at a rate almost double that of gizzard shad which is normal.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory our TN River reservoirs for their presence. A surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for possible observations. TVA also helped with these surveys initially with their own timing and methodologies. A summary of TWRA’s efforts for 2021 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/29/2022 and continuing through 8/22/2022 in Nickajack Reservoir below Chickamauga Dam. Boat electrofishing was used to survey tailwater areas directly below Chickamauga Dam. The general survey area was located from Chickamauga Dam downstream to the C.B Robinson Bridge (Dupont Pkwy). One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 2.10 km below the dam moving upstream. The face of the dam, lock chambers, a section of North Chickamauga Creek, and a small pocket upstream of South Chickamauga Creek were also surveyed. North Chickamauga Creek was sampled from the mouth, upstream to the 153 Bridge (approximately 500 km). Standard electrofishing settings were used. Temperatures ranged from 11 to 30 C, the average discharge was 18,130 cfs and the average tailwater elevation was 634. 32 ft.

Total surveillance effort in 2022 was 13.46 hours. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.
At least 10 different species were observed in Nickajack Reservoir in 2022; Buffalo spp., Longnose Gar, Spotted Gar, Gizzard Shad, Threadfin Shad, Skipjack Herring, Redear Sunfish, Sucker spp., Channel Catfish, and Freshwater Drum.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys and brood gamefish collections in Tennessee River reservoirs. Furthermore, a roving creel clerk was surveying on neighboring Chickamauga three days per week in 2021. This position interacts with anglers throughout the reservoir and has had no sightings or reports of any Invasive Carp in Chickamauga. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Furthermore, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020 nor 2021.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	1.55	-	-	-	-	7.30	4.42
Density (fall electrofishing)											
PSD	-	-	-	-	92.4	-	-	-	-	63.0	77.7
RSD (preferred)	-	-	-	-	39.0	-	-	-	-	29.0	34.0
CPUE (total)	-	-	-	-	24.9	-	-	-	-	36.2	30.5
CPUE ≥ Stock	-	-	-	-	23.4	-	-	-	-	28.9	26.2
CPUE ≥ MLL (15-inches)	-	-	-	-	0.6	-	-	-	-	7.8	4.2
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	92.0	-	-	-	-	96.1	94.0
Quality to Preferred	-	-	-	-	98.7	-	-	-	-	98.4	98.5
Preferred to Memorable	-	-	-	-	100.9	-	-	-	-	97.4	99.2
Memorable to Trophy	-	-	-	-	110.2	-	-	-	-	107.7	108.9

Samples taken during day unless otherwise noted

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	2.96	-
Density (fall electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	63.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	44.0	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	3.8	-
CPUE (total)	-	-	-	-	-	-	-	-	-	11.5	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	8.6	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	3.8	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	1.6	-
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	86.0	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	79.6	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	83.8	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	93.0	-

Samples taken during day unless otherwise noted

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	1.87	-	-	-	-	5.07	3.47
Density (fall electrofishing)											
PSD	-	-	-	-	74.0	-	-	-	-	43.0	58.5
RSD (preferred)	-	-	-	-	32.0	-	-	-	-	15.0	23.5
CPUE (total)	-	-	-	-	33.9	-	-	-	-	30.9	32.4
CPUE ≥ Stock	-	-	-	-	32.0	-	-	-	-	25.8	28.9
Condition (fall electrofishing)											
Stock to Quality	-	-	-	-	97.0	-	-	-	-	96.1	96.6
Quality to Preferred	-	-	-	-	95.9	-	-	-	-	86.5	91.2
Preferred to Memorable	-	-	-	-	99.6	-	-	-	-	86.7	93.2

Samples taken during day unless otherwise noted

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	-	-	-	-	-	-	43.7	-
Threadfin CPUE	-	-	-	-	-	-	-	-	-	92.3	-

Parksville Reservoir (2022 Annual Report)

Reservoir Facts:

Area (acres): 1,930 **Mean Depth (feet): N/A** **Shoreline (miles):** 47

Counties: Polk

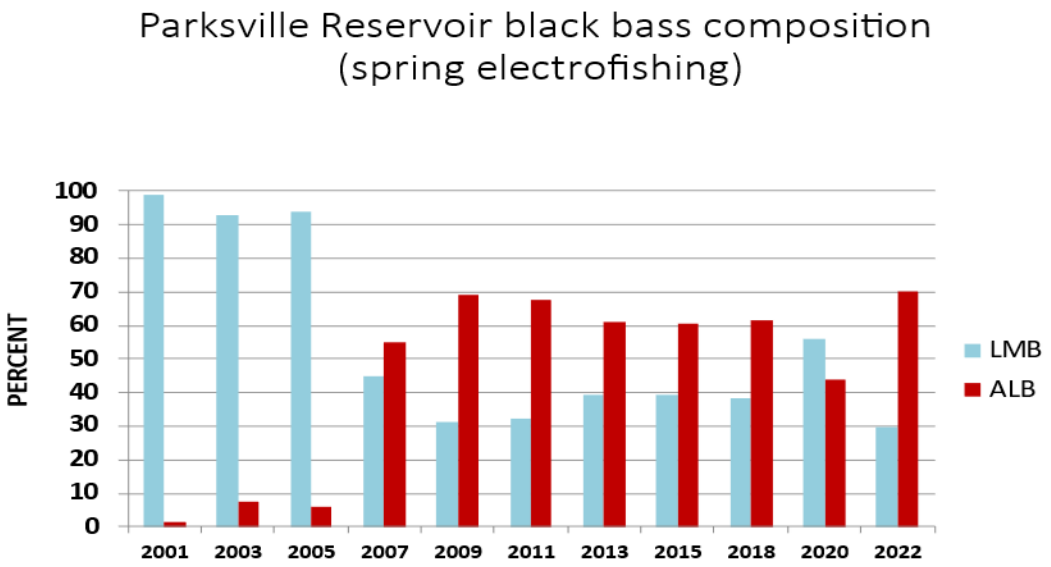
Reservoir Description: Parksville Reservoir is a small impoundment that was created by the Tennessee Electric Power Company with the creation of Ocoee Dam #1 in 1911. The Tennessee Valley Authority (TVA) purchased this facility in 1939. Parksville has 1,930 surface acres and is in Polk County which is in the extreme southeastern portion of Tennessee. Parksville Reservoir is characterized by being eutrophic and contains various types warmwater fish species. Parksville Reservoir has been greatly impacted over its life span by the copper mines located on the Ocoee River upstream of Parksville Reservoir as well as significant deforestation practices and correlated high sediment loads. The dynamics within Parksville Reservoir have greatly changed within the past two decades in relation to increased aquatic vegetation abundance and species composition with the realization of non-native species like Alabama bass and blueback herring from unknown sources. Parksville has been stocked by TWRA in recent years with bluegill, redear sunfish, black crappie, musky, walleye, and trout. A year-long roving creel survey was conducted on Parksville Reservoir during the year 2019 (See results in tables below per species).

Hydrilla was discovered in Parksville Reservoir in 2010 according to information from TVA. At that time, most of the hydrilla was relatively isolated to the shallow water habitat around the Ocoee Inn. By 2016, the species was distributed throughout the reservoir, constituting approximately 182 acres (10 percent) of the water body. Surveys of directly adjoining water bodies (Ocoee #2, Ocoee #3, and the Hiwassee River) in 2016 suggest that hydrilla is currently not present directly above Parksville Reservoir or below Ocoee #1 Dam. This information was gathered from TVA reports. To combat the hydrilla at Parksville, TVA instituted a triploid grass carp stocking program in 2018.

Status and management of fish species:

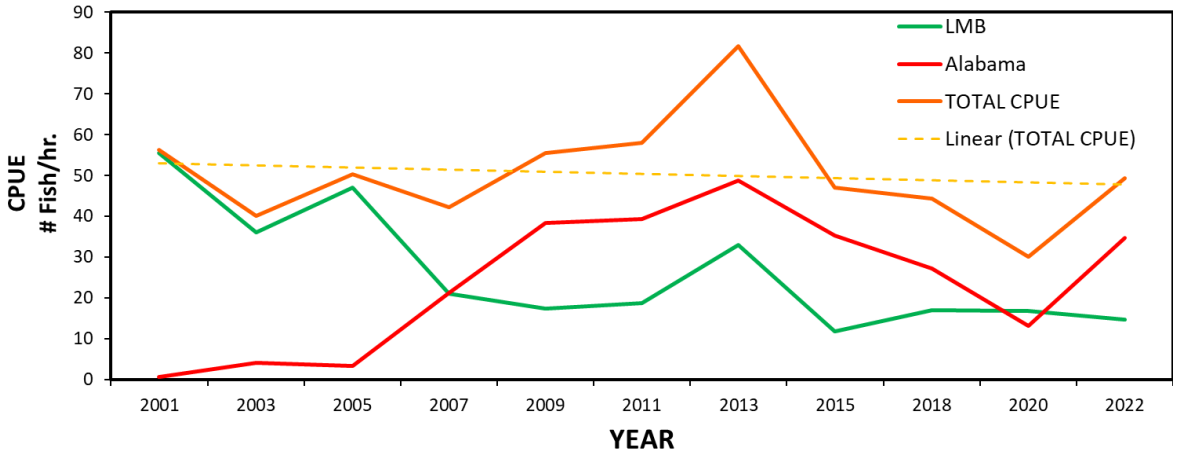
Largemouth bass (LMB): TWRA conducted spring black bass electrofishing surveys at Parksville Reservoir in 2022. These surveys are typically conducted every other year therefore the next electrofishing survey is scheduled for 2024.

Since the realization of Alabama bass in Parksville and the advancement of this species, the LMB population in Parksville has decreased according to the black bass composition realized from TWRA spring electrofishing surveys. CPUE for substock LMB has been consistently low over the recent past years of black bass electrofishing surveys as compared to historical surveys (especially before the year 2001 when Alabama bass presence was first realized). Specifically, the total CPUE for substock LMB realized from these spring electrofishing surveys were 3.0 LMB/hour in the 2011, 3.33 LMB/hour in the 2013 and 0.33 LMB/hour for 2015. NO substock LMB were collected in the 2018, 2020, or 2022 spring black bass electrofishing surveys. Recent electrofishing surveys have shown that species composition in reference to black bass are heavily skewed towards Alabama bass with this invasive species consistently representing over 50% of the black bass composition at Parksville Reservoir. Before Alabama bass were realized, largemouth bass comprised 100% of the black bass presence at Parksville according to spring electrofishing surveys (see graph below).



(*Percentage of black bass distribution (largemouth bass vs. Alabama bass) by data collection year at Parksville Reservoir. These black bass were collected during bi-annual spring electrofishing surveys.)*

Mid-summer seining surveys have not had a good representation of Young of Year (YOY) LMB either in contrast to the high numbers of YOY Alabama bass found in the same surveys in past years. Overall CPUE of 33 LMB/hour in the 2013 electrofishing surveys did show a rebound from low numbers captured within the previous two surveys but the 2015 results were at an overall low at 11.7 LMB/hour. The overall CPUE in 2018 was near average when compared to the past ten years at 17.0 LMB/hour and near that same figure in 2020 at 16.8 LMB/hour. The overall CPUE for LMB in the 2022 spring electrofishing surveys was 14.7 LMB/hour which is below the 10-year average of 17.6 LMB/hour (*see graph below, Parksville electrofishing total CPUE for black bass species in Parksville Reservoir*).



The CPUE for LMB ≥ 15” was low at 2.33 LMB/hour in 2015 but higher in 2018 surveys at 7.0 LMB/hour and slightly higher in 2020 at 7.60 LMB/hour. This figure for the 2022 spring surveys was 6.3 LMB/hour which is slightly above the 10-year average of 5.7 LMB/hour. These CPUEs per spring electrofishing surveys do not favor the LMB population that is no doubt being negatively impacted by the dominant presence of Alabama bass.

The conditions (Wr’s) of LMB collected before 2018 were consistent with past years indicating adequate forage bases, surprisingly. However, these Wr’s were lower than normal in the 2018 surveys suggesting inadequate forage, possibly due to the competition for available food with Alabama bass. The Wr’s for LMB collected during the 2022 spring electrofishing surveys were satisfactory for Parksville standards. Historically, Parksville has been characterized by being very nutrient poor, having high contaminant levels (mainly copper) and hosting a very limited forage base.

A roving creel survey conducted at Parksville in 2019 showed a catch rate of 0.66 LMB/hour for those fishermen who were targeting largemouth bass. This same creel survey showed a catch rate for those anglers who were fishing for “any black bass” to be 0.45 bass/hour which is less than half of that same figure collected via creel surveys in 2013 of 1.09 bass/hour at Parksville.

Smallmouth bass (SMB): No representative samples of smallmouth bass have been collected in TWRA’s data surveys on Parksville Reservoir. Limited reports from a few fishermen say they catch smallmouth bass on a rare occasion. There are very limited expectations for catches of smallmouth bass in Parksville Reservoir on a consistent basis.

Alabama Bass: In 2001, a small representation of “spotted bass” (2 fish) were observed during the bi-annual spring electrofishing surveys on Parksville Reservoir by TWRA’s Region 3 Reservoir Management crew. Since 2001, it has been proven that these “spotted bass” appearing bass are Alabama bass according to genetic tests rather than the native northern strain “Kentucky” spotted bass historically found in TN reservoirs. Post genetic tests performed on “spotted bass” from Parksville confirm that they are all 100% Alabama bass. To date, these Alabama bass have been very prolific within the waters of Parksville. Since 2007, Alabama bass have consistently comprised most of the black bass population at Parksville which before their unsanctioned introduction, largemouth bass made up 100% of black bass collected during spring electrofishing surveys (see graph in Largemouth bass narrative). Furthering this point, overall CPUE from our electrofishing surveys have increased from a rate of 4.0 Alabama bass/hr in 2003 to a current ten-year average of 35.6 Alabama bass/hr. In addition, a fall black bass electrofishing survey was conducted in 2023 as well to try and capture more Alabama bass for an Age and Growth study. The overall CPUE for Alabama bass during this fall survey was 54.7 Alabama bass/hour which is the most recorded in Parksville surveys. The fall survey was conducted on the same sites that are electrofished for black bass in the spring surveys at Parksville.

Age and growth surveys conducted on Alabama bass in 2022 from electrofishing surveys showed a higher than usual annual mortality rate estimate of 55.1%. This high number is probably indicative of the fact that only 5 Alabama bass (4 from spring survey, 1 from fall survey) were over the age of 4. Additionally, this survey showed that on average an age 1 Alabama bass was 84mm (3.31 inches) in length and an age 3 Alabama bass was 275 mm (10.83 inches) in length.

According to the mid-summer seining surveys conducted in from 2011-2018, the catch rates for Young of Year (YOY) Alabama bass were typically higher than that of LMB which likely represents an overall greater reproductive success rate for Alabama bass over LMB. No seining surveys have been conducted since 2018. Condition factors (Wrs) for Alabama bass collected during the spring electrofishing surveys were comparable to that of the LMB from the same surveys.

The first Alabama bass state record in TN was caught in Parksville Reservoir in 2008 which weighed 5 lbs., 14 oz. This record fish was confirmed by genetic tests to be an Alabama bass. Since that record, two new record Alabama bass have been caught in TN waters in or adjoining Parksville Reservoir. The first of these newer records was caught a short distance below Parksville Dam (Ocoee River, tributary to Chickamauga Reservoir) in 2010 weighing 6 lbs., 07 oz. Currently the Alabama bass record for TN is once again from Parksville Reservoir weighing 7 pounds even, caught on March 10, 2014. The identity of these record fish was confirmed to be that of an Alabama bass by genetic tests.

Alabama bass continue to expand within this reservoir and beyond (E.g. Chickamauga and Watts Bar reservoirs). Historically, Parksville's limiting factors for largemouth bass were low forage bases, poor water quality and low presence of preferred bass habitat. Currently, aquatic vegetation is present on the upper and lower ends of the reservoir. Additionally, blue back herring have been documented in the reservoir by the U.S. Forest Service and by shad netting efforts conducted by the TWRA Region 3 Reservoir Crew in 2014. Not only are Alabama bass expanding but apparently so are other contributing factors to propel this population of non-native fish to expand and dominate Parksville Reservoir. The population of Alabama bass in Parksville is expected to unfortunately remain stable if not continuing to increase. It is perceived that Alabama bass will continue to negatively impact the native LMB population at Parksville Reservoir.

A roving, year-long, creel survey was conducted at Parksville in 2019. The results showed that anglers who were targeting Alabama bass caught them at a rate of 0.48 Alabama bass/hour. This creel survey also showed that 85.4% of Alabama bass caught were released despite a "No creel limit" regulation to encourage harvest of these fish at Parksville. The average weight of Alabama bass caught was 1.29 lbs. according to these same surveys.

Crappie: Parksville Reservoir does not rival other reservoirs that are close in geographic proximity (E.g., Chickamauga Reservoir, directly downstream) regarding reputable crappie fishing success. Because of the notable clarity in Parksville, it is better suited for black crappie rather than white crappie. Fishing for crappie on Parksville Reservoir will provide mixed success according to electrofishing surveys and recent creel surveys. No consistency regarding high catch rates of crappie is expected. In hopes of increasing the crappie populations at Parksville, both black and blacknose crappie were stocked in Parksville annually, beginning in 2013 to 2018, by TWRA. An additionally objective was to hopefully create a hatchery brood source for blacknose crappie at Parksville to facilitate crappie production at close by Sugar Creek and Hiwassee fish hatcheries, which are managed by the TWRA Region 3 Reservoir Fish Management crew. Evaluations have shown that this project has not been a success as realized in creel surveys and electrofishing efforts. According to the roving creel survey in 2013 anglers caught crappie at a rate of 1.30 crappie/hour and this same calculation via a roving creel survey in 2019 had a catch rate of 1.04 crappie/hour. TWRA stocked 28,683 blacknose crappie fingerlings stocked into Parksville in the fall of 2018 which concluded this project as no crappie have been stocked into Parksville since.

Redear: Redear sunfish have been stocked collectively with bluegill in Parksville Reservoir on different occasions throughout the past several years. Redear sunfish were first stocked into Parksville in the year 2007 in hopes of supplying a forage base while also offering increased angling opportunities. Within the past few years several stockings of redear fingerlings have taken place at Parksville (See table below). Most recently, 228,675 redear fingerlings were stocked in 2021 and 152,262 redear/bluegill mix in 2022. There has been some realized success with these stocking efforts. Fishing success is expected to be favorable at the current time for bluegill and redear at Parksville due to stocking efforts by TWRA and possibly natural spawning success contributions. The 2019, year-long roving creel survey at Parksville, showed an angler catch rate of 9.2 "panfish" (bluegill & redear)/hour. The 2013 creel report showed little

effort and success regarding overall panfishing in Parksville. Hopefully the stocking of bluegill and redear will improve these angling opportunities and forage base.

Bluegill: Bluegill typically exhibit a consistent presence in Parksville Reservoir. Bluegill were stocked as early as the year 2007 in conjunction with redear sunfish to help promote and sustain a forage base for gamefish at Parksville. Bluegill fingerlings have been stocked on multiple years. Most recently there were 136,563 bluegill fingerlings stocked in 2021 and 152,262 bluegill/redear mix stocked in 2022. According to limited fishing reports, anglers enjoy good success of bluegill angling there during peak opportunistic times. Fair success should be expected at the current time. Sunfish (bluegill, redear sunfish) were caught at a rate of 2 panfish/hour according to creel surveys which were conducted at Parksville in 2013, which is an increase to 9.2 panfish/hour from 2019 creel surveys. Bluegill presence remains consistent but variable in the mid-summer seining surveys (CPUE = 12.00 bluegill/seine haul in 2016, 1.00 bluegill/hour in 2017, and 10.0 bluegill/hour in 2018). No seining surveys have been conducted since 2018. A variety of preferred bluegill habitat exists at Parksville Reservoir.

Yellow Perch: During the 2016 spring black bass electrofishing survey, several yellow perch were observed and collected for data analysis by TWRA reservoir personnel. The overall CPUE realized was 144.9 yellow perch/hour in 2016 followed up by a CPUE of 63.6 yellow perch/hour in 2018 in like surveys, and most recently 12.8 yellow perch/hour in 2020 from these spring black bass electrofishing surveys as well. It is important to remember that these yellow perch were bycatch and not any part of a yellow perch targeted survey. These CPUE's showed a good abundance of yellow perch lending to great possibilities for angling success. Condition factors (Wr's) were down from optimal levels signaling a limited forage base for optimum conditions at that time although it has been documented that yellow perch Wr's in southern reservoirs often are underrepresented. Future electrofishing surveys should provide valuable information for the ongoing evaluation of this yellow perch fishery. Age and growth studies will also be necessary as part of the overall evaluation of these yellow perch. Historically, there have been no length or creel limits for yellow perch at Parksville or any other reservoir in the state. Although varying reports are received regarding angling success for yellow perch at Parksville, two yearlong roving creel surveys in 2013 and 2019 there provides some insight (See table below). As this table illustrates, there was a significant increase in yellow perch caught and harvested from 2013 to 2019. Also noteworthy from this same information is the fact that in 2019, yellow perch made up 8.9% of the species caught at Parksville yet represented 24.9% of the species harvested there. This is further evidence that more studies and possible regulations should be part of the effort to evaluate the sustainability and enhancement of the yellow perch population at Parksville.

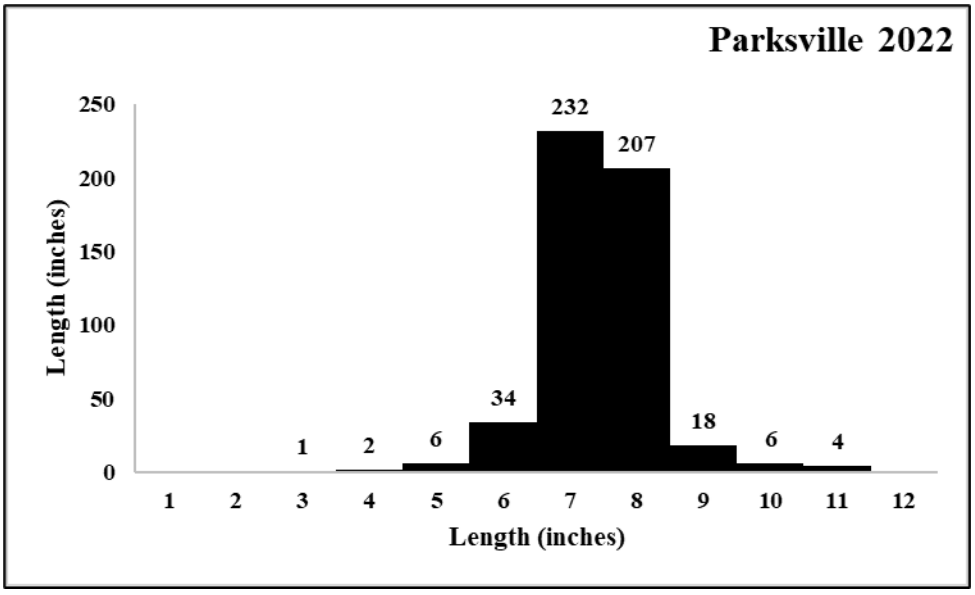
Parksville Yellow Perch Creel Summary

NOTE: No other creel surveys have been conducted on Parksville Reservoir

									Percent Angler Contribution			
Year	Number of Perch Caught	Intended # Perch Caught	Percent Catch Composition	Number of Perch Harvested	Species Harvest Composition	Catch Rate	Percent Released	All Fish Reservoir Angler Hours	0 - 25 Miles Traveled	26 - 100 Miles Traveled	101 - 250 Miles Traveled	> 250 Miles Traveled
2013	138	0	0.2%	77	0.7%	N/A	44.2%	44,157	64.9%	34.8%	0.3%	
2019	**2,464**	**103**	8.9%	1,282	24.9%	N/A	48.0%	38,921	72.5%	26.3%	0.7%	0.6%

On March 26, 2019, a new state record yellow perch, weighing 2 lbs., 5 oz., was caught upstream from Parksville in Ocoee #3, which is a smaller impoundment than Parksville and on the same river. It is very probable that the density of yellow perch in Ocoee#3 will have a direct effect on the yellow perch population downstream at Parksville (Ocoee #1). More evaluations of the yellow perch fishery at Ocoee #3 are warranted and therefore were conducted in 2022.

A yellow perch survey was conducted in 2022 on Parksville (Ocoee #1) and Ocoee #3 reservoirs as an attempt to evaluate this fishery and establish much needed baseline data. All yellow perch collected from Parksville during this survey were from Sylco Creek. Yellow perch collected from Parksville Reservoir exhibited high catch rates at 252.3 yellow perch/hour. Most of the yellow perch collected at Parksville were above stock size (see graph below). Also, from otolith collections of these yellow perch, it was determined that an age 1 yellow perch from Parksville was 108 mm in total length while an age 3 yellow perch was 192 mm (7.6”) in total length (see Length frequency histogram below). This survey also concluded a high mortality rate for yellow perch at Parksville of 65% annually. It is worth noting that the yellow perch populations in Parksville Reservoir (Ocoee #1) and Ocoee # 3 closely resembled each other in population statistics analyzed.



(*Distribution of yellow perch from Parksville 2022 electrofishing survey, Sylco Creek area, n = 510*)

Finally, yellow perch populations often parallel aquatic vegetation abundance because of correlation to spawning habitat preference and success. Therefore, fluctuations of this habitat may determine yellow perch densities at Parksville Reservoir. One recent management decision by TVA may illuminate this relationship between yellow perch and aquatic vegetation because TVA introduced triploid grass carp in 2018 in Parksville to combat hydrilla infestations. These grass carp could have a negative effect on the ability for yellow perch to have successful spawns due to their preference for aquatic vegetation for egg attachment sites.

Walleye: Walleye, which are native to the Parksville Reservoir drainage, were initially stocked into this reservoir in 2016 by TWRA. Prior to this initial stocking no walleye have been observed or reported from Parksville Reservoir. There were 20,726 walleye fingerlings stocked in this inaugural stocking and in 2017 there were another 19,575 walleye fingerlings stocked, 27,723 walleye fingerlings in 2018, and 16,502 in 2019. No walleye were stocked into Parksville in 2020 due to a shortage realized by TWRA hatcheries. However, 13,352 walleye fingerlings stocked into Parksville in 2021 and 8,885 in 2022. Hopefully a walleye fishery will be established in Parksville Reservoir due to these efforts. Future data surveys will evaluate this project and determine the longevity of it. During the 2019 yearlong roving creel survey at Parksville there were no recordings of walleye catches by the creel clerk. However, a small, targeted electrofishing effort for walleye was expended in the early spring of 2020 in the upper reaches of Parksville Reservoir that showed their presence. This success was found in the area where the Ocoee

River meets Parksville Reservoir and upstream a short distance as water depths permitted electrofishing boat presence. There was a realized CPUE of 9.3 walleye/hour. It is thought that walleye were in this area because of spawning efforts. This is encouraging and more data collections will be planned as part of an ongoing evaluation. With Parksville's varying habitat, it is presumed that walleye should inhabit this small reservoir throughout. Several undocumented reports of successful walleye anglers in Parksville exists in recent years.

Musky: In the fall of 2017 there were 603 muskies stocked into Parksville Reservoir. The musky on average were 13 inches long and came from hatchery sources in Kentucky. These musky fingerlings were stocked by TWRA reservoir personnel using boats to distribute the fish reservoir wide and into preferred habitat such as laydowns and aquatic vegetation beds. Another 1,000 juvenile musky were stocked in 2019 at Parksville in various areas of the reservoir as well. Most recently, there were 300 muskies of the same approximate size as earlier stockings, stocked into Parksville in 2021 and 2022 under the same stocking regime as in 2017. The native range of the musky would have incorporated Parksville Reservoir but have long been non-existent in this river system and adjoining ones (Ocoee and Hiwassee River drainages). Future stockings of musky are desired as they become available. The reservoir crew will monitor this project in the years to come, specifically for abundance, natural reproduction documentation, and growth rate analysis. Several reports and photos of musky being caught at Parksville have been shared by anglers with these muskies being around 24 to 36 inches in length.

Shad: Shad populations in Parksville Reservoir are limited at best. During the bi-annual spring electrofishing surveys, some large adult gizzard shad are typically observed. However, rarely if ever are schools of young shad observed that would offer promise of an abundant forage base. During the 2022 spring black bass electrofishing surveys, gizzard shad were collected at a rate of 9.7 gizzard shad/hour. Typically gizzard shad observations at Parksville are mostly comprised of large adults.

A large die-off of blueback herring during the winter was observed by the public and the U.S. Forest Service a few years ago. It is thought that these blueback herring have been illegally introduced as they were released after being used as bait. Intentional stockings however have not been dismissed as a possibility. In April of 2014, a total of 5 gill nets were set by TWRA in Parksville in search of blueback herring. Five blueback herring were caught in these surveys, confirming from earlier reports of their presence in Parksville Reservoir. Blueback herring are documented as having negative impacts on several stages of young fish development, starting at the egg stage. The status of blueback densities in Parksville is not known.

Lakewide Creel Results

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	44,156	-	-	-	-	-	38,921	-	-	-	41,539
Angler Hrs./Acre	23.36	-	-	-	-	-	20.90	-	-	-	22.13
Angler Trips	7,029	-	-	-	-	-	6,677	-	-	-	6,853
Value of Fishery (Trip expenitures-creel)											
All Species	$99,940	-	-	-	-	-	$122,020	-	-	-	$110,980

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	36,771	-	-	-	-	-	34,146	-	-	-	35,459
(hrs./acre)	19.1	-	-	-	-	-	17.7	-	-	-	18.4
Any Black Bass (hrs.)	36,771	-	-	-	-	-	17,747	-	-	-	27,259
(hrs./acre)	19.1	-	-	-	-	-	9.20	-	-	-	14.1
Largemouth Bass (hrs.)	-	-	-	-	-	-	135	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	0.07	-	-	-	-
Smallmouth Bass (hrs.)	-	-	-	-	-	-	-	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	-	-	-	-	-
Spotted Bass (hrs.)	-	-	-	-	-	-	16,264	-	-	-	-
(hrs./acre)	-	-	-	-	-	-	8.43	-	-	-	-
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	-
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	-
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	-
Tournament Catch Rate (creel)	-	-	-	-	-	-	-	-	-	-	-
Non-Tournament Catch Rate (creel)	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures)											
All Black Bass	$87,520	-	-	-	-	-	$110,080	-	-	-	$98,800
Any Black Bass	$87,520	-	-	-	-	-	$55,960	-	-	-	$71,740
Largemouth Bass	-	-	-	-	-	-	$510	-	-	-	-
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-	-
Spotted Bass	-	-	-	-	-	-	$53,610	-	-	-	-

Largemouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022*	10 yr. Average
Substock CPUE (spring electrofishing)	3.33	-	0.33	-	0.68	-	-	-	-	-	1.00	1.45
CPUE (mid-summer seine)	4.50	-	-	0.50	-	-	-	-	-	-	-	2.50
Density (spring electrofishing)												
PSD	62.5	-	82.3	-	76.0	71.0	-	83.0	-	68.0	84.0	73.8
RSD (preferred)	26.0	-	24.0	-	29.0	41.0	-	52.0	-	45.0	24.0	36.2
CPUE (total)	33.0	-	11.7	-	12.3	17.0	-	16.8	-	14.7	13.7	17.6
CPUE ≥ Stock	29.3	-	11.3	-	11.6	17.0	-	16.8	-	14.7	12.7	16.8
CPUE ≥ MLL (15-inches)	7.7	-	2.3	-	3.4	7.0	-	7.6	-	6.3	3.0	5.7
Growth (spring electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	267	330	-
Condition (spring electrofishing)												
Stock to Quality	86.5	-	98.6	-	84.1	82.4	-	80.6	-	86.6	102.1	86.5
Quality to Preferred	84.5	-	88.1	-	85.4	80.7	-	81.5	-	87.5	86.4	84.6
Preferred to Memorable	89.0	-	87.5	-	95.5	86.2	-	89.5	-	93.4	92.2	90.2
Memorable to Trophy	80.9	-	90.9	-	-	79.0	-	90.6	-	-	-	85.4
Mortality (spring electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	15.1%	-	-
Fishing Success (creel)												
Catch Rate, num./hr. (intended)	-	-	-	-	-	-	0.66	-	-	-	-	-
Catch Rate, num./hr. (any black bass)	1.09	-	-	-	-	-	0.45	-	-	-	-	0.77
Harvest Rate, num./hr. (any black bass)	0.19	-	-	-	-	-	0.00	-	-	-	-	0.10
% Released	85.2	-	-	-	-	-	97.2	-	-	-	-	91.2
Mean Weight	2.36	-	-	-	-	-	2.61	-	-	-	-	2.49

Note: 2013 harvest rate represents any black bass data
Note: 2017 was an injury complanit sample
Note: 2022* was a targeted survey conducted in the fall (all traditional spring sites were sampled)

Alabama Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022*	10 yr. Average
Substock CPUE (spring electrofishing)	3.00	-	1.00	-	-	-	-	-	-	7.00	17.00	7.00
CPUE (mid-summer seine)	3.00	10.00	4.00	1.00	1.50	-	-	-	-	-		3.90
Density (spring electrofishing)												
PSD	62.8	-	71.8	-	-	-	-	-	-	52.0	39.0	56.4
RSD (preferred)	38.0	-	36.0	-	-	-	-	-	-	16.0	5.0	23.8
CPUE (total)	48.7	-	35.3	-	-	27.3	-	13.2	-	34.7	54.7	35.6
CPUE ≥ Stock	45.7	-	34.3	-	-		-	-	-	27.7	37.7	36.3
Growth (spring electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	84	201	-
Length Age-3	-	-	-	-	-	-	-	-	-	275	326	-
Condition (spring electrofishing)												
Stock to Quality	79.5	-	84.7	-	88.1	-	-	-	-	83.3	83.7	83.9
Quality to Preferred	81.2	-	86.9	-	87.7	-	-	-	-	84.4	80.7	84.2
Preferred to Memorable	78.1	-	91.2	-	85.0	-	-	-	-	89.9	90.0	86.8
Memorable to Trophy	-	-	-	-	-	-	-	-	-	85.5	78.6	82.1
Mortality (spring electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	55.1%	-	-
Fishing Success (creel)												
Catch Rate, num./hr (intended)	-	-	-	-	-	-	0.48	-	-	-	-	-
Catch Rate, num.hr (any black bass)	1.09	-	-	-	-	-	0.45	-	-	-	-	0.77
Harvest Rate, num./hr (any black bass)	0.19	-	-	-	-	-	0.09	-	-	-	-	0.14
% Released	85.8	-	-	-	-	-	85.4	-	-	-	-	85.6
Mean Weight	1.35	-	-	-	-	-	1.29	-	-	-	-	1.32

Note: 2022* was a targeted survey conducted in the fall (all traditional spring sites were sampled)

Black Crappie

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
CPUE (midsummer seine)	-	2.00	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	100.0	-	-	-	100.0	-	-	100.0
RSD (preferred)	-	-	-	92.0	-	-	-	79.0	-	-	85.5
CPUE (total)	-	-	-	11.2	-	14.0	-	11.2	-	-	12.1
CPUE ≥ Stock	-	-	-	11.2	-	-	-	11.2	-	-	11.2
CPUE ≥ MML (10 inches)	-	-	-	10.4	-	-	-	8.0	-	-	9.2
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	87.8	-	-	-	87.0	-	-	87.4
Quality to Preferred	-	-	-	82.9	-	-	-	91.3	-	-	87.1
Preferred to Memorable	-	-	-	88.9	-	-	-	87.5	-	-	88.2
Memorable to Trophy	-	-	-	84.8	-	-	-	78.1	-	-	81.5
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	23,152	70,990	38,440	43,151	34,246	28,683	-	-	-	-	39,777
#/Acre	12.3	37.6	20.3	22.8	18.1	15.2	-	-	-	-	21.0
Angler Pressure (creel)											
Angler Hrs. (all crappie)	1,486	-	-	-	-	-	304	-	-	-	895
Angler Hrs./Acre	0.77	-	-	-	-	-	0.20	-	-	-	0.48
Fishing Success (creel)											
Catch Rate (any crappie)	1.30	-	-	-	-	-	1.04	-	-	-	1.17
Harvest Rate (any crappie)	0.67	-	-	-	-	-	0.49	-	-	-	0.58
% Released (black crappie)	58.1	-	-	-	-	-	69.3	-	-	-	63.7
Mean Weight (black crappie)	0.80	-	-	-	-	-	0.75	-	-	-	0.78
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$3,560	-	-	-	-	-	$930	-	-	-	$2,245

Non-target sample unless otherwise noted

White Crappie

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	-
Density (electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (10 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)											
Angler Hrs. (all crappie)	1,486	-	-	-	-	-	304	-	-	-	895
Angler Hrs./Acre	0.77	-	-	-	-	-	0.20	-	-	-	0.49
Fishing Success (creel)											
Catch Rate (any crappie)	1.30	-	-	-	-	-	1.04	-	-	-	1.17
Harvest Rate (any crappie)	0.67	-	-	-	-	-	0.49	-	-	-	0.58
% Released (white crappie)	59.6	-	-	-	-	-	-	-	-	-	-
Mean Weight (white crappie)	0.79	-	-	-	-	-	-	-	-	-	-
Value of the Fishery (Trip Expenditures - creel)											
All Crappie	$3,560	-	-	-	-	-	$930	-	-	-	$2,245

Walleye

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2020*	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	0.02	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)												
PSD	-	-	-	-	-	-	-	72.0	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	28.0	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	0.17	9.29	-	-	4.73
CPUE ≥ Stock	-	-	-	-	-	-	-	0.13	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	0.10	-	-	-	-
Growth (gill netting)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)												
Stock to Quality	-	-	-	-	-	-	-	93.5	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	84.8	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	96.1	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	95.2	-	-	-	-
Mortality (gill netting)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Stocking												
#	-	-	-	20,726	19,575	27,723	16,502	-	-	13,352	8,885	17,794
#/Acre	-	-	-	10.97	10.36	14.67	8.70	-	-	6.92	4.60	9.37
Angler Pressure (creel)												
Angler Hrs.	-	-	-	-	-	-	-	-	-	-	-	-
Angler Hrs./Acre	-	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)												
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
% Released	-	-	-	-	-	-	-	-	-	-	-	-
Mean Weight	-	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures - creel)												
Walleye	-	-	-	-	-	-	-	-	-	-	-	-

Note: * Represents targeted electrofhing sample

Yellow Perch

Recruitment	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-		-	2.07	3.37	-
Density (electrofishing)												
PSD	-	-	-	50.0	37.0	53.0	-	30.0	-	58.0	49.0	45.6
RSD (preferred)	-	-	-	18.0	16.0	7.0	-	9.0	-	2.0	1.0	10.4
CPUE (total)	-	-	-	144.9	13.0	63.6	-	12.8	-	252.3	97.9	97.3
CPUE ≥ Stock	-	-	-	142.5	13.0	63.6	-	9.2	-	250.3	94.5	95.7
Growth (electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	108	102	-
Length Age-3	-	-	-	-	-	-	-	-	-	192	194	-
Condition (electrofishing)												
Stock to Quality	-	-	-	80.7	52.4	72.3	-	-	-	82.7	80.3	72.0
Quality to Preferred	-	-	-	65.9	60.9	64.8	-	-	-	80.6	78.5	68.1
Preferred to Memorable	-	-	-	65.1	66.8	68.4	-	-	-	79.3	-	69.9
Memorable to Trophy	-	-	-	67.3	69.7	60.5	-	-	-	-	-	65.8
Mortality (electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	65%	49%	-
Stocking												
#	-	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)												
Angler Hours	-	-	-	-	-	-	-	-	-	-	-	-
Angler Hours/Acre	-	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)												
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intended)	-	-	-	-	-	-	-	-	-	-	-	-
% Released	44.2	-	-	-	-	-	48.0	-	-	-	-	46.1
Mean Weight	0.80	-	-	-	-	-	-	-	-	-	-	-
Value of Fishery (Trip Expenditures-creel)												
Yellow Perch	-	-	-	-	-	-	-	-	-	-	-	-

Note: * Represents targeted sample
Note: Only 10 non-traditional sites were sampled in 2020
Note: All yellow perch collected in 2020 were from one site
Note: All yellow perch in 2022 were collected in Sylco Creek
Note: 2022** represents a targeted yellow perch survey conducted on Ocoee #3

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	7.00	6.50	2.00	12.00	1.00	10.00	-	-	-	-	6.42
Stocking											
#	-	-	-	4,338	52,279	49,956	38,927	198,046	136,563	152,262	90,339
#/Acre	-	-	-	2.30	27.66	26.43	20.60	102.61	70.76	78.89	47.04
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	90.0	-	-	-	-	-	178.0	-	-	-	134.0
Angler Hrs./Acre	0.05	-	-	-	-	-	0.09	-	-	-	0.07
Fishing Success (creel)											
Catch Rate (any sunfish)	2.0	-	-	-	-	-	9.2	-	-	-	5.6
Harvest Rate (any sunfish)	0.0	-	-	-	-	-	0.0	-	-	-	0.0
% Released (bluegill)	75.7	-	-	-	-	-	77.4	-	-	-	76.6
Mean Weight (bluegill)	0.26	-	-	-	-	-	0.22	-	-	-	0.24
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	$0	-	-	-	-	-	$400	-	-	-	$200

Non-target sample unless otherwise noted
Note: 2016 & 2020 stockings were bluegill/redear sunfish mix
Note: 100,471 bluegill/redear mix were stocked in addition to the bluegill stockings in 2021

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-		-
Redear CPUE (electrofishing)	-	-	-	-	-	-	-	-	-	14.0	-
Stocking											
#	-	-	56,000	92,120	58,016	188,878	36,942	198,046	228,672	152,262	126,367
#/Acre	-	-	29.62	48.70	30.70	99.93	19.50	102.61	118.48	78.89	66.05
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	90	-	-	-	-	-	-	-	-	-	-
Angler Hrs./Acre	0.05	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate (any sunfish)	2.0	-	-	-	-	-	9.2	-	-	-	5.6
Harvest Rate (any sunfish)	0.0	-	-	-	-	-	0.0	-	-	-	0.0
% Released (redear)	40.2	-	-	-	-	-	62.1	-	-	-	51.2
Mean Weight (redear)	0.38	-	-	-	-	-	0.55	-	-	-	0.47
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	$0	-	-	-	-	-	$400	-	-	-	$200

Non-target sample unless otherwise noted
Note: 2018 stockings were redear sunfish only
Note: 100,471 bluegill/redear mix were stocked in addition to the redear sunfish stockings in 2021
Note: 2022 CPUE value was obtained during a fall nighttime electrofishing survey

Muskellunge

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	603	-	1,000	-	300	300	551
#/Acre	-	-	-	-	0.32	-	0.53	-	0.16	0.16	0.29
Angling Pressure (creel)											
Angler Hours	-	-	-	-	-		-	-	-	-	-
Angler Hours/Acre	-	-	-	-	-		-	-	-	-	-
Fishing Success (creel)											
Catch Rate (intended)	-	-	-	-	-	-	-	-	-	-	-
Harvest Rate (intedned)	-	-	-	-	-	-	-	-	-	-	-
% Released	-	-	-	-	-	-	97.3%	-	-	-	-
Mean Weight	-	-	-	-	-	-	11.4	-	-	-	-
Value of Fishery (Trip Expenditures-creel)											
Muskullunge	-	-	-	-	-	-	-	-	-	-	-

Shad

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	-	-	-	-	-	-	-	-	9.7	-
Threadfin CPUE	-	-	-	-	-	-	-	-	-	-	-
Blueback CPUE	-	0.25	-	-	-	-	-	-	-	-	-

Note: 5 nets were set during 2014 to detect presence of blueback herring

Habitat Enhancement - 2022

Type of Work	Details	Quanity	
		New	Renovated
None Performed			

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	None Performed	None Performed
Dissolved Oxygen	None Performed	None Performed
PH	None Performed	None Performed
Conductivity	None Performed	None Performed

Angler Attitude Surveys (2019)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

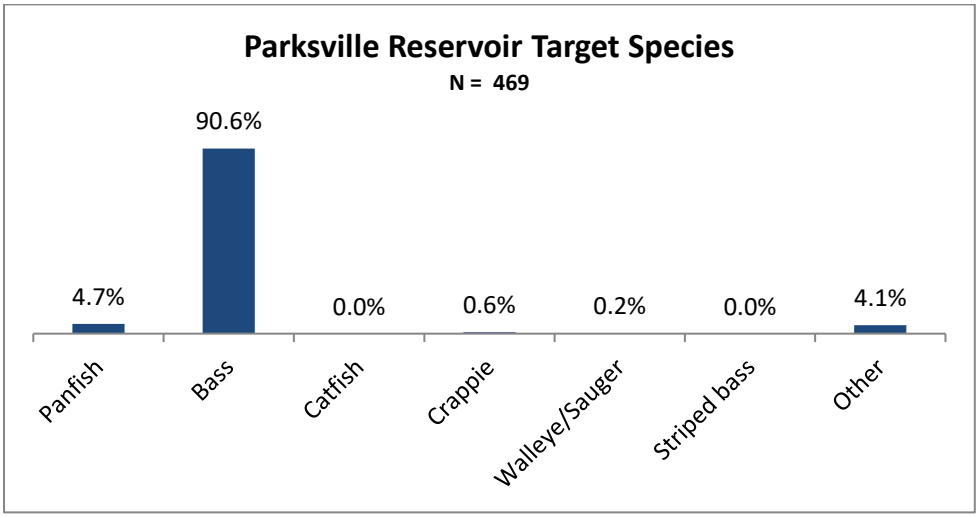
TWRA sampled the angling public with attitude surveys in 2019 on four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Dale Hollow, Parksville, and Watts Bar reservoirs). Overall “approval” of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to these 2019 surveys. We feel confident that this summary of our “angler attitudes” will provide valuable insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks and the Region 3 reservoir fisheries crew.

There were no creel surveys conducted on Parksville Reservoir in 2022 or since 2019. Therefore, results from the most current (2019) Angler Attitude Survey conducted at Parksville Reservoir are as follows:

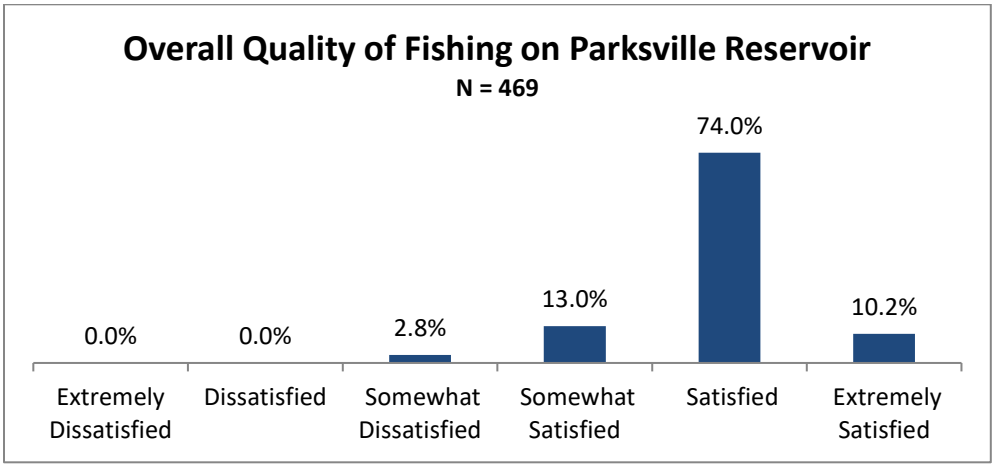
There were a total of 606 anglers interviewed while fishing at Parksville Reservoir in 2019. Only one interview was recorded per angler even though some anglers were interviewed multiple times within one year. The actual number of angler submissions per question is recorded in the “n” value in the graphs below. This was known by asking the individual had they participated in this survey previously during this calendar year. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol. Of the anglers interviewed who were fishing at Parksville, 61.8% had been fishing at Parksville for over 10 years.

The most targeted species of fish by anglers on Parksville in 2019 was bass (90.6%) followed distantly by panfish (4.7%) as depicted in the graph below. TWRA stock bluegill and redear sunfish (panfish) on an annual basis as allowed by TWRA hatchery success.

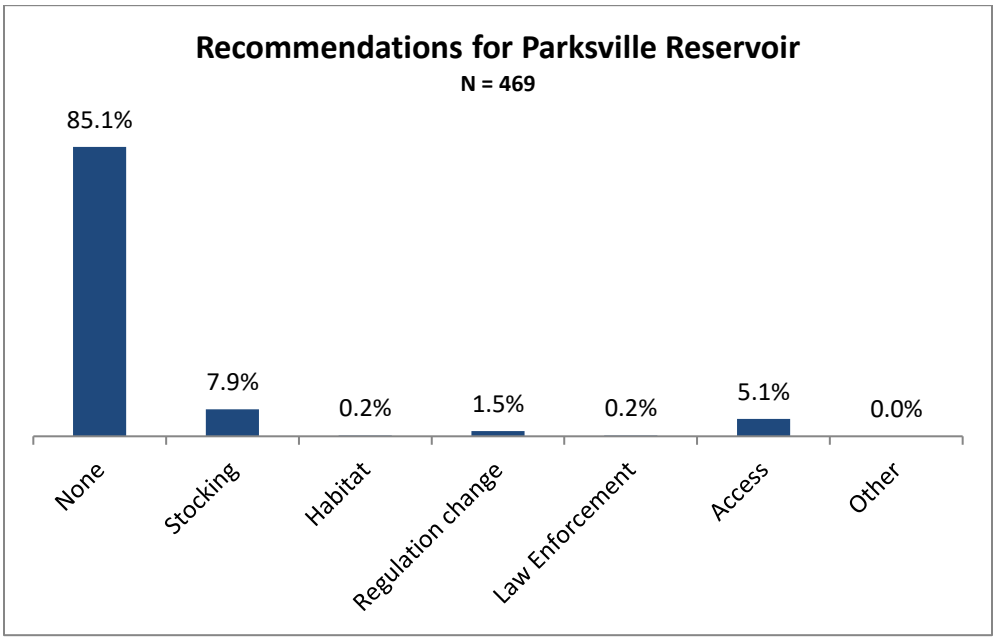


These surveys also revealed that fishermen who identified “Bass” (n=424) as their primary target species, that 28.5% of these bass anglers also fished bass tournaments. On average, these bass tournament fishermen at Parksville Reservoir fished an average of 7.7 bass tournaments/year at Parksville Reservoir during 2019. Very limited boat access areas at Parksville will prevent tournaments from occurring more frequently and on a larger scale.

As the graph below depicts anglers expressed a high “satisfaction” rating (97.2%) overall when asked about the “overall quality of fishing on Parksville Reservoir”.



When anglers fishing Parksville Reservoir were asked if they had any recommendations for the overall management of the fishery at Parksville, the large majority (85.1%) had “None”. Nearly 8% of anglers voiced recommendations for stocking. In recent years to current TWRA has stocked musky, redear sunfish, bluegill, walleye, black and blacknose crappie, and rainbow trout into Parksville. As the graph below also illustrates, concerns by anglers for more boat access area also made the list of recommendations.



Overall, the angler attitudes obtained in 2019 from those fishing at Parksville Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

Watts Bar Reservoir (2022 Annual Report)

Reservoir Facts:

Area (acres): 39,600 **Mean Depth (feet):** **Shoreline (miles):** 722

Counties: Rhea, Meigs, Roane, and Loudon

Total Fishing Effort (angler hours): 400,139 (2020) **Total Value by Anglers:** $1,478,220 (2020)

Reservoir Description: Watts Bar Reservoir is a mainstem impoundment on the Tennessee River that was built in 1942 with the completion of Watts Bar Dam at TN River mile 530 in both Rhea and Meigs counties. Watts Bar has a surface area of 39,600 acres and 722 miles of shoreline. In addition to forming a navigable 72-mile-long reservoir on the Tennessee River, Watts Bar also creates a slack-water channel for navigation more than 20 miles up the Clinch River and 12 miles up the Emory River (TVA). To maintain the water depth required for navigation, the minimum winter elevation for Watts Bar Reservoir is 735 feet. The typical summer operating range is between 740 and 741 feet. Thus, during the wintertime, these surface acres are reduced as Watts Bar goes through a drawdown of 5-6 feet. Watts Bar has several tributaries with some of the more notable ones being the Clinch River, Emory River, White's Creek, and Piney Creek. Several cities lie near Watts Bar, such as Spring City, Rockwood, Harriman, Kingston, and Lenoir City. Watts Bar offers great opportunities for a multitude of game fish. The Tennessee Wildlife Resources Agency (TWRA) also stocks several gamefish into Watts Bar on an annual basis, including striped bass, black crappie, walleye, and Florida largemouth bass. Watts Bar offers several different habitat types for multiple fish species, including rocky shorelines and points, stumps, lay downs, aquatic vegetation, and varying types of substrates. Watts Bar Reservoir is a destination for recreation of many types.

Starting in the early 1990's and continuing for several years, the absence or minimal presence of aquatic vegetation continues to be a factor as it applies to available habitat in Watts Bar Reservoir. For example, in the late 1980's Eurasian water milfoil had a strong presence in this reservoir which concentrated higher densities of largemouth bass as well as other species of fish (both predator and prey). Currently, various species of aquatic vegetation (both native and nonnative) have been observed within Watts Bar Reservoir. Aquatic vegetation presence at Watts Bar currently provides a stage for conflict between lake front owners and fishermen regarding the contrast of opinions for eradication or protection respectively. These opinions are based on aesthetics, navigation, property values, and perceived fisheries benefits, depending on the user group.

Aquatic Nuisance Species (ANS) Management:

The threat of invasive carp has necessitated the development of a surveillance plan to continually inventory TN River reservoirs in Region 3 for their presence. Therefore, surveillance for Invasive Carp was initiated in 2020 on all Tn River Reservoir tailwaters in Region 3. These surveys will be important in monitoring for the presence of silver carp, one of the four species of Invasive carp in Tennessee. Bighead carp have already been documented below Nickajack Dam which is where the current state record (90 lbs.) was caught back in 2005. These surveys were conducted by TWRA, and electrofishing was used as the method for possible observations. TVA also helped with these surveys initially (2020) with their own timing and methodologies. A summary of TWRA's efforts for 2022 is described below:

Silver Carp surveillance was conducted on a bi-weekly basis beginning 3/24/2022 and continuing through 8/23/2022 in Watts Bar Reservoir. Boat electrofishing was used to survey tailwater areas directly below Fort Loudoun and Melton Hill dams. The first survey area was located from Fort Loudoun Dam downstream to the first cove on the left descending bank. One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 1.5 km below the dam moving upstream. The face of the dam and the lock chambers were also surveyed. Standard electrofishing settings were used. Temperatures ranged from 12 to 25 C, the average discharge was 12,633 cfs, and the average tailwater elevation was 740.85 ft. Total surveillance effort below Fort Loudoun Dam in 2022 was 8.5 hours. The second survey area was located from the Melton Hill Dam downstream to the overhead powerline. This area was sampled once per month. One run was completed by 2 boats, electrofishing in tandem on each descending bank. Two runs (one per side) were conducted per survey. Runs began approximately 1.0 km below the dam moving upstream. The face of the dam and the lock chambers were also surveyed. Standard electrofishing settings were used. Temperatures ranged from 11 to 24 C, the average discharge was 4,211 cfs, and the average tailwater elevation was 740.15 ft. Total surveillance effort below Melton Hill Dam in 2022 was 2.90 hours. No Silver Carp or other invasive carp have been observed through TWRA surveillance in 2022.

At least 15 different species were observed in Watts Bar Reservoir in 2022: Skipjack Herring, Gizzard Shad, Threadfin Shad, Striped Bass, White Bass, Smallmouth Bass, Yellow bass, Longnose gar, Channel Catfish, Freshwater Drum, Sturgeon, Common Carp, Buffalo spp., Walleye, and Muskellunge.

In addition to tailwater surveillance, TWRA also monitors Invasive Carp presence through annual sportfish surveys and brood gamefish collections in Tennessee River reservoirs. Furthermore, a roving creel clerk was surveying on neighboring Chickamauga Reservoir three days per week in 2021. This position interacts with anglers throughout the reservoir and has had no sightings or reports of any Invasive Carp in Chickamauga. TWRA communicates with other agencies such as Tennessee Valley Authority (TVA), who conduct annual fish surveys on the Tennessee River System, and U.S. Army Corps of Engineers (USACE) to report Silver Carp presence. TWRA also relies on commercial fishers to report any observations or catches of Invasive Carp where commercial fishing is allowed. Furthermore, TWRA has asked the public to report any observations or realized catches of Invasive Carp (E.g., Silver Carp) on all Region 3 reservoirs. TWRA has also posted Silver Carp info on social media outlets, fishing guides, kiosks, boat ramps, and general handouts of Silver Carp awareness and response protocol.
No Silver, Bighead, or Black Carp were observed through TWRA surveillance in 2020, 2021, nor 2022.
NOTE: NO creel surveys were conducted on Watts Bar Reservoir in 2022.

Status and management of fish species:

Largemouth bass (LMB): Largemouth bass fishing at Watts Bar Reservoir continues to be good and consistent overall when compared to the past ten years. Black bass electrofishing surveys were conducted in the spring of 2022. Spring black bass electrofishing surveys are conducted every other year on Watts Bar thus the next survey is scheduled for the spring of 2024. The overall CPUE for LMB in the 2022 spring electrofishing surveys were close to the 10-year average at a rate of 51.8 LMB/hour (See LMB Table below). The mean CPUE for LMB $\geq$ 15 inches of 10.8 LMB/hour was below the 10-year average of 14.7 LMB/hour. Condition factors (Wrs) for LMB captured during the spring electrofishing surveys were below average for stock to memorable sizes in these 2022 electrofishing surveys. Creel surveys have shown that mean weights of caught LMB remain very consistent over the past ten years at Watts Bar. According to the latest roving creel survey data conducted on Watts Bar Reservoir, the mean weight of LMB harvested by anglers was 2.74 lbs. in 2019 and down to 2.20 lbs. in 2020. Data from this same creel survey reflected angler catch rates near average when compared to the past several years for anglers fishing for largemouth bass (See “Largemouth bass” table below). The 2018 mid-summer seining surveys revealed a near average e catch rate (4.80 LMB/seine haul) but was at a ten-year low in 2017 at

1.50 LMB/seine haul. These seine haul surveys have shown consistent spawning over the past ten years though. No seining surveys have been conducted since 2018. The catch rates for substock LMB have been stable over the past ten years and higher in recent surveys revealing consistent annual spawning success for largemouth bass. Prolific forage bases of shad species (gizzard and threadfin) and skipjack herring at Watts Bar have promoted good populations of black bass as well as other gamefish. Hopefully, favorable spawning conditions will be realized on a consistent basis allowing for continued sustainable populations of largemouth bass.

In 2015, a Florida largemouth bass (FLMB) stocking program was launched in Watts Bar Reservoir. There were three main stocking sites (Piney embayment @ Rhea Springs, Big Springs in Meigs Co., and Caney Creek) selected for stocking the FLMB fingerlings. These sites are in the mid to lower end of the reservoir and incorporate a multitude of different habitat types for adult and sub-adult bass. Because these stocking sites had limited amounts of habitat conducive to juvenile fish survival, these sites were initially enhanced with rows of brush to promote hiding places for the juvenile fish once released. Annual stockings of FLMB will be repeated for the next several years. Ongoing data surveys (i.e., electrofishing, genetics, and creel) will be conducted during this process to evaluate the success of this project. Most recently, there were a total of 311,655 FLMB fingerlings stocked into Watts Bar in 2020, 306,049 in 2021, and 311,521 in 2022 between the 3 sites mentioned. These are higher numbers than any of the previous stocking years due to a surplus realized by the success of TWRA state hatchery facilities. The results of this project will not be known immediately but most likely will take around 8 years from inception to see larger LMB showing up. This is because it is not the pure FLMB that contribute to the trophy size but rather the hybrids that are produced when the northern LMB and FLMB hybridize. First, the FLMB must be of size to reproduce (minimum of 2-3 years old) and then that offspring (hybrid) will need to become 5 plus year old to start contributing to the early stages of trophy bass status. This information is based on many studies at Chickamauga Reservoir that is currently past 20 years of an ongoing FLMB stocking project there that has experienced major success in producing trophy sized LMB and a new state record in 2015.

Smallmouth bass (SMB): Smallmouth bass have been surveyed during the semi-annual spring electro-fishing black bass surveys and in targeted SMB night surveys (see Tables below). The targeted surveys are conducted during early spring season times when SMB are more vulnerable to electrofishing gear in the littoral zone. The smallmouth bass fishery in Watts Bar Reservoir is held in high regards by the fishing public. Since the onset of the 18” minimum size limit years ago (5 bass/day on smallmouth bass at Watts Bar), the population has responded well with observed increases in abundance of SMB up to the 18” minimum length limit (MLL). High fishing pressure and associated mortality are most likely responsible for the cropping off of SMB greater than 18” as is evident in length frequency graphs from electrofishing data collections. Originally, TWRA recommended a one or two fish limit at an 18” MLL, but due to public opposition from the tournament angling community, it was raised to a creel of five by the Tennessee Fish and Wildlife Commission (TFWC).

Targeted SMB surveys are conducted in late March to early April, at night, and at preferred SMB habitat areas such as rocky banks in the main TN River area on the lower end (Watts Bar Dam to the point of Fooshee Peninsula) and mid-section (White’s Creek embayment as well as upper and lower TN River sections adjacent to the mouth of White’s Creek) areas of Watts Bar Reservoir. The overall catch rate for the targeted samples conducted in 2015 was 21.3 SMB/hour, the lowest recorded in the past ten years. The catch rate for the targeted 2019 survey was 26.3 SMB/hour. In this same 2019 survey, catch rates for SMB greater than 18” (5.6 SMB/hour) was the highest in the past ten years. The average weight of smallmouth bass caught was 3.43 lbs. according the 2020 roving creel survey on Watts Bar, which is near the ten-year average. Condition factors (Wrs) for SMB in the quality to memorable size range were

satisfactory although lower than the 3 previously like surveys in past years. Summer seining efforts in 2018 showed a low rate for CPUE of 0.40 SMB/seine haul. No seining surveys have been conducted since 2018. Watts Bar has an abundant forage base of shad (gizzard and threadfin) and skipjack herring that consistently lend to good condition factors for black bass at Watts Bar as well as other gamefish.

2022 Targeted SMB Survey including Genetic Testing for Alabama Bass influence:

Most recently, a targeted SMB survey was conducted on Watts Bar Reservoir in the early spring of 2022 that incorporated genetic testing for Alabama presence and influence on the SMB population. The areas targeted have favorable smallmouth bass habitat such as rocky shorelines which also provide preferred nesting opportunities for smallmouth bass. These sites are outlined in the Google Map below and are the same areas used historically for these SMB targeted surveys.

In addition to gathering information related to SMB, this survey was also utilized to gather information regarding Alabama bass. Specifically, efforts were made to collect date to evaluate distribution, abundance, genetic integrity, hybridization, etc. from Alabama bass. Additionally, 105 fin clips representing individual fish, were taken from specimens representing 3 groups of fish based on visual ID: Smallmouth bass, “spotted bass”, and hybrid looking SMB, SPB. The results of these 105 fin clips would also serve to illustrate the accuracy of field ID when Alabama bass genetics are in the mix. On a final note, there were 6 “spotted bass” collected during the regular black bass spring electrofishing surveys genetically tested from an upper embayment (Caney Creek) on Watts Bar (Table 4). For the point of illustrating the spread of Alabama bass in Watts Bar Reservoir, they are included in the summary below but were not part of the targeted SMB survey. As the summary illustrates, field ID of SMB is not accurate when Alabama bass are hybridizing with SMB. Therefore, immediate action is warranted in determining regulations that consider the confusion created for ID by anglers, LE, and fisheries professionals where SMB, SPB and Alabama bass co-exists, like Watts Bar Reservoir.

Below is the Overview and findings of this 2022 targeted survey:

2022 Watts Bar Targeted SMB Survey Summary
Overview/Methodology

- To evaluate and monitor the influence of Alabama bass on Watts Bar Reservoir’s smallmouth bass fishery
- Reservoir wide genetic survey
- Survey locations divided into three sections of the reservoir where known smallmouth bass populations reside
- Survey areas were mid-reservoir (Whites Creek) down to Watts Bar Dam
    - Lower end near Watts Bar Dam
    - Fooshee Peninsula/surrounding islands
    - Whites Creek
- All sites were historical survey areas so comparisons could be made with current and future data
- Conducted surveys at night with boat electrofishing around known smallmouth bass spawning habitat.
- Goal = collect 100 genetic clips between the three primary survey areas from SMB, ALB/SPB, and possible “hybrid” crosses
    - Efforts were made to collect genetics from various length/age groups
    - Efforts were made to collect representative genetic samples from all three survey areas (~35 fin clips from each area)

- Photos were taken of all specimens tested for genetics
    - Hopefully aid in visual identification of unique hybrid crosses

Current Results/Observations

- Total of 314 fish collected
    - 218 visually identified as smallmouth bass
    - 96 visually identified as Alabama/spotted bass
- Total of 105 genetics clips collected
    - 68 clips collected from smallmouth bass
    - 37 clips collected from Alabama/spotted bass
- Genetic samples by survey area
    - 35 genetic samples collected at lower end near Watts Bar Dam
    - 27 genetic samples collected at Fooshee Peninsula
    - 37 genetic samples collected at Whites Creek
    - 6 genetic samples collected at Caney Creek (collected during black bass survey)
- Species specific length ranges from genetically tested fish
    - Smallmouth bass (Min-Max/Mean TL): **6.3-19.6 in./12.4 in.**
    - Alabama/spotted bass (Min-Max/Mean TL): **4.3-19.1 in./12.5 in.**
- Don't know with 100% certainty but roughly 20 of the fish tested for genetics appeared to be hybrid crosses
    - All "hybrid" looking fish were genetically tested
    - This number may be much higher when we receive the results of these genetic tests
- Whites Creek had the greatest Alabama/spotted bass influence
    - Only observed 35 smallmouth bass and 79 Alabama/spotted bass
- Fooshee Peninsula and surrounding area may be a stronghold for a healthy smallmouth bass population
    - Observed the highest catch rates of smallmouth bass (100 individuals)
    - Alabama/spotted bass were far less common (4 individuals)

Genetic Results

- Out of 105 total genetic samples only 32 fish were found to be pure SMB.
    - SMB comprised 30.5% of the fish we sampled for genetics.
    - In the field, 68 fish were visually ID'd as pure SMB. Only 32 of the 68 were confirmed through genetics as pure SMB.
    - 47.1% visual ID accuracy on SMB.
- Out of 105 total genetic samples only 4 were found to be pure ALB.
    - ALB comprised only 3.8% of the fish we sampled for genetics.
    - In the field, 29 fish were visually ID'd as ALB. Only 4 of the 29 were confirmed through genetics as pure ALB.
    - 13.8% visual ID accuracy on ALB.
- ALB/SMB hybrids were represented at the highest frequency. Out of 105 samples 37 were found to be ALB/SMB hybrids
    - ALB/SMB hybrids comprised 35.2% of the fish we sampled for genetics.
    - ALB/SMB hybrids were observed at all sites excluding Caney Creek
    - ALB/SMB hybrids were observed at the highest frequency at the lower end of the reservoir (**Table 1**) and were relatively common in Whites Creek (**Table 3**).
- Other hybrid variations were observed but at lower frequencies
    - 17 ALB/SPB hybrids were observed which comprised 16.2% of our genetic sample.
    - 9 ALB/SMB/SPB hybrids were observed which comprised 8.6% of our genetic sample.
- 4 fish were found to have Coosa/Redeye bass genetics.

- All 4 fish with CSB genetics were collected in Whites Creek.

Table 1. Genetic results for sites near Watts Bar Dam.

Lower End Near Dam	
Species	**Number Collected**
SMB	10
ALB	1
ALB/SMB	19
ALB/SPB	2
ALB/CSB	0
CSB/SMB	0
LMB/SMB	1
ALB/SMB/SPB	2
ALB/CSB/SMB	0
ALB/CSB/SPB	0
Total	**35**

Table 2. Genetic results for sites near Fooshee Peninsula and surrounding islands.

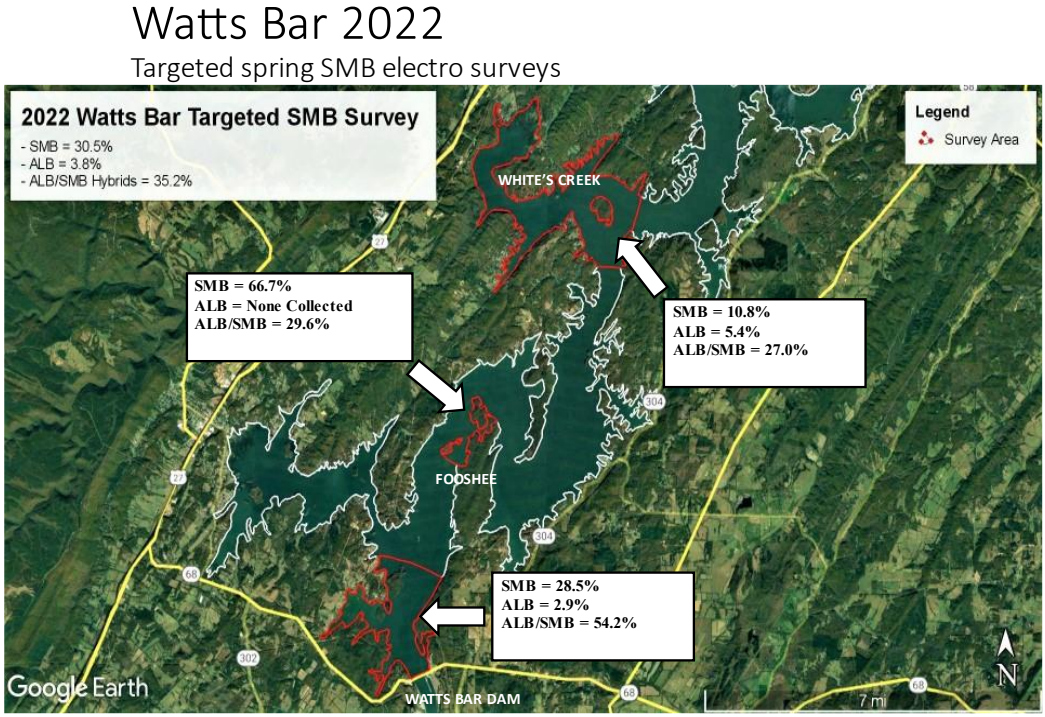
Fooshee Peninsula	
Species	**Number Collected**
SMB	18
ALB	0
ALB/SMB	8
ALB/SPB	1
ALB/CSB	0
CSB/SMB	0
LMB/SMB	0
ALB/SMB/SPB	0
ALB/CSB/SMB	0
ALB/CSB/SPB	0
Total	**27**

Table 3. Genetic results for sites in and around Whites Creek

Whites Creek	
Species	**Number Collected**
SMB	4
ALB	2
ALB/SMB	10
ALB/SPB	11
ALB/CSB	1
CSB/SMB	1
LMB/SMB	0
ALB/SMB/SPB	5
ALB/CSB/SMB	2
ALB/CSB/SPB	1
Total	**37**

Table 4. Genetic results for sites in Caney Creek. Caney Creek was not part of original SMB genetic survey. Samples were collected during bi-annual black bass survey.

Caney Creek	
Species	**Number Collected**
SMB	0
ALB	1
ALB/SMB	0
ALB/SPB	3
ALB/CSB	0
CSB/SMB	0
LMB/SMB	0
ALB/SMB/SPB	2
ALB/CSB/SMB	0
ALB/CSB/SPB	0
Total	**6**



(*Map of targeted smallmouth bass survey areas on Watts Bar, historic and current*)

With these findings and past confirmations, there are great concerns for the smallmouth bass fishery at Watts Bar Reservoir regarding realized ramifications by the confirmed presence of Alabama bass. See the “Alabama bass” narrative below for further explanations regarding Alabama bass in Watts Bar.

Spotted bass (SPB): According to the spring electro-fishing surveys conducted over the past ten years at Watts Bar Reservoir, CPUE (fish/hour) for spotted bass have decreased to being near non-existent, as is evident in the spring 2014 black bass electrofishing surveys to current. Of the “spotted bass” collected recently (2.80 SPB/hour in 2022 spring electrofishing surveys on Watts Bar), extreme caution should be given towards making a positive ID of these fish since Alabama bass are inhabiting Watts Bar Reservoir. Spotted bass and Alabama bass are mostly indistinguishable with any confidence.

Other TN River reservoirs in Region 3 have experienced this same trend with native spotted bass according to past creel and electrofishing surveys conducted by TWRA. One possible explanation, initially, for this decline could be from a change in water levels due to TVA’s Reservoir Operations Study (ROS), instituted in 2008, which delays the summertime fill to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success by decreasing availability of preferred nesting sites for spotted bass. Of the SPB that have been collected in the past, relative weights (Wrs) are satisfactory. Spotted bass in Watts Bar Reservoir also tend to be less numerous and smaller in size when compared to other region 3 reservoirs like Center Hill and neighboring Chickamauga Reservoir. For these reasons, it is not anticipated that Watts Bar Reservoir will be a priority for anglers targeting spotted bass. Spotted bass are typically caught while pursuing other species of black bass most times as they are not

often a targeted species of bass. A special watch should be extended towards monitoring this native fishery in Watts Bar and other mainstem reservoirs along the TN River. A small representation of SPB did show up in the 2015 mid-summer seining surveys at a CPUE of 0.20 SPB/seine haul. No spotted bass were collected in the 2016 seining surveys but in 2017 there was a CPUE of 0.50 SPB/seine haul. No seining surveys have been conducted since 2018. Caution should be accompanied with this seining data due to the possibility that these juvenile fish could have been Alabama bass. See “NOTE” below regarding Alabama bass.

Alabama bass: In 2014 there were some suspicious looking “spotted bass” collected at the White’s Creek embayment while TWRA Region 3 reservoir managers conducted spring black bass electrofishing surveys at Watts Bar. These suspect fish were sent off for genetic analysis for species identification. This small sample (10 fish) were confirmed as possessing different levels of Alabama bass genes. These Alabama bass were likely transported to Watts Bar by fishermen trying to enhance the bass fishery there, which has long been rumored to be the case. Sadly, these introductions will likely have dire consequences on native blackbass species at Watts Bar, especially smallmouth bass populations.

A more robust sample of “spotted bass” were collected for genetic surveys in the spring of 2019 (April 11) during a targeted smallmouth bass electrofishing survey at Watts Bar Reservoir. The area that the “spotted bass” were collected were in the Whites Creek embayment including areas adjacent to the Half Moon area on the TN River (mouth of White’s Creek). The water temp was 64.5 degrees which is favorable for smallmouth and spotted bass spawning. The results of these genetic tests concluded the presence of Alabama bass genes in the vast majority of the 49 “spotted bass” appearing fish that were sent off. Of great concern is that NO pure spotted bass were realized. Only 2 of the 49 species were pure Alabama bass, the remainder were represented by a genetic influence of Alabama bass as they had hybridized with both largemouth and smallmouth bass. As these Alabama bass influenced fish (pure and hybrids) are caught and hauled to other areas of the reservoir (E.g., tournament weigh-ins) the process of Alabama bass expansion and hybridization with other black bass will be realized on more of a reservoir wide scale. More concerning is the realization of these Alabama bass and hybrids hauled through the dams and released in neighboring reservoirs (E.g., tournament weigh-ins). Sadly, this Alabama bass presence will have long lasting and likely irreversible negative consequences on both the largemouth and smallmouth bass populations at Watts Bar.

Alabama bass have been well documented to cause declines in native largemouth bass and especially smallmouth bass where Alabama bass have been introduced (E.g., Upper Georgia reservoirs, Lake Norman, NC). Careful monitoring of the Alabama bass distribution and abundance will be imperative at Watts Bar although little can be done at this time or in the future. Awareness of stocking illegal fish and specifically Alabama bass has been highlighted in the TWRA annual fishing regulation publications. Alabama bass were first observed in Tennessee at Parksville Reservoir in 2001.

Crappie (black and white): Watts Bar Reservoir traditionally has provided a good crappie fishery with opportunities for both white and black crappie. Recent creel surveys show that crappie harvests from Watts Bar are nearly equitable between black crappie and white crappie. During the 1980’s, white crappie were the dominant species of crappie caught at Watts Bar. This white crappie fishery was supported by the large year classes produced at Watts Bar with some estimated harvest rates of over 650K annually in the 1980’s, according to creel surveys. As with some other reservoirs, in Tennessee and out of state, white crappie population numbers have decreased and black crappie have increased, especially in reservoirs where the water clarity has improved which has proven to be more conducive to black crappie. According to the fall trapnetting surveys conducted in 2010, white crappie had great spawning success that year with a CPUE of 12.4 white crappie/net. This high CPUE realized in 2010 was most like due to high water levels in the spring due to excessive rain. Not since 2003 has a year class this large been

realized in trapnetting surveys. Large spring rain events were most likely the cause for great year classes in 2003 and 2010. Fall trapnetting surveys conducted on Watts Bar in 2014 and 2015 revealed fair catch rates for white crappie at 2.40 and 2.69 white crappie/net night respectively. The 2016, 2017, and 2018 fall netting surveys yielded NO white crappie although the 2017 trapnetting surveys were likely compromised by large rain events during the week of sampling. In 2019, fall trapnetting surveys yielded a low catch rate of YOY crappie at 0.6 white crappie/net night. However, in the 2020 fall trapnetting surveys, the CPUE was 3.02 WC/net night, which is the highest in the past ten years but down to 0.7 in like 2021 surveys and even further down in 2022 to 0.21 WC/net night, the lowest in the past 10 years.

Black crappie representation in the 2014 to 2022 fall trapnetting surveys are non-existent to nearly non-existent which has been an ongoing trend over the past ten years. Water fluctuations in the spring are the likely culprit for failed spawning attempts by crappie at Watts Bar. Blacknose crappie (BNC) and black crappie have been stocked in middle (White's Creek) and lower (Piney Creek) embayments in hopes of offsetting poor years of black crappie recruitment in Watts Bar for several years since 2010 (See black crappie table below). An additional motive for stocking these BNC has been to produce adult BNC which can be used for brood fish within the hatchery system at Sugar Creek and Hiwassee fishponds, which are near Watts Bar Reservoir. Several brood blacknose crappie have been collected from Watts Bar over the past few years. As predicted by trapnetting survey collections, the year 2013 was a productive year for crappie anglers on Watts Bar Reservoir due to the elevated spawning success in 2010 of mainly white crappie. Anglers fishing for crappie in Watts Bar expended an estimated $195,570 in 2019 according to roving creel surveys which is consistent. Figures from 2020 creel surveys are not referenced here because these surveys were compromised due to Covid restrictions. Past creel surveys show that catch rates for crappie at Watts Bar have remained at a consistent level as compared over the past ten years but low overall compared to historic catch rates for crappie at Watts Bar.

Redear: When compared to other redear sunfish fisheries in other Tennessee reservoirs, Watts Bar is not a high destination for anglers seeking redear angling opportunities. This is because the densities of redear sunfish are not comparable to neighboring reservoirs like Chickamauga, which lies directly downstream and historically has offered greater angling opportunities for redear. According to roving creel surveys, low average catch rates have been realized over the past ten years for redear sunfish at Watts Bar. Also, redear sunfish have made a minimal presence in the mid-summer seining surveys. Redear sunfish will likely be caught by anglers in pursuit of bluegill and those who fish some of the few historic redear nesting sites. The average weight for a harvested redear from Watts Bar in 2020 was 0.41 lb. Redear were not well represented in the 2018 summer seining surveys (1.30 redear/seine haul). No seining surveys have been conducted since 2018. However, fall trapnetting surveys targeting crappie, yielded a catch rate of 2.96 redear/net night in 2021 and 2.18 redear/net night in 2022, the highest recorded in these surveys. Anglers specifically looking to catch redear will probably engage in a trip to neighboring Chickamauga Reservoir or further downstream to Nickajack Reservoir where fishing success for redear is better when compared to Watts Bar.

Bluegill: Good bluegill populations, known more for quantity rather than quality, provide ample opportunity for angling on Watts Bar Reservoir. Overall, the mid-summer seining surveys reflect consistent spawning success for bluegill here although samples taken in 2014 were at a ten-year low (2.70 bluegill/seine haul) but rebounded in 2015 to a CPUE of 16.1 bluegill/seine haul and this same figure near average in the 2016 surveys at 7.30, 7.80 in 2017 and to a ten year high in 2018 at 15.30 bluegill/seine haul. No seining surveys have been conducted since 2018. Bluegill were represented in the 2015 fall trapnetting surveys, targeting crappie, at a CPUE of 6.7 bluegill/net night and increased to a CPUE of 14.9 in 2016 but down to 4.29 bluegill/net night in 2019 surveys. In 2021, the bluegill CPUE collected from these same trapnetting surveys were at an all-time high of 13.8 bluegill/net night but down

slightly in 2022 to 11.41 bluegill/net night. Expectations for sustained bluegill populations are expected for Watts Bar Reservoir. Bluegill are prolific, often realizing 3 spawns in one year, especially in environments like Watts Bar Reservoir and other neighboring TN River impoundments where bluegill habitat is abundant. There are no current regulations pertaining to size or creel here and at other reservoirs across the state for that matter. Bluegill populations will continue to be monitored through trapnetting, mid-summer seines, creel, and electrofishing surveys as needed.

Sauger: Due to inconsistent and unpredictable sauger spawning success, annual stockings of sauger were historically executed by TWRA to ensure dependable annual year classes of these fish. However, it was recently decided that a close relative of sauger, walleye, would be stocked in Watts Bar instead of sauger. In 2011, TWRA launched a new walleye stocking project at Watts Bar. This decision was made in part due to the difficulty of culturing sauger at hatchery facilities and even the collection of sauger brood. Additionally, other benefits of stocking walleye would be realized over the historic trends of stocking sauger as well, therefore a walleye stocking program was initiated (see “Walleye” section in this Watts Bar report).

In 2014, sauger anglers expended an estimated $15,540 in pursuit of sauger according to TWRA annual creel surveys and in 2015 to current year there were not enough creel info gathered from sauger anglers to estimate this same figure. Low catch rates as compared to ten years ago were evident in the 2016 creel surveys (See table below). Most of the historic sauger fishing takes place around Browder shoals upstream to Ft. Loudon Dam, in early spring. Sauger congregate in this area for spawning attempts. Sauger, which are native to the TN River, are expected to still be represented at some level but much lower than when sauger stocking occurred on an annual basis. Realization that sauger population densities are correlated to annual stocking programs have long been determined within TN River impoundments by TWRA studies and university studies sponsored by TWRA. Additionally, due to the challenges associated with successfully propagating sauger on a consistent level and biological differences; the shift to stocking walleye instead of sauger appeared to be a much better option (See Walleye narrative below).

Walleye: A walleye stocking program was implemented at Watts Bar Reservoir in 2011, replacing a sauger stocking project there that had been in place for several years. This shift was brought about due to the challenges and inconsistencies of raising sauger in TWRA hatcheries and even the collection of sauger brood. Furthermore, walleye when compared to sauger, live longer, obtain larger sizes, and offer better year around fisheries. Additive to this was the success for walleye over sauger regarding all aspects of hatchery functions. Finally, walleye are a cousin of sauger and are also native to the TN River.

Walleye fingerlings have been stocked annually (See Walleye Table below) since initiation of this project except for the year 2020 which was due to a walleye production shortage realized within TWRA hatcheries. There were 132,043 walleye fingerlings stocked into Watts Bar in 2022. In 2014, a gillnet survey (experimental gill nets) was conducted in the middle (White’s Creek) and lower sections (Piney River) of Watts Bar where walleye had been stocked. There were 106 walleye collected during this effort representing different year classes and all walleye collected exhibited excellent condition factors (Wrs). Several walleye were collected in this survey that exceeded the 16” MLL statewide walleye regulations. The biggest walleye collected from this 2014 sample was 24.1 inches and weighed 6.5 pounds which was likely already present in Watts Bar prior to initial stocking. Walleye from this survey on average were 17.1 inches long at age 3 according to data obtained from otoliths. Anglers have been very supportive and excited regarding this new project which replaced historic sauger stocking regimes at Watts Bar. Reports of anglers catching walleye have been ongoing and become common, especially in the Watts Bar headwaters below Ft. Loudon dam. As anglers learn the preferred areas of the reservoir, regarding

walleye inhabitation, there should reflect increased catch rates in creel surveys. This population and project will continue to be evaluated to determine recruitment, growth, mortality, and density. Determination of preferred spawning runs by the walleye, if they are established, will be beneficial to this evaluation as well. There will be a continued request for the stocking of walleye in Watts Bar annually in different sections of the reservoir (Piney Creek embayment, White's Creek Embayment, Clinch/Emory River, and upper section below Ft. Loudon Dam). Roving creel surveys conducted in 2015 showed that the average catch rate for walleye had jumped considerably from 0.05 walleye/hour in 2014 to 1.29 walleye/hour in 2015, 0.82 in 2016, 0.57 in 2018, 0.32 in 2019, and to 0.88 in 2020. No reservoir wide creel was taken on Watts Bar during the year 2017 and due to Covid restrictions, the 2020 creel was incomplete. The average weight for walleye that were harvested in 2016 was 1.96 lb. up slightly from 2015 reflecting walleye being harvested right at the legal size of 16 inches. The average sized walleye caught by anglers in 2020 weighed 2.87 lbs. according to roving creel data collected there. This is the biggest weight gathered from creel surveys since inception of the walleye stocking project in 2011. A year-long roving creel survey is planned for Watts Bar in 2023 which should provide updated harvest info., mean weights, and angling pressure regarding the walleye fishery there.

Catfish: Fishing for catfish, while utilizing a variety of methods (trotlines, rod & reel, jugs, noodling, etc.), remains popular on Watts Bar Reservoir. Ample numbers of blue, channel, and flathead catfish provide great angling opportunity there. Catfish harvest from Watts Bar is represented as the majority being blue catfish and channel catfish as the second most harvested. It is expected that catfish angling at Watts Bar will remain positive in respect of pursuit and the success. Recent data shows great consistency with angling hours expended in pursuit of catfish at Watts Bar; this figure was near average in 2018 at 1.27 angler hours/acre and that same figure was down to 0.84 in 2019 creel surveys there. The average catch rate for anglers pursuing catfish at Watts Bar was 1.58 catfish/hour in 2019 which is near the ten-year average for catfishing at Watts Bar. Creel surveys in 2020 were not conducted during the late spring and summer months therefore most likely missing most catfish data opportunities since this is time of year when most of the targeted catfishing takes place. Therefore, when comparing 2020 creel data to past years, caution should be taken. Unlike neighboring Chickamauga Reservoir, there is no commercial fishing allowed at Watts Bar which could have impacts on catfish populations. The table below shows the consistency among both blue and channel catfish average sizes and catch rates from creel surveys over the past decade. A year-long roving creel survey is planned for Watts Bar in 2023 which should provide updated harvest info., mean weights, and angling pressure regarding the catfish fishery there. Creel data for catfish represents the most knowledge we have of that fishery since no targeted catfish surveys are done.

Catch rates (#/hour) & Average weights (lbs.)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVG
Watts Bar Channel Cat Catch Rate	0.06	0.04	0.05	0.08	0.22	0.71	0.48		0.32	0.27	**0.25**
Watts Bar Channel Cat Avg weight	2.91	3.23	2.82	3.1	2.8	3.07	2.85			3.44	**3.03**
Watts Bar Blue Cat Catch Rate	0.96	0.94	0.98	1.57	1.13	1.28	1.2		1.33	1.26	**1.18**
Watts Bar Blue Cat Avg weight	4.34	3.12	3.25	3.33	3.7	3.15	4.2			6.78	**3.98**

Striped bass: Striped bass fishing continues to be a very popular endeavor on Watts Bar Reservoir thanks to an annual stocking program by TWRA. Many out of state guide services in pursuit of striped bass can be observed in preferred striped bass waters such as below Fort Loudon Dam on the Tennessee River (Watts Bar head waters) and below Melton Hill Dam on the Clinch River, a main tributary to Watts Bar. Striped bass have flourished at Watts Bar due to ample dissolved oxygen at varying water depths, thermal refuges, and abundant forage bases (gizzard and threadfin shad, skipjack herring) throughout the reservoir. Striped bass were first stocked into Watts Bar in 1964 and have been part of a long tradition ever since. It is estimated from the 2019 creel surveys that $938,730 was

expended in “total trip expenditures” this same year in the pursuit of striped bass. The creel survey conducted in 2020 did not take place the entire year due to restrictions because of the Covid virus therefore those comparisons are not referenced here. This is important to mention since striped bass fishing takes place throughout the year on Watts Bar. The tailwater area (below Ft. Loudon Dam) continues to be the area of the greatest angling success for striped bass though. In 2019 the average weight of harvested striped bass was 13.48 pounds which is slightly below the ten-year average for Watts Bar. However, this is possibly a positive reflection of successful upcoming year classes of striped bass thanks to stocking successes. Angling effort has remained consistent for anglers in pursuit of striped bass at Watts Bar justifying ongoing stocking allocations. There were 198,773 striped bass fingerlings stocked into Watts Bar Reservoir by TWRA in 2019, 200,894 stocked in 2020,194,987 in 2021, and 120,999 in 2022. A year-long roving creel survey is planned for Watts Bar in 2023 which should provide updated harvest info., mean weights, and angling pressure regarding the striped bass fishery there. Creel data for striped bass represents the most knowledge and therefore evaluation we have of that fishery. There are a limited number of other efforts targeted towards striped bass data collections. Several decades of evaluations of striped bass at Watts Bar has given confidence in the expected outcome of stocking striped bass annually there.

Lakewide Creel Results

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs.	383,910	329671	657,860	256,241	-	393,675	460,233	400,139	-	-	411,676
Angler Hrs./Acre	9.82	8.43	16.60	6.47	-	9.94	11.80	10.10	-	-	10.45
Angler Trips	65,960	52290	102,487	42,168	-	62,356	76,914	31,945	-	-	62,017
Value of Fishery (Trip expenitures-creel)											
All Species	$1,054,860	$1,155,120	$1,784,010	$810,120	-	$1,416,930	$1,780,970	$1,478,220	-	-	$1,354,319

Black Bass

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
All Black Bass (hrs.)	135,026	118,269	303,160	126,172	-	200,382	234,839	108,725	-	-	175,225
(hrs./acre)	3.45	2.98	7.65	3.19	-	5.06	5.94	2.75	-	-	4.43
Any Black Bass (hrs.)	135,026	117,057	296,341	126,172	-	71,991	225,602	84,609	-	-	150,971
(hrs./acre)	3.45	2.95	7.48	3.19	-	1.82	5.70	2.14	-	-	3.82
Largemouth Bass (hrs.)	-	1,212	6,819	-	-	122,384	5,045	23,712	-	-	31,834
(hrs./acre)	-	0.03	0.17	-	-	3.09	0.13	0.60	-	-	0.80
Smallmouth Bass (hrs.)	-	-	-	-	-	6,007	1,513	404	-	-	2,641
(hrs./acre)	-	-	-	-	-	0.15	0.04	0.01	-	-	0.07
Spotted Bass (hrs.)	-	-	-	-	-	-	2,679	-	-	-	2,679
(hrs./acre)	-	-	-	-	-	-	0.07	-	-	-	0.07
Tournaments (all black bass)											
# Tournaments (BITE)	-	-	-	-	-	-	-	-	-	-	
Pounds/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	
Bass/Angler Day (BITE)	-	-	-	-	-	-	-	-	-	-	
Tournament Angler Hrs/Acre (cre	-	-	-	-	-	-	-	-	-	-	
Tournament Catch Rate (creel)	1.05	1.34	0.52	0.94	-	0.88	0.77	0.51	-	-	0.86
Non-Tournament Catch Rate (cree	0.82	0.52	0.71	0.59	-	0.45	0.48	0.45	-	-	0.57
Value of Fishery (Trip Expenditures)											
All Black Bass	$1,003,780	$856,830	$791,160	$377,480	-	$760,970	$878,550	$467,990	-	-	$733,823
Any Black Bass	$1,003,780	$842,750	$777,010	$377,480	-	$258,080	$832,860	$371,730	-	-	$637,670
Largemouth Bass	-	$14,080	$14,150	-	-	$485,010	$27,050	$95,590	-	-	$127,176
Smallmouth Bass	-	-	-	-	-	$17,880	$11,470	$670	-	-	$10,007
Spotted Bass	-	-	-	-	-	-	$7,170	-	-	-	-

Largemouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	2.29	-	12.20	-	-	-	7.05	-	8.60	7.53
CPUE (mid-summer seine)	4.20	4.50	8.80	5.30	1.50	4.80		-	-	-	4.85
Density (spring electrofishing)											
PSD	-	72.0	-	67.0	-	83.0	-	78.0	28.0	75.0	67.2
RSD (preferred)	-	34.0	-	33.0	-	39.0	-	46.0	-	26.0	35.6
CPUE (total)	-	35.8	-	54.6	-	68.6	-	44.5	-	51.8	51.1
CPUE ≥ Stock	-	17.4	-	42.4	-	64.2	-	37.5	-	43.2	41.0
CPUE ≥ MLL (15-inches)	-	5.7	-	14.2	-	25.2	-	17.5	-	10.8	14.7
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	89.4	-	91.6	-	88.6	-	95.4	97.8	88.9	92.0
Quality to Preferred	-	91.9	-	90.8	-	88.8	-	93.1	92.8	86.3	90.6
Preferred to Memorable	-	95.7	-	93.8	-	89.2	-	91.8	-	85.8	91.3
Memorable to Trophy	-	99.8	-	85.4	-	91.1	-	90.9	-	96.7	92.8
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	187,233	93,430	195,923	207,433	180,043	311,655	306,049	311,521	224,161
#/Acre	-	-	4.7	2.4	4.9	5.2	4.6	7.9	7.7	7.9	5.7
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.72	0.23	0.50	-	-	0.39	0.19	0.38	-	-	0.40
Catch Rate, num./hr. (any black bass)	0.97	0.68	0.96	0.67	-	0.60	0.57	0.49	-	-	0.71
Harvest Rate, num./hr. (any black bass)	0.06	0.00	0.00	-	-	0.00	0.00	0.00	-	-	0.01
% Released	94.9	91.2	94.8	97.2	-	99.1	87.3	94.9	-	-	94.2
Mean Weight	2.98	2.94	2.85	3.18	-	2.80	2.74	2.20	-	-	2.81

Note: Stocked fish are FLMB

Note: 2012 & 2013 harvest rate (num./hr) values represent any black bass data

Note: Data collected in 2021 was a targeted genetics sample for ≤ 14 in. LMB, effort was not recorded

Smallmouth Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	0.30	1.80	0.40	1.40	0.10	0.40	-	-	-	-	0.73
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	33.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	33.0	-
CPUE (preferred)	-	-	-	-	-	-	-	-	-	0.20	-
CPUE (total)	-	-	-	-	-	-	-	2.56	-	0.60	1.58
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	0.60	-
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	0.20	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	
Length Age-3	-	-	-	-	-	-	-	-	-	-	
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	88.4	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	74.3	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.21	0.11	-	-	-	0.64	0.00	0.15	-	-	0.22
Catch Rate, num./hr. (any black bass)	0.97	0.68	0.96	0.67	-	0.60	0.57	0.49	-	-	0.71
Harvest Rate, num./hr. (any black bass)	0.06	0.00	-	-	-	0.05	0.00	0.00	-	-	0.02
% Released	96.0	96.9	97.6	100.0	-	98.1	97.3	93.4	-	-	97.0
Mean Weight	3.57	3.43	4.04	-	-	3.68	4.10	3.43	-	-	3.71

Note: 2012 & 2013 harvest rate (num./hr) values represent any black bass data

Smallmouth Bass (Target Sample)

Recruitment (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE	-	-	0.55	-	-	-	0.29	-	-	0.95	0.60
Density (electrofishing)											
PSD	-	-	67.0	-	-	-	76.0	-	-	63.0	68.7
RSD (preferred)	-	-	45.0	-	-	-	56.0	-	-	29.0	43.3
CPUE (preferred)	-	-	10.8	-	-	-	14.7	-	-	9.3	11.6
CPUE (total)	-	-	24.7	-	-	-	26.3	-	-	35.1	28.7
CPUE ≥ Stock	-	-	24.1	-	-	-	26.0	-	-	34.1	28.1
CPUE ≥ Preferred	-	-	6.0	-	-	-	14.7	-	-	9.3	10.0
CPUE ≥ MLL (18-inches)	-	-	2.6	-	-	-	2.4	-	-	1.3	2.1
Growth (electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)											
Stock to Quality	-	-	100.4	-	-	-	91.4	-	-	92.8	94.9
Quality to Preferred	-	-	91.6	-	-	-	84.4	-	-	81.3	85.8
Preferred to Memorable	-	-	85.3	-	-	-	84.8	-	-	78.2	82.8
Memorable to Trophy	-	-	84.8	-	-	-	80.9	-	-	76.4	80.7
Mortality (electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-

Samples taken at night unless otherwise noted

Spotted Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	0.60	-
CPUE (mid-summer seine)	0.10	1.50	0.20	-	0.50	0.30	-	-	-	-	0.52
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	64.0	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	18.0	-
CPUE (total)	-	-	-	-	-	-	-	1.57	-	2.80	2.19
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	2.20	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	91.2	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	82.2	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	77.2	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Fishing Success (creel)											
Catch Rate, num./hr. (intended)	0.03	-	-	-	-	-	0.17	-	-	-	0.10
Catch Rate, num./hr. (any black bass)	0.97	0.68	0.96	0.67	-	0.60	0.57	0.49	-	-	0.71
Harvest Rate, num./hr. (any black bass)	0.06	0.07	0.05	0.02	-	-	0.00	0.03	-	-	0.04
% Released	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	100.0
Mean Weight	-	-	-	-	-	-	-	-	-	-	-

Alabama Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019*	2020	2021	2022*	10 yr. Average
Substock CPUE (spring electrofishing)	-	-	-	-	-	-	-	-	-	0.55	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (spring electrofishing)											
PSD	-	-	-	-	-	-	-	-	-	67.0	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	31.0	-
CPUE (total)	-	-	-	-	-	-	7.8	0.8	-	14.7	7.8
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	14.1	-
Growth (spring electrofishing)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (spring electrofishing)											
Stock to Quality	-	-	-	-	-	-	-	-	-	101.0	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	89.7	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	83.4	-
Mortality (spring electrofishing)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-

Note: * Collected during SMB targeted survey as well as tested for genetics

Black Crappie

Recruitment (trap-netting)	2013	2014	2015	2016*	2017	2018	2018*	2019**	2020	2021*	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	0.15	-	0.08	0.17	0.05	0.13	0.12
CPUE (mid-summer seine)	-	-	0.40	-	-	-	-	-	-	-	-	-
Density (electrofishing)												
PSD	83.0	-	-	98.0	-	97.0	98.0	100.0	-	100.0	-	96.0
RSD (preferred)	31.0	-	-	84.0	-	85.0	85.0	93.0	-	93.0	-	78.5
CPUE (total)	144.4	-	-	24.7	-	13.2	32.5	18.2	-	16.1	-	41.5
CPUE ≥ Stock	144.0	-	-	24.7	-	13.2	32.5	18.2	-	16.1	-	41.5
CPUE ≥ MML (10 inches)	40.3	-	-	21.0	-	11.2	16.9	13.6	-	14.1	-	19.5
Growth (electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)												
Stock to Quality	-	-	-	85.7	-	80.9	87.7	94.1	-	101.6	-	90.0
Quality to Preferred	-	-	-	103.8	-	100.5	93.6	-	-	105.8	-	100.9
Preferred to Memorable	-	-	-	100.2	-	94.2	100.7	97.4	-	104.2	-	99.3
Memorable to Trophy	-	-	-	96.4	-	89.7	100.0	92.1	-	99.2	-	95.5
Mortality (electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Stocking												
#	-	9,629	-	-	56,657	-	40,467	75,788	-	162,880	130,150	79262
#/Acre	-	0.25	-	-	1.45	-	1.02	1.91	-	4.11	3.30	2.01
Angler Pressure (creel)												
Angler Hrs. (all crappie)	86,875	52,943	83,079	24,101	-	40,785	-	55,746	31,639	-	-	53595
Angler Hrs./Acre	2.23	1.35	2.09	0.61	-	1.03	-	1.41	0.80	-	-	1.36
Fishing Success (creel)												
Catch Rate (any crappie)	2.79	1.75	1.74	1.87	-	1.60	-	1.60	1.49	-	-	1.83
Harvest Rate (any crappie)	1.15	1.01	0.97	1.01	-	0.89	-	1.01	0.95	-	-	1.00
% Released (black crappie)	71.9	47.4	47.0	54.1	-	50.7	-	37.8	39.5	-	-	49.8
Mean Weight (black crappie)	0.81	0.75	0.82	0.77	-	0.84	-	0.85	0.79	-	-	0.80
Value of the Fishery (Trip Expenditures - creel)												
All Crappie	$515,060	$331,270	$216,580	$81,550	-	$144,640	-	$195,570	$103,540	-	-	$226,887

Non-target sample unless otherwise noted

* Targeted electrofishing sample

** Brood collection

Blacknose Crappie

Recruitment (trap-netting)	2013	2014	2015	2016	2017	2018	2018*	2019**	2020	2021*	2022	10 yr. Average
Substock CUPE	-	-	-	-	-	-	-	-	-	-	0.02	-
Substock CPUE (mid-summer sein)	-	-	-	0.30	-	-	-	-	-	-	-	-
Density (electrofishing)												
PSD	80.0	-	-	-	-	-	97.0	98.0	-	100.0	-	93.8
RSD (preferred)	30.0	-	-	-	-	-	90.0	78.0	-	87.0	-	71.3
CPUE (total)	16.1	-	-	-	-	-	6.7	13.4	-	3.7	-	10.0
CPUE ≥ Stock	16.1	-	-	-	-	-	6.7	13.4	-	3.7	-	10.0
CPUE ≥ MML (10 inches)	4.4	-	-	-	-	-	6.2	8.1	-	2.6	-	5.3
Growth (electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)												
Stock to Quality	-	-	-	-	-	-	82.1	-	-	110.9	-	96.5
Quality to Preferred	-	-	-	-	-	-	95.5	-	-	177.1	-	136.3
Preferred to Memorable	-	-	-	-	-	-	104.1	-	-	107.6	-	105.9
Memorable to Trophy	-	-	-	-	-	-	99.8	-	-	96.4	-	98.1
Mortality (electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Stocking												
#	-	218,050	26,283	-	54,131	-	58,696	60,722	-	-	-	83,576
#/Acre	-	5.6	0.7	-	1.4	-	1.5	1.5	-	-	-	2.1
Angler Pressure (creel)												
Angler Hrs. (all crappie)	86,875	52,943	83,079	24,101	-	40,785	-	55,746	31,639	-	-	53,595
Angler Hrs./Acre	2.23	1.35	2.10	0.61	-	1.03	-	1.41	0.80	-	-	1.36
Fishing Success (creel)												
Catch Rate (any crappie)	2.79	1.75	1.74	1.87	-	1.60	-	1.60	1.49	-	-	1.83
Harvest Rate (any crappie)	1.15	1.01	0.97	1.01	-	0.89	-	1.01	0.95	-	-	1.00
% Released (blacknose crappie)	-	47.6	50.2	38.8	-	24.0	-	30.0	0.0	-	-	31.8
Mean Weight (blacknose crappie)	1.06	0.81	0.90	0.81	-	0.93	-	0.82	1.10	-	-	0.92
Value of the Fishery (Trip Expenditures - creel)												
All Crappie	$515,060	$331,270	$216,580	$81,550	-	$144,640	-	$195,570	$103,540	-	-	$226,887

Non-target sample unless otherwise noted

* Targeted electrofishing sample

** Brood Collection

White Crappie

Recruitment (trap-netting)	2013	2014**	2015**	2016*	2017	2018	2018*	2019	2020	2021*	2022	10 yr. Average
Substock CUPE	0.23	2.40	2.69	-	-	0.48	-	0.60	3.02	0.70	0.21	1.29
Substock CPUE (target shock)	-	-	-	22.7	-	-	-	-	-	-	-	-
Density (electrofishing)												
PSD	73.7	57.0	56.0	85.0	-	100.0	100.0	99.0	-	97.0	-	83.5
RSD (preferred)	32.0	57.0	44.0	70.0	-	97.0	83.0	96.0	-	75.0	-	69.3
CPUE (total)	254.8	2.6	2.8	22.7	-	14.4	12.3	38.7	-	14.0	-	45.3
CPUE ≥ Stock	254.4	0.1	0.1	22.7	-	14.4	12.3	38.7	-	14.0	-	44.6
CPUE ≥ MML (10 inches)	71.8	0.1	0.1	16.2	-	14.0	5.8	32.9	-	9.0	-	18.7
Growth (electrofishing)												
Length Age-1	-	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-	-
Condition (electrofishing)												
Stock to Quality	-	-	-	94.4	-	-	-	-	-	109.6	-	102.0
Quality to Preferred	-	-	-	104.1	-	108.7	91.5	92.5	-	103.5	-	100.1
Preferred to Memorable	-	-	-	105.3	-	93.5	95.9	98.5	-	105.3	-	99.7
Memorable to Trophy	-	-	-	101.8	-	95.4	97.7	98.0	-	100.1	-	98.6
Mortality (electrofishing)												
Total Mortality	-	-	-	-	-	-	-	-	-	-	-	-
Angler Pressure (creel)												
Angler Hrs. (all crappie)	86,875	52,943	83,079	24,101	-	40,785	-	55,746	31,639	-	-	53,595
Angler Hrs./Acre	2.23	1.35	2.10	0.61	-	1.03	-	1.41	0.80	-	-	1.36
Fishing Success (creel)												
Catch Rate (any crappie)	2.79	1.75	1.74	1.87	-	1.60	-	1.60	1.49	-	-	1.83
Harvest Rate (any crappie)	1.15	1.01	0.97	1.01	-	0.89	-	1.01	0.95	-	-	1.00
% Released (white crappie)	63.5	47.9	45.6	55.9	-	52.2	-	34.9	35.6	-	-	47.9
Mean Weight (white crappie)	0.73	0.74	0.81	0.77	-	0.73	-	0.83	0.79	-	-	0.77
Value of the Fishery (Trip Expenditures - creel)												
All Crappie	$515,060	$331,270	$216,580	$81,550	-	$144,640	-	$195,570	$103,540	-	-	$226,887

Non-target sample unless otherwise noted

* Targeted electrofishing sample

** Data collected from trap netting

Walleye

Recruitment (gill netting)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	0.30	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (prefered)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	0.03	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MML (15 inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	435.0	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	101.1	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	97.7	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	97.3	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	252,460	332,666	232,509	174,261	191,119	193,787	194,992	-	88,960	132,043	199,200
#/Acre	6.50	8.50	5.87	4.40	4.83	4.90	4.92	-	2.25	3.30	5.05
Angler Pressure (creel)											
Angler Hrs.	-	1,925	6,444	3,691	-	13,246	4,741	4,874	-	-	5,820
Angler Hrs./Acre	-	0.05	0.16	0.09	-	0.33	0.12	0.12	-	-	0.15
Fishing Success (creel)											
Catch Rate (intended)	-	0.05	1.29	0.82	-	0.57	0.32	0.88	-	-	0.66
Harvest Rate (intended)	-	0.00	0.50	0.47	-	0.32	0.32	0.53	-	-	0.36
% Released	-	100.0	68.7	62.4	-	76.3	41.5	45.4	-	-	65.7
Mean Weight	-	-	1.61	1.96	-	2.45	2.56	2.87	-	-	2.29
Value of Fishery (Trip Expenditures - creel)											
Walleye	-	$11,160	$13,900	$13,330	-	$32,240	$14,320	$26,050	-	-	$18,500

Sauger

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	-	-	-	-	-	-	-	-	-
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-1	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	-	-	-	-	-	-	-	-	-	-	-
#/Acre	-	-	-	-	-	-	-	-	-	-	-
Angling Pressure (creel)											
Angler Hours	1,241	1,914	-	651	-	-	-	-	-	-	1,269
Angler Hours/Acre	0.03	0.05	-	0.02	-	-	-	-	-	-	0.03
Fishing Success (creel)											
Catch Rate (intended)	1.81	0.15	-	0.59	-	-	-	-	-	-	0.85
Harvest Rate (intended)	0.36	0.09	-	0.43	-	-	-	-	-	-	0.29
% Released	75.1	81.2	71.0	51.6	-	37.2	100.0	85.7	-	-	71.7
Mean Weight	1.52	1.27	1.55	1.54	-	1.53	-	1.51	-	-	1.49
Value of Fishery (Trip Expenditures-creel)											
Sauger	$13,930	$15,540	-	$1,080	-	-	-	-	-	-	$10,183

Striped Bass

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Substock CPUE (gill netting)	-	-	-	-	-	-	-	-	-	-	-
CPUE (mid-summer seine)	-	-	3.00	0.70	0.70	-		-	-	-	1.47
Density (gill netting)											
PSD	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	0.01	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ MLL (15-inches)	-	-	-	-	-	-	-	-	-	-	-
Growth (gill netting)											
Length Age-2	-	-	-	-	-	-	-	-	-	-	-
Length Age-3	-	-	-	-	-	-	-	-	-	-	-
Condition (gill netting)											
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-
Mortality (gill netting)											
Total Mortality	-	-	-	-	-	-	-	-	-	-	-
Stocking											
#	212,648	151,007	114,313	174,253	231,718	197,076	198,773	200,894	194,987	120,999	179,667
#/Acre	5.4	3.9	2.9	4.4	5.9	5.0	5.0	5.1	4.9	3.1	4.6
Angling Pressure (creel)											
Angler Hours	40,138	27,137	95,980	32,203	-	31,259	66,877	8,639	-	-	43,176
Angler Hours/Acre	1.03	0.69	2.43	0.81	-	0.79	1.69	0.22	-	-	1.09
Fishing Success (creel)											
Catch Rate (intended)	0.86	0.61	0.37	0.37	-	0.67	0.44	0.08	-	-	0.49
Harvest Rate (intended)	0.12	0.07	0.11	0.06	-	0.08	0.03	0.07	-	-	0.08
% Released	89.8	88.5	84.0	82.1	-	91.4	90.0	89.5	-	-	87.9
Mean Weight	21.19	10.68	17.04	19.53	-	15.20	13.48	-	-	-	16.19
Value of Fishery (Trip Expenditures-creel)											
Striped Bass	$335,400	$311,090	$356,860	$151,940	-	$147,460	$431,220	$42,480	-	-	$253,779

Bluegill

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Bluegill CPUE (mid-summer seine)	7.30	2.70	16.10	7.30	7.80	15.30	-	-	-	-	9.42
Bluegill Substock CPUE (trap-netting)	-	2.65	6.74	14.90	-	-	4.29	-	13.77	11.41	8.96
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	2,672	3,999	772	2,060	-	3,925	5,353	940	-	-	2,817
Angler Hrs./Acre	0.07	0.10	0.02	0.05	-	0.10	0.14	0.02	-	-	0.07
Fishing Success (creel)											
Catch Rate (any sunfish)	2.24	3.26	4.62	4.29	-	4.58	5.38	5.52	-	-	4.27
Harvest Rate (any sunfish)	0.29	0.67	0.00	0.54	-	0.38	1.46	4.37	-	-	1.10
% Released (bluegill)	85.2	83.4	78.9	78.8	-	92.0	76.1	76.5	-	-	81.6
Mean Weight (bluegill)	0.21	0.22	0.21	0.26	-	0.23	0.24	0.23	-	-	0.23
Value of Fishery (Trip Expeditures - creel)											
All Sunfish	$7,560	$15,320	$1,620	$4,240	-	$4,530	$7,910	$2,280	-	-	$6,209

Non-target sample unless otherwise noted
Note: 2013 & 2014 catch rate and harvest rate values represent bluegill only

Redear

Recruitment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Redear CPUE (mid-summer seine)	0.10	-	-	0.20	0.20	1.30	-	-	-	-	0.45
Redear Substock CPUE (trap-netting)	-	-	0.23	-	-	-	0.56	-	2.96	2.18	1.48
Angling Pressure (creel)											
Angler Hrs. (all sunfish)	2,672	3,999	772	2,060	-	3,925	5,353	940	-	-	2,817
Angler Hrs./Acre	0.07	0.10	0.02	0.05	-	0.10	0.14	0.02	-	-	0.07
Fishing Success (creel)											
Catch Rate (any sunfish)	0.14	0.10	4.62	4.29	-	4.58	5.38	5.52	-	-	3.52
Harvest Rate (any sunfish)	0.05	0.05	0.00	0.54	-	0.38	1.46	4.37	-	-	0.98
% Released (redear)	47.1	60.3	0.0	30.7	-	82.8	11.0	22.3	-	-	36.3
Mean Weight (redear)	0.35	0.32	0.35	0.38	-	0.60	0.36	0.41	-	-	0.40
Value of Fishery (Trip Expenditures - creel)											
All Sunfish	$7,560	$15,320	$1,620	$4,240	-	$4,530	$7,910	$2,280	-	-	$6,209

Non-target sample unless otherwise noted
Note: 2013 & 2014 catch rate and harvest rate values represent redear only

Catfish

Angler Pressure (creel)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Angler Hrs. (all catfish)	24,176	53,113	71,841	22,269	-	49,535	32,729	8,065	-	-	37,390
Angler Hrs./Acre	0.62	1.36	1.82	0.56	-	1.25	0.83	0.20	-	-	0.95
Fishing Success (creel)											
Catch Rate (any catfish)	1.81	1.49	2.07	1.78	-	1.78	1.58	1.25	-	-	1.68
Harvest Rate (any catfish)	0.35	0.31	0.65	0.49	-	0.01	0.11	0.14	-	-	0.29
% Released (channel)	76.1	81.7	51.9	52.4	-	100.0	87.7	75.0	-	-	75.0
Mean Weight (channel)	3.10	2.80	3.07	2.85	-	-	3.44	1.35	-	-	2.77
Value of Fishery (Trip Expenditures - creel)											
All Catfish	$189,640	$412,880	$234,620	$79,940	-	$185,360	$99,530	$27,370	-	-	$175,620

Lake Sturgeon

Stocking	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
#	-	-	-	-	-	-	-	-	2,993	3,628	3,311
#/Acre	-	-	-	-	-	-	-	-	0.08	0.09	0.08

Shad

Density (electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	-	-
Gizzard CPUE	-	72.0	-	13.0	-	30.9	-	-	-	8.8	31.2
Threadfin CPUE	-	9.2	-	256.0	95.0	14.7	-	-	-	16.8	78.3

Habitat Enhancement - 2022

Type of Work	Details	Quanity	
		New	Renovated
Enhanced Fish Attractor Sites	25 Fish Attractors - 40 Stake Buckets Each	0 New Sites	25 Fish Attractor Sites
Stocking Site Enhancement	Stocking Sites Refurbished w/ Block & Pipe	5 Stocking Sites	Rhea Springs, Big Springs, Rector Creek, Roddy Ramp, Caney Creek
Test Site Sturctures	Fish Prefference of Various Structures	1 Test Site	Toestring Test Site
	15 Stake Buckets, 15 Block & Pipe, & 3 Shelbyville Cubes		

Water Quality Monitoring - 2022

Parameter	Sampling Period	Water Quality
Temperature	None Performed	None Performed
Dissolved Oxygen	None Performed	None Performed
PH	None Performed	None Performed
Conductivity	None Performed	None Performed

Watts Bar Reservoir Headwater (2022 Annual Report)

Description of study area

Area: Due to the unique fishery that often exists in “tailwater areas”, a more in-depth survey of this area was determined to be a good management tool into the overall evaluation of this reservoir. However, because of drastic differences in flows, habitat, temperature, clarity, etc., as compared to the overall reservoir characteristics, these sampling efforts are targeted and reported specifically in relation to this “tailwater area” and not the reservoir as a whole. Additionally, this study area can fluctuate drastically from day to day as well as hour to hour due to generations schedules, rainfall influence, etc. Therefore, longtime trends and consistency in environmental conditions among sampling times should be considered.

The primary study area typically exists between Ft. Loudon Dam (TN River) down to the location of the mouth of the Little TN River (Tellico Dam) at approximately TN River Mile 601. However, the area below Melton Hill Dam is also surveyed occasionally. This area below Melton Hill Dam is the upper reach of the Clinch River, a major tributary to Watts Bar Reservoir. A survey of this area was conducted in 2022 in conjunction with the area below Ft. Loudon Dam. Most of the data collections are aimed at black bass and to a lesser extent striped bass at the current time within this study area. Typically, these surveys are conducted in the fall of the year.

Largemouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017*	2017**	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE	-	-	-	-	-	1.22	-	-	2.07	-	-	2.39	-	1.89
Density (fall electrofishing)														
PSD	-	-	-	-	-	74.0	-	-	67.0	-	-	100.0	100.0	85.3
RSD (preferred)	-	-	-	-	-	37.0	-	-	17.0	-	-	73.0	100.0	56.8
CPUE (total)	-	-	-	-	-	11.4	-	6.5	17.4	-	-	18.3	7.2	12.2
CPUE ≥ Stock	-	-	-	-	-	10.2	-	-	15.4	-	-	16.0	7.2	12.2
CPUE ≥ MLL (15-inches)	-	-	-	-	-	3.0	-	-	2.6	-	-	12.8	7.2	6.4
Condition (fall electrofishing)														
Stock to Quality	-	-	-	-	-	98.6	-	-	93.9	-	-	-	-	96.2
Quality to Preferred	-	-	-	-	-	94.9	-	-	92.9	-	-	81.7	-	89.8
Preferred to Memorable	-	-	-	-	-	90.4	-	-	96.7	-	-	91.6	106.1	96.2
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

Largemouth bass: Overall CPUE for LMB collected via fall electrofishing had a good representation below both Ft. Loudon Dam and Melton Hill Dam. Most LMB collected were in the larger size category with very few substock CPUE collected. Condition factors for the LMB collected were satisfactory.

Smallmouth Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017*	2017**	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-	21.87	5.05	13.46
Density (fall electrofishing)														
PSD	-	-	-	-	-	-	-	-	-	-	-	25.0	80.0	52.5
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-	75.0	60.0	67.5
CPUE (preferred)	-	-	-	-	-	-	-	-	-	-	-	-	5.65	-
CPUE (total)	-	-	-	-	-	-	-	3.2	3.6	-	-	26.6	13.8	11.8
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-	4.8	8.77	6.8
CPUE ≥ Preferred	-	-	-	-	-	-	-	-	-	-	-	-	5.65	-
CPUE ≥ MLL (18-inches)	-	-	-	-	-	-	-	-	-	-	-	-	3.86	-
Condition (fall electrofishing)														
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-	83.8	96.4	90.1
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-	78.1	74.2	76.1
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-	-	84.9	-
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

Smallmouth bass: Smallmouth bass were represented well in the headwater surveys on Watts Bar, both below Ft. Loudon and Melton Hill dams. Caution should be given to the ID of these fish however due to the fact of the influence of Alabama bass in these areas and associated challenges with positive ID due to that influence. The CPUE for substock SMB was best represented below the Melton Hill Dam area on the Clinch River.

Spotted Bass

Recruitment	2013	2014	2015	2016	2017*	2017**	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)														
PSD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Condition (fall electrofishing)														
Stock to Quality	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

White Bass

Recruitment (fall electrofishing)	2013	2014	2015	2016	2017*	2017**	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)														
PSD	-	-	-	-	95.0	-	-	-	-	-	-	-	100.0	97.5
RSD (preferred)	-	-	-	-	90.0	-	-	-	-	-	-	-	100.0	95.0
CPUE (total)	-	-	-	-	9.5	-	-	6.0	4.6	-	-	-	28.1	12.0
CPUE ≥ Stock	-	-	-	-	9.5	-	-	-	-	-	-	-	28.1	18.8
CPUE ≥ Preferred											-	-	28.1	-
Condition (fall electrofishing)														
Stock to Quality	-	-	-	-	86.2	-	-	-	-	-	-	-	-	-
Quality to Preferred	-	-	-	-	94.0	-	-	-	-	-	-	-	-	-
Preferred to Memorable	-	-	-	-	81.5	-	-	-	-	-	-	-	95.8	88.6
Memorable to Trophy	-	-	-	-	-	-	-	-	-	-	-	-	99.9	-

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

White bass: White bass were represented well below Ft. Loudon dam. The condition factors (Wrs) for the adult white bass were very favorable as this class also made up most of the white bass collected. White bass support an important target species for anglers in the tailwater areas on a seasonal basis.

Striped Bass

Recruitment (fall electrofishing)	2013	2014*	2014**	2015	2016	2017*	2017**	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)															
PSD	-	100.0	100.0	-	-	98.0	83.0	-	-	100.0	-	-	-	-	96.2
RSD (preferred)	-	67.0	69.0	-	-	90.0	42.0	-	-	93.0	-	-	-	100.0	76.8
CPUE (total)	-	2.8	35.2	-	-	20.8	83.6	-	25.0	117.7	-	-	-	3.1	41.2
CPUE ≥ Stock	-	1.5	17.6	-	-	20.8	83.6	-	-	117.7	-	-	-	3.1	40.7
CPUE ≥ Preferred	-	1.5	17.6	-	-	20.8	83.6	-	-	117.7	-	-	-	3.1	40.7
Condition (fall electrofishing)															
Stock to Quality	-	-	-	-	-	-	75.8	-	-	69.5	-	-	-	-	72.7
Quality to Preferred	-	-	-	-	-	71.6	68.3	-	-	101.9	-	-	-	-	80.6
Preferred to Memorable	-	-	-	-	-	77.5	71.4	-	-	-	-	-	-	83.2	77.4
Memorable to Trophy	-	-	-	-	-	79.9	68.1	-	-	67.1	-	-	-	84.2	74.8

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

Striped bass: During this fall electrofishing survey, very few striped bass were collected. The year-long roving creel surveys provide the best account of this fishery, however. The striped bass fishery, established annually through TWRA's stocking efforts, promote a very popular fishery in both the tailwaters below the Ft. Loudon and Melton Hill dams. This fishery provides great economic influence through in and out of state anglers and guides pursuing striped bass in these geographic areas.

Walleye

Recruitment	2013	2014	2015	2016	2017	2018	2019*	2019**	2020	2021	2022*	2022**	10 yr. Average
Substock CPUE (fall electrofishing)	-	-	-	-	-	-	-	-	-	-	-	-	-
Density (fall electrofishing)													
PSD	-	-	-	-	-	-	-	-	100.0	-	-	-	-
RSD (preferred)	-	-	-	-	-	-	-	-	53.0	-	-	-	-
CPUE (total)	-	-	-	-	-	-	-	-	8.7	-	-	-	-
CPUE ≥ Stock	-	-	-	-	-	-	-	-	8.7	-	-	-	-
CPUE ≥ MLL (15-inches)									8.7	-	-	-	-
Condition (fall electrofishing)													
Stock to Quality	-	-	-	-	-	-	-	-	91.3	-	-	-	-
Quality to Preferred	-	-	-	-	-	-	-	-	86.4	-	-	-	-
Preferred to Memorable	-	-	-	-	-	-	-	-	95.5	-	-	-	-
Memorable to Trophy	-	-	-	-	-	-	-	-	97.5	-	-	-	-

Note: * Sample taken from headwaters below Melton Hill Dam on the Clinch River
Note: ** Sample taken from headwaters below Fort Loudon Dam on the Tennessee River

Shad

Density (fall electrofishing)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022**	2022*	10 yr. Average
Alewife CPUE	-	-	-	-	-	-	-	-	-	1.93	-	-
Gizzard CPUE	-	-	-	-	-	-	-	-	-	27.02	-	-
Threadfin CPUE	-	-	-	-	-	-	-	-	-	1,758.62	1,212.12	1485.37

Note: * represents samples collected below Melton Hill Dam
Note: ** represents samples collected below Ft. Loudoun Dam

Watts Bar Angler Attitude Survey (2020)

NOTE: No creel surveys and correlated angler attitude surveys were collected in 2021 or 2022 on Watts Bar Reservoir. A year-long roving creel survey is planned for Watts Bar in 2023.

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat, and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five-year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. To accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often, minority user groups succeed in representing the sentiment of the angling public when it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

TWRA's Region 3 Reservoir Fish Management sampled the angling public with attitude surveys in 2020 on four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Dale Hollow, Parksville, and Watts Bar Reservoirs).

Overall "approval" of Region 3 reservoirs in this survey is very favorable at the current time according to these 2018 surveys. We feel confident that this summary of our "angler attitudes" will once again provide insight to how these reservoirs are evaluated by our angling public. This type of information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

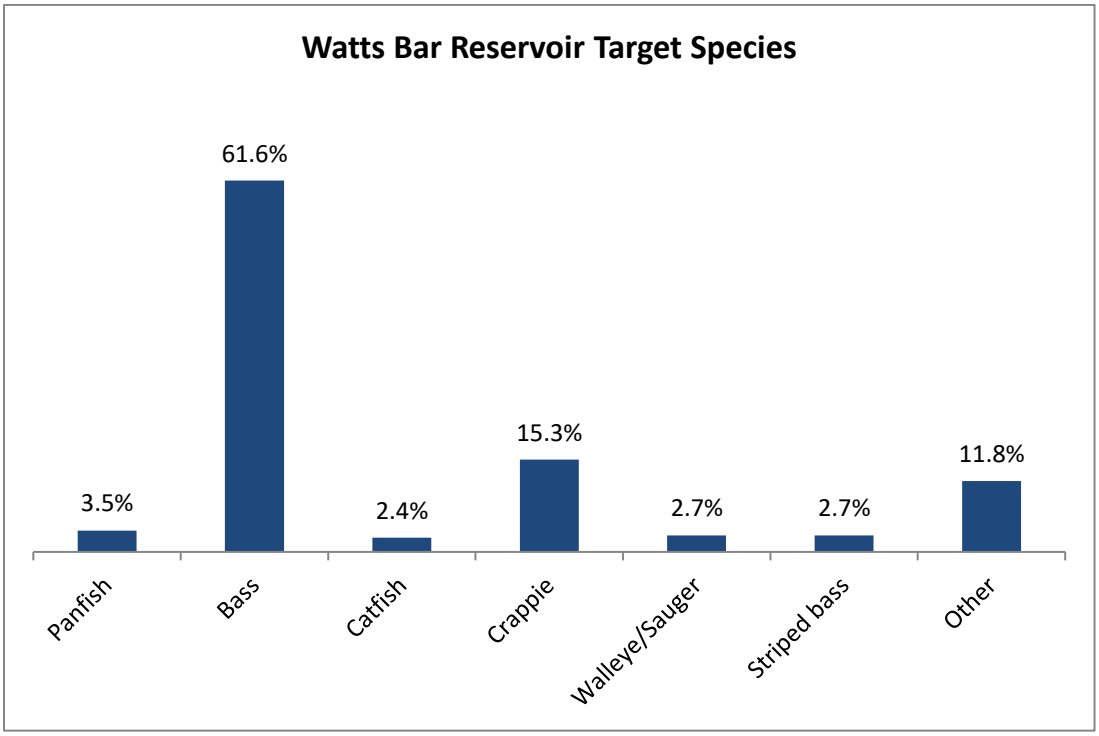
This project and overall fish management would not be possible without the dedication of our creel clerks and the Region 3 reservoir fisheries crew.

NOTE: Creel interviews in 2020 were compromised due to Covid restrictions and correlated safety measures. For the safety of creel clerks, there was limited interaction with members of the public for several months. Specifically, this meant no creel interviews for the months of April – September within the Region 3 reservoir program. Because these surveys still covered a good portion of spring and fall, which are often the seasons with the most fishing pressure realized, it is felt that there is merit to sharing this data within this annual report. Some exceptions of course would be realized when comparing it to previous years where these surveys were conducted all 12 months.

Results from the Angler Attitude Survey conducted at Watts Bar in 2020 are as follows:

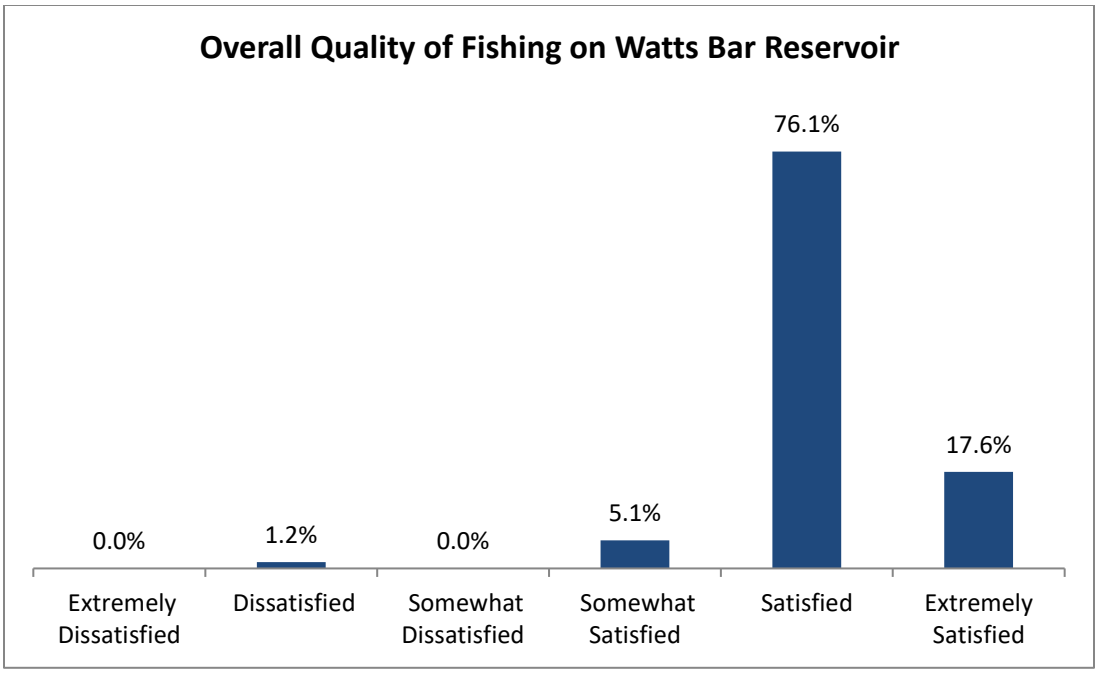
There was a total of 287 anglers who were fishing at Watts Bar Reservoir interviewed by a creel clerk for the angler attitude survey in 2020. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol. Although 287 were interviewed throughout the year, some of the anglers were interviewed multiple times so only the one interview was recorded for any one angler (n = 255) as is reflected in the graphs below.

The most targeted species of fish by anglers on Watts Bar in 2020 was bass (61.6%) with crappie (15.3%) being the next most sought-after game fish. Catfish have ranked higher in previous surveys; this is likely due to limited creel interviews (Covid restrictions) in the summer when catfishing typically peaks.

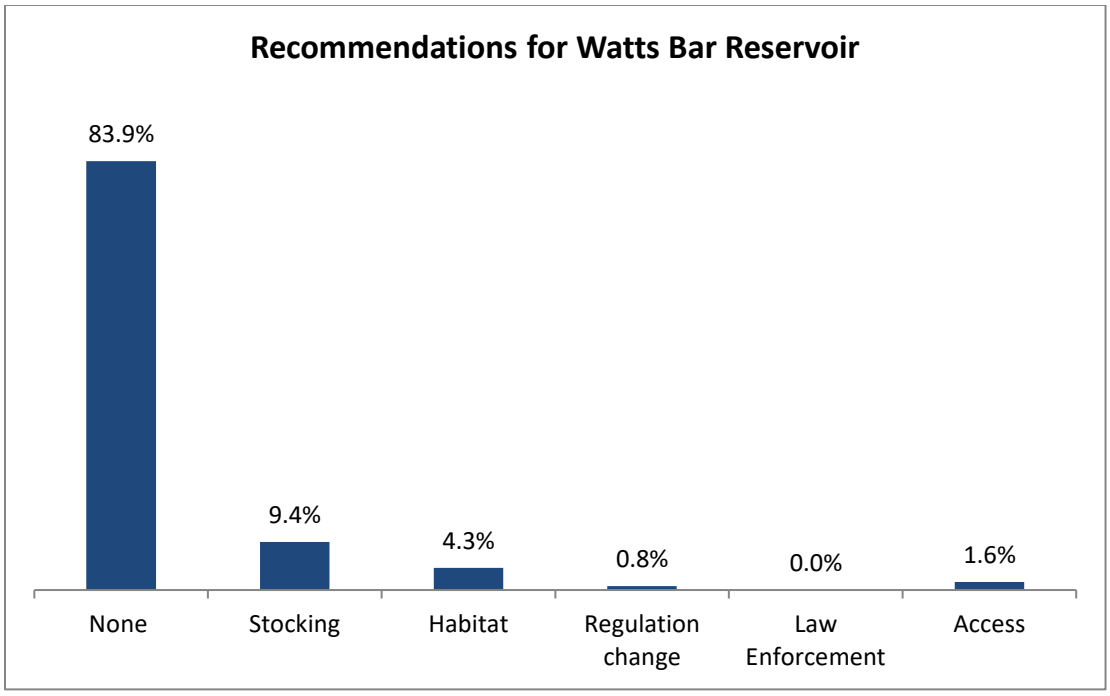


These surveys also revealed that fishermen who identified “Bass” (n = 157) as their primary target species, 63.1% (99 bass anglers) also fished bass tournaments. On average, these bass tournament fishermen at Watts Bar Reservoir fished an average of 9.1 bass tournaments/year at Watts Bar Reservoir.

As the graph below depicts, anglers expressed a high satisfaction rating (98.8%) overall when asked about the “overall quality of fishing on Watts Bar Reservoir”.



According to the graph below, when anglers who fish Watts Bar Reservoir were asked if they had any recommendations, the large majority (83.9%) had “NONE” thus indicating approval for TWRA’s management of the fisheries resource at Watts Bar. Anglers who were interviewed listed “stocking” as a concern. Currently at Watts Bar, TWRA stocks striped bass, walleye, Florida largemouth bass, and black crappie annually. “Habitat” and more specifically the need for aquatic vegetation and the call for “NO spraying” to eradicate existing aquatic vegetation was also a category for concern for Watts Bar anglers as was also the major area of concern last year with these same interviews. TWRA has no control over the sustainability or management of aquatic vegetation at Watts Bar Reservoir or any other reservoir in Region 3.



Overall, the angler attitudes obtained in 2020 from those fishing at Watts Bar Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

Region 4

Boone Reservoir

Description

Surface Area: 4,520 acres
Counties: Sullivan, Washington
Full Pool Elevation: 1384 feet above mean sea level
Maximum Depth: 122 feet
Mean Chlorophyll (Forebay): 10.8 parts per million
Trophic Status (Forebay): Mesotrophic
Hydraulic Retention Time: 38 days
Total Fishing Effort: 116,902 hours

Shoreline Distance: 127 miles
Drainage Area: 1840 square miles
Mean Annual Fluctuation: 54 feet
Thermocline Depth: 7 feet
Shoreline Development: 13%
Trophic Index, Carlson (1977): 53.9
Reservoir Age: 70 years (dam completed 1952)
Total Value by Anglers: $456,580

Summary:

Electrofishing

Boone Reservoir water levels were held at 10ft below winter pool elevations (1350-1355 feet above mean sea level) from 2014- 2021 for dam repairs. Boone Reservoir is now back to its normal operating schedule in 2022.

Boone Reservoir was stocked with 50,000 F-1 hybrid largemouth bass, for the second consecutive year, in early June 2022. These F-1 largemouth bass are the first generation cross between a Northern strain largemouth and a Florida strain largemouth. The F-1 largemouth has been shown to exhibit “hybrid vigor” by exhibiting fast growth and the production of large trophy size fish. The plan is to stock advanced F-1 largemouth bass fingerlings into the reservoir for 3 years at a rate of 50,000 per year. These advanced fingerlings should be larger than the naturally spawned largemouth in the reservoir, which would increase their chances of recruitment and growth into larger size classes. We are hopeful that with all the shoreline vegetation and cover that the survival rate will be good and that Boone Reservoir will produce some trophy largemouth bass.

The 2022 largemouth bass catch rates were well above average, at 64.0 fish/hour. The PSD value for high percentage of fish in the 6-10” size range. Largemouth bass relative weights were about average across all size ranges for Boone Reservoir.

Smallmouth bass catch rates were below average for 2022, at 11.3 fish/hour. However, the catch rates for fish over the 15-inch MLL was about average. The smallmouth bass relative weights were above average for Boone Reservoir.

Black crappie catch rates for 2022 were about average this year for Boone Reservoir. We will hopefully see some successful year classes from spawning in Boone Reservoir in the future, due to improved habitat from hydro-seeding and natural vegetation in the reservoir. We also plan to continue to supplement the crappie population with stocking efforts to help when spawning success is low.

Gill Netting

There was no winter striped bass gill-netting sample conducted in 2022.

Shad Netting

Shad gillnetting was conducted on Boone Reservoir in September of 2022. We used 20 suspended experimental gill nets to monitor shad populations on Boone Reservoir. We were also able to collect a good sample of Monrones in this sample.

Habitat Enhancement

There weren't any habitat enhancement projects conducted on Boone Reservoir in 2022.

Water Quality

Water quality sampling was conducted at three sites on Boone Reservoir during the months of July, August, and September of 2022. The water quality samples were all normal for Boone Reservoir.

Lake wide Angling Summary

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angler Hours	no survey	132,714	no survey	no survey	77,349	no survey	no survey	no survey	67,210	116,902	98,544
Angler Hours Per Acre	no survey	29.4	no survey	no survey	12.2	no survey	no survey	no survey	14.8	25.7	20.5
Angler Trips	no survey	24,087	no survey	no survey	13,025	no survey	no survey	no survey	12,588	19,342	17,261
Value of Fishery (angler expenditures creel)											
All Species	no survey	$534,030	no survey	no survey	$235,350	no survey	no survey	no survey	$258,760	$456,580	$371,180

Black Bass, Boone Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	no survey	82,216	no survey	no survey	45,874	no survey	no survey	no survey	26,731	71,215	56,509
	(hrs/acre)	no survey	18.2	no survey	no survey	10.1	no survey	no survey	no survey	5.9	15.8	12.5
Any Black Bass	(hrs)	no survey	81,617	no survey	no survey	45,086	no survey	no survey	no survey	25,341	65,011	54,264
	(hrs/acre)	no survey	18.1	no survey	no survey	10.0	no survey	no survey	no survey	5.6	14.4	12.0
Largemouth Bass	(hrs)	no survey	335	no survey	no survey	788	no survey	no survey	no survey	1,226	5,689	2,010
	(hrs/acre)	no survey	0.1	no survey	no survey	0.2	no survey	no survey	no survey	0.3	1.3	0.5
Smallmouth Bass	(hrs)	no survey	264	no survey	no survey	0	no survey	no survey	no survey	164	515	236
	(hrs/acre)	no survey	0.0	no survey	no survey	0.0	no survey	no survey	no survey	0.1	0.1	0.1
Spotted Bass	(hrs)	no survey	0	no survey	no survey	0	no survey	no survey	no survey	0	0	0
	(hrs/acre)	no survey	0.0	no survey	no survey	0.0	no survey	no survey	no survey	0.0	0.0	0.0
Tournaments (BITE program & creel survey data)												
# Tournaments (BITE)		none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported
Pounds/Angler Day (BITE)												
Bass/Angler Day (BITE)												
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		no survey	$300,270	no survey	no survey	$139,180	no survey	no survey	no survey	$90,460	$233,300	$190,803
Any Black Bass		no survey	$297,670	no survey	no survey	$137,530	no survey	no survey	no survey	$87,520	$214,960	$184,420
Largemouth Bass		no survey	$1,640	no survey	no survey	$1,650	no survey	no survey	no survey	$2,500	$16,140	$5,483
Smallmouth Bass		no survey	$960	no survey	no survey	$0	no survey	no survey	no survey	$440	$2,200	$900
Spotted Bass		no survey	$0	no survey	no survey	$0	no survey	no survey	no survey	$0	$0	$0

Largemouth Bass, Boone Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	no survey	4.6	10.3	7.3	3.0	1.7	8.0	8.3	6.3	19.0	7.6
Density (electrofishing data - CPUE = # fish/hour)											
PSD	no survey	83%	57%	80%	87%	91%	82%	81%	75%	32%	74%
RSD - Preferred	no survey	33%	25%	31%	39%	56%	65%	45%	34%	16%	38%
CPUE	no survey	48.3	60.3	63.0	55.3	36.7	43.7	56.3	29.0	64.0	50.7
CPUE ≥ Stock	no survey	43.7	50.0	55.7	52.3	35.0	35.7	48.0	22.7	45.0	43.1
CPUE ≥ MSL (15")	no survey	12.3	10.3	13.7	16.3	17.7	22.0	21.0	7.7	7.3	14.3
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	81.1	88.3	80.5	82.1	86.0	89.3	85.7	86.6	86.7	85.1
Quality - Preferred	no survey	82.3	87.8	84.3	90.4	90.2	94.3	87.8	87.7	86.7	87.9
Preferred - Memorable	no survey	86.3	89.9	82.1	91.1	92.0	95.9	87.5	83.7	86.7	88.4
Memorable - Trophy	no survey	96.4	86.4	91.9	100.0	none	93.3	83.8	none	none	92.0
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	no survey	0.23	no survey	no survey	0.27	no survey	no survey	no survey	0.69	1.02	0.55
Harvest Rate	no survey	0.00	no survey	no survey	0.00	no survey	no survey	no survey	0.00	0.00	0.00
Percent Harvested	no survey	2.0%	no survey	no survey	0.2%	no survey	no survey	no survey	0.0%	0.0%	0.6%
Mean Weight (pounds)	no survey	2.44	no survey	no survey	5.6	no survey	no survey	no survey	N/A	N/A	4.0

Smallmouth Bass, Boone Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	no survey	4.3	2.6	4.3	4.5	3.3	5.7	1.0	1.3	0.3	3.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	no survey	63%	67%	79%	78%	74%	83%	79%	81%	61%	74%
RSD - Preferred	no survey	37%	40%	47%	48%	55%	65%	62%	50%	58%	51%
CPUE	no survey	26.2	29.6	22.0	20.7	13.7	23.0	20.3	13.3	11.3	20.0
CPUE ≥ Stock	no survey	21.8	27.0	17.7	16.7	10.3	17.3	19.3	12.0	11.0	17.0
CPUE ≥ MSL (15")	no survey	5.5	7.0	4.0	5.0	4.3	9.3	10.0	4.7	5.3	6.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	79.4	81.9	74.8	84.8	78.7	81.3	84.5	88.3	79.1	81.4
Quality - Preferred	no survey	80.0	80.2	77.9	84.0	82.0	85.0	79.7	80.5	93.2	82.5
Preferred - Memorable	no survey	75.3	77.9	70.0	82.1	81.0	83.1	81.8	85.6	78.2	79.4
Memorable - Trophy	no survey	69.3	75.5	72.0	76.3	80.0	76.2	78.9	82.9	79.5	76.7
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	no survey	0.16	no survey	no survey	0.12	no survey	no survey	no survey	0.10	0.11	0.12
Harvest Rate	no survey	0.01	no survey	no survey	0.00	no survey	no survey	no survey	0.00	0.00	0.00
Percent Harvested	no survey	5.3%	no survey	no survey	0.1%	no survey	no survey	no survey	0.0%	0.0%	1.4%
Mean Weight (pounds)	no survey	2.56	no survey	no survey	3.65	no survey	no survey	no survey	N/A	N/A	3.105

Spotted Bass, Boone Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	no survey	0.6	0.0	0.7	2.0	1.0	2.0	0.3	0.7	0.3	0.8
Density (electrofishing data - CPUE = # fish/hour)											
PSD	no survey	38%	15%	57%	60%	68%	74%	82%	73%	58%	58%
RSD - Preferred	no survey	6%	80%	4%	10%	12%	26%	53%	21%	29%	27%
CPUE	no survey	16.0	15.3	25.7	26.0	9.3	8.3	6.0	11.7	15.3	14.8
CPUE ≥ Stock	no survey	16.6	15.3	25.0	24.0	8.3	6.3	5.7	11.0	15.0	14.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	92.5	none	94.0	95.1	97.2	98.1	90.9	none	98.6	95.2
Quality - Preferred	no survey	88.2	113.4	87.0	93.8	95.9	94.0	93.5	101.6	94.2	95.7
Preferred - Memorable	no survey	97.8	107.6	81.2	83.4	76.7	103.9	97.0	97.3	98.3	93.7
Memorable - Trophy	no survey	none	94.9	none	none	none	none	80.5	91.9	none	none
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	no survey	0.07	no survey	no survey	0.16	no survey	no survey	no survey	0.17	0.09	0.12
Harvest Rate	no survey	0.00	no survey	no survey	0.00	no survey	no survey	no survey	0.00	0.00	0.00
Percent Harvested	no survey	0.0%	no survey	no survey	0%	no survey	no survey	no survey	0%	2.3%	1%
Mean Weight (pounds)	no survey	N/A	no survey	no survey	N/A	no survey	no survey	no survey	N/A	1.85	N/A

White Crappie, Boone Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/ hour)											
Age-0 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A
Substock CPUE	no survey	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/ hour)											
PSD	no survey	100%	100%	100%	0%	100%	0%	100%	0%	100%	67%
RSD - Preferred	no survey	0%	89%	100%	0%	50%	0%	100%	0%	50%	43%
CPUE	no survey	0.3	3.0	0.3	0.0	0.7	0.0	1.3	0.0	1.3	0.8
CPUE ≥ Stock	no survey	0.3	3.0	0.3	0.0	0.7	0.0	1.3	0.0	1.3	0.8
CPUE ≥ MSL (10")	no survey	0.0	2.6	0.3	0.0	0.7	0.0	1.3	0.0	0.3	0.6
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	none	none	none	none	none	none	none	none	none	none
Quality - Preferred	no survey	102.0	113.4	none	none	97.9	none	none	none	112.0	106.3
Preferred - Memorable	no survey	none	107.5	none	none	none	none	none	none	109.2	108.4
Memorable - Trophy	no survey	none	94.8	93.6	none	103.0	none	99.2	none	93.6	96.8
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	no survey	3,109	no survey	no survey	1,370	no survey	no survey	no survey	495	2,987	1,990
Angler Hours/Acre	no survey	0.6	no survey	no survey	0.3	no survey	no survey	no survey	0.1	0.7	0.4
Fishing Success (creel survey data)											
Catch Rate	no survey	N/A	no survey	no survey	0.60	no survey	no survey	no survey	N/A	4.52	2.56
Harvest Rate	no survey	N/A	no survey	no survey	0.38	no survey	no survey	no survey	N/A	1.76	1.07
Percent Harvested	no survey	N/A	no survey	no survey	70.8%	no survey	no survey	no survey	N/A	48.7%	59.8%
Mean Weight (pounds)	no survey	N/A	no survey	no survey	0.95	no survey	no survey	no survey	N/A	1.23	1.09
Value of Fishery (creel survey data - trip expenditures)											
Any Crappie	no surevey	$8,990	no surevey	no survey	$3,370	no survey	no survey	no survey	$1,870	$10,340	$6,143

Black Crappie, Boone Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour)											
Age-0 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	no survey	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/ hour)											
PSD	no survey	82%	100%	100%	100%	100%	100%	100%	100%	75%	95%
RSD - Preferred	no survey	36%	81%	86%	75%	100%	100%	100%	50%	25%	73%
CPUE	no survey	7.4	9.0	2.3	1.3	0.7	2.0	3.7	1.3	2.7	3.4
CPUE ≥ Stock	no survey	7.4	9.0	2.3	1.3	0.7	2.0	3.7	1.3	2.7	3.4
CPUE ≥ MSL (10")	no survey	3.1	6.3	2.0	1.0	0.7	2.0	3.7	0.7	0.7	2.2
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	93.0	none	none	none	none	none	none	none	97.4	95.2
Quality - Preferred	no survey	85.0	92.9	83.4	83.1	none	none	none	95.8	99.9	90.0
Preferred - Memorable	no survey	88.3	85.7	92.3	none	none	88.9	86.3	91.3	none	88.8
Memorable - Trophy	no survey	83.0	79.9	81.2	89.5	83.0	88.8	84.3	none	89.0	84.8
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	13.9	9.8	5.0	4.9	5.3	6.0	0.0	9.4	9.3	0.0	6.4
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	no survey	3,109	no survey	no survey	1,370	no survey	no survey	no survey	495	2,987	1,990
Angler Hours/Acre	no survey	0.6	no survey	no survey	0.3	no survey	no survey	no survey	0.1	0.7	0.4
Fishing Success (creel survey data)											
Catch Rate	no survey	0.56	no survey	no survey	1.57	no survey	no survey	no survey	0.26	1.37	0.94
Harvest Rate	no survey	0.26	no survey	no survey	0.90	no survey	no survey	no survey	0.26	0.56	0.50
Percent Harvested	no survey	75.0%	no survey	no survey	65.0%	no survey	no survey	no survey	100.0%	52.6%	73.2%
Mean Weight (pounds)	no survey	1.44	no survey	no survey	1.18	no survey	no survey	no survey	1.01	1.5	1.2825
Value of Fishery (creel survey data - trip expenditures)											
Any Crappie	no survey	$8,990	no survey	no survey	$3,370	no survey	no survey	no survey	$1,870	$10,340	$6,143

Striped Bass, Boone Reservoir

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (summer shad gill net data - CPUE = # fish/net night))											
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	no survey	0.0	0.0
Density (summer shad gill net data - CPUE = # fish/net night)											
PSD	24%	24%	50%	50%	80%	67%	86%	0%	no survey	0%	42%
RSD - Preferred	0%	0%	0%	0%	0%	33%	29%	0%	no survey	0%	7%
CPUE	0.9	0.7	1.7	0.6	0.5	0.3	0.7	0.1	no survey	0.4	0.7
CPUE ≥ Stock	0.9	0.7	1.7	0.6	0.5	0.3	0.7	0.1	no survey	0.4	0.7
CPUE ≥ 15"	0.8	0.6	1.5	0.6	0.5	0.2	0.6	0.1	no survey	0.4	0.6
Growth (summer shad gill net data)											
Mean TL at Age-1 (mm)	365	N/A	360	N/A	461	N/A	362	N/A	no survey	429	395.4
Mean TL at Age-3 (mm)	603	508	544	513	660	N/A	563	N/A	no survey	N/A	565
Relative Weight (winter gill net; data 300' nets)											
Stock - Quality	none	107.9	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	107.9
Quality - Preferred	99.6	106.7	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	103.2
Preferred - Memorable	93.0	96.0	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	94.5
Memorable - Trophy	64.8	none	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	64.8
Trophy	none	none	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	N/A
Mortality (summer shad gill net data)											
Total Mortality	*	*	*	*	*	*	*	*	no survey	*	*
Stocking											
# per Acre	4.9	2.2	2.7**	2.8**	3.2**	2.5**	2.6**	0.0**	5.4	5.1	4.4
Angling Pressure (creel survey data - striped bass only)											
Angler Hours	no survey	6,875	no survey	no survey	2,885	no survey	no survey	no survey	3,761	16,706	7,557
Angler Hours/Acre	no survey	1.5	no survey	no survey	0.6	no survey	no survey	no survey	0.8	3.7	1.7
Fishing Success (creel survey data - striped bass only)											
Catch Rate	no survey	0.39	no survey	no survey	0.20	no survey	no survey	no survey	0.25	0.30	0.29
Harvest Rate	no survey	0.01	no survey	no survey	0.03	no survey	no survey	no survey	0.03	0.00	0.02
Percent Harvested	no survey	3.7%	no survey	no survey	13.3%	no survey	no survey	no survey	4.5%	0.0%	5.4%
Mean Weight (pounds)	no survey	14.80	no survey	no survey	17.70	no survey	no survey	no survey	19.09	N/A	17.20
Value of Fishery (creel survey data - trip expenditures)											
Any Morones	no survey	$144,960	no survey	no survey	$64,360	no survey	no survey	no survey	$110,400	$122,190	$110,478
Striped Bass Only	no survey	$48,320	no survey	no survey	$8,450	no survey	no survey	no survey	$29,740	$61,780	$37,073

*Data did not meet criteria for calculating mortality
**Stocking numbers reduced due to low water levels

Hybrid Striped Bass, Boone Reservoir

Hybrid Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (summer shad gill net data - CPUE = # fish/net night))											
Substock CPUE	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	no survey	0.1	0.01
Density (summer shad gill net data - CPUE = # fish/net night)											
PSD	98%	98%	100%	100%	100%	0%	100%	100%	no survey	96%	88%
RSD - Preferred	95%	95%	100%	93%	100%	0%	90%	100%	no survey	82%	84%
CPUE	2.1	0.8	0.8	1.5	0.5	0.0	1.0	0.3	no survey	3.7	1.2
CPUE ≥ Stock	2.1	0.8	0.8	1.5	0.5	0.0	1.0	0.3	no survey	3.6	1.2
CPUE ≥ MSL (15")	1.8	0.6	0.6	1.3	0.5	0.0	0.9	0.3	no survey	2.9	1.0
Growth (summer shad gill net data)											
Mean TL at Age-1 (mm)	352	N/A	389	382	N/A	N/A	375	N/A	no survey	354	370
Mean TL at Age-3 (mm)	530	505	531	526	530	N/A	552	N/A	no survey	562	534
Relative Weight (winter gill net data)											
Stock - Quality	none	none	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	N/A
Quality - Preferred	none	92.2	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	92.2
Preferred - Memorable	105.5	95.7	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	100.6
Memorable - Trophy	100.4	95.0	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	97.7
Trophy	none	none	no survey	no survey	no survey	no survey	no survey	no survey	no survey	no survey	N/A
Mortality (summer shad gill net data)											
Total Mortality	*	35%	*	*	*	*	*	*	no survey	*	*
Stocking											
# per Acre	5.6	7.1	2.9**	2.9**	2.4**	2.8**	2.6**	0.0**	5.7	4.9	5.8
Angling Pressure (creel survey data - hybrid striped bass only)											
Angler Hours	no survey	447	no survey	no survey	967	no survey	no survey	no survey	206	N/A	540
Angler Hours/Acre	no survey	0.1	no survey	no survey	0.2	no survey	no survey	no survey	0.1	N/A	0.1
Fishing Success (creel survey data - hybrid striped bass only)											
Catch Rate	no survey	0.38	no survey	no survey	0.26	no survey	no survey	no survey	0.09	0.09	0.21
Harvest Rate	no survey	0.04	no survey	no survey	0.07	no survey	no survey	no survey	0.00	0.00	0.03
Percent Harvested	no survey	24.5%	no survey	no survey	18.7%	no survey	no survey	no survey	0.4%	1.4%	11.3%
Mean Weight (pounds)	no survey	6.60	no survey	no survey	6.60	no survey	no survey	no survey	11.95	11.43	9.15
Value of Fishery (creel survey data - trip expenditures)											
Any Morones	no survey	$144,960	no survey	no survey	$64,360	no survey	no survey	no survey	$110,400	$122,190	$110,478
Hybrid Striped Bass Only	no survey	$0	no survey	no survey	$3,520	no survey	no survey	no survey	$570	N/A	$1,363

* Data did not meet criteria for calculating mortality.
**Stocking numbers reduced due to low water levels

Sunfish, Boone Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	no survey	4,801	no survey	no survey	2,473	no survey	no survey	no survey	4,012	6,349	4,409
Angler Hours/Acre	no survey	1.1	no survey	no survey	0.5	no survey	no survey	no survey	0.9	1.4	1.0
Fishing Success (creel survey data - bluegill only)											
Catch Rate (bluegill)	no survey	2.15	no survey	no survey	2.78	no survey	no survey	no survey	2.20	1.92	2.26
Harvest Rate (bluegill)	no survey	0.17	no survey	no survey	0.00	no survey	no survey	no survey	0.00	0.09	0.07
% Harvested (bluegill)	no survey	6.1%	no survey	no survey	0.0%	no survey	no survey	no survey	0.3%	3.0%	2.4%
Mean Weight (bluegill)	no survey	0.22	no survey	no survey	n/a	no survey	no survey	no survey	0.42	0.47	0.37
Value of Fishery (creel survey data - trip expenditures only)											
Any Sunfish	no survey	$5,400	no survey	no survey	$1,860	no survey	no survey	no survey	$4,760	$9,320	$5,335

Catfish, Boone Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - all catfish)											
Angler Hours	no survey	213	no survey	no survey	570	no survey	no survey	no survey	1,304	3,464	1,388
Angler Hours/Acre	no survey	0.0	no survey	no survey	0.1	no survey	no survey	no survey	0.3	0.8	0.3
Fishing Success (creel survey data)											
Catch Rate (channel cat)	no survey	0	no survey	no survey	0.22	no survey	no survey	no survey	0.05	0.11	0.10
Harvest Rate (channel cat)	no survey	0	no survey	no survey	0.22	no survey	no survey	no survey	0.05	0.11	0.10
% Harvested (channel cat)	no survey	46.5%	no survey	no survey	31.2%	no survey	no survey	no survey	45.5%	75.5%	49.7%
Mean Weight (channel cat)	no survey	3.83	no survey	no survey	4.28	no survey	no survey	no survey	3.25	4.21	3.89
Value of Fishery (creel survey data - trip expenditures only)											
Any Catfish	no survey	$280	no survey	no survey	$1,850	no survey	no survey	no survey	$3,020	$9,760	$3,728

Shad, Boone Reservoir

Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Density (summer shad gill net data - geometric mean density)											
Gizzard Shad	6.9	8.0	15.5	9.8	6.4	8.4	9.1	10.3	no survey	5.6	8.9
Threadfin Shad	3.2	1.4	0.0	0.5	2.6	13.6	6.8	12.1	no survey	2.1	4.7
Alewife	7.1	2.9	15.2	6.0	3.0	1.9	7.6	1.9	no survey	1.7	5.3

Habitat Enhancement, Boone Reservoir

Type of Work	Details	Quantity	
		New	Renovated
Planted	n/a		
Rebrushed	n/a		
Checked and Refurbishe stake beds	n/a		
Rebrushed	n/a		
Added	n/a		
Installed	n/a		

Water Quality Monitoring, Boone Reservoir

Parameter	Sampling Period	Water Quality
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

Cherokee Reservoir 2022

Description

Surface Area: 30,300 Acres

Shoreline Miles: 400

Counties: Grainger, Hamblin, Hawkins, Jefferson

Full Pool Elevation (feet-msl): ~ 1,070

Winter Pool Elevation (feet-msl): ~ 1,040

Dam Completion: 1941

Reservoir Age: 81

Total Fishing Effort (Angler Hours): 567,953

Total Value by Anglers: 2,929,100

Summary:

Electrofishing

Electrofishing surveys were conducted between the dates of 4/25/2022 and 4/27/2022. A total of 20 sites were sampled. The following species and numbers were collected during the survey:

Largemouth Bass – 231 Smallmouth Bass – 136 Spotted Bass – 20 Black Crappie – 27

Black-Nosed Black Crappie – 1 Walleye – 16 Sauger X Walleye Hybrid – 3

The CPUE for Largemouth Bass was 46.2 fish/hour, which was the 3rd highest over the 10-year average. Of the Largemouth Bass collected, 77% were ≥ 13 inches, which should equate to a good number of fish over the 15-inch MML for anglers to catch next year. Additionally, the relative weights of Largemouth Bass were comparable to the 10-year average.

Management plan: habitat enhancement.

Smallmouth Bass had a CPUE of 27.2 fish/hour, which was the highest CPUE in the past 10 years. This CPUE was a 141% increase of the 10-year mean. Smallmouth Bass relative weights for all size categories were comparable to the 10-year average. Cherokee Reservoir should continue to be a quality Smallmouth Bass fishery in the coming years.

Management plan: habitat enhancement.

Trap Netting

Trap nets were set on Cherokee Reservoir between the dates of 11/14/2022 and 11/18/2022 to sample crappie populations. A total of 76 traps were set and 215 fish were captured (209 Black Crappie, 3 Black-nose Black Crappie, and 3 White Crappie).

Our trap nets captured 162 less crappie compared to last year. However, we achieved a CPUE of 2.8 which is comparable to the 10-year average. Additionally, 76 percent of the fish collected were ≥ 8 inches. This should lead to good fishing for the next few years. Unfortunately, we didn't collect any young of year fish which may lead to a decline in angler success in the future. Cherokee Reservoir did not receive any supplemental stocking this year.

Management plan: increased stocking efforts.

Winter Gill Netting: No winter gill net surveys were conducted on Cherokee Reservoir in 2022.

Habitat Enhancement

A total of 504 Cedar tree structures were refurbished and 382 new structures were deployed using Cedar trees, Bamboo, and cedar stakes.

Water Quality

Water quality was conducted at 4 sites on Cherokee Reservoir in 2022 during the months of July, August, and September. These samples were normal for Cherokee Reservoir.

Lakewide Angling Survey

Total Effort and Expenditures

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure											
Angler Hours	567,593	No Survey	286,212	339,391	No Survey	344,478	No Survey	472,865	No Survey	249,755	376,716
Angler Hours Per Acre	18.7		9.4	11.2		11.4		15.6		8.2	12.4
Angler Trips	88,384		49,167	59,726		70,523		75,655		67,625	68,513
Value of Fishery (angler expenditures creel)											
All Species	$2,846,760	No Survey	$1,530,150	$1,848,370	No Survey	$1,259,970	No Survey	$5,066,370	No Survey	$2,929,100	$2,580,120

Black Bass, Cherokee Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	358,306	No Survey	136,315	142,006	No Survey	99,193	No Survey	121,754	No Survey	66,741	154,053
	(hrs/acre)	11.8		4.5	4.7		3.3		4.0		2.2	5.1
Any Black Bass	(hrs)	19,757		71,785	47,006		27,548		37,546		26,814	38,409
	(hrs/acre)	0.7		2.4	1.6		0.9		1.2		0.9	1
Largemouth Bass	(hrs)	332,053		52,988	92,890		61,514		54,974		37,815	105,372
	(hrs/acre)	11.0		1.7	3.1		2.0		1.8		1.2	3.5
Smallmouth Bass	(hrs)	6,151		9,897	2,110		10,131		29,234		2,112	9,939
	(hrs/acre)	0.2		0.3	0.1		0.3		1.0		0.1	0.3
Spotted Bass	(hrs)	345		1,645	0		0		0		0	332
	(hrs/acre)	0.0		0.1	0.0		0.0		0.0		0.0	0.0
Tournaments (BITE program)												
# Tournaments (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pounds/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bass/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		$1,974,960	No Survey	$763,610	$757,400	No Survey	$402,510	No Survey	$3,625,650	No Survey	$760,770	$1,380,817
Any Black Bass		$55,890		$380,130	$238,650		$127,440		$324,900		$309,710	$239,453
Largemouth Bass		$1,898,930		$190,030	$422,000		$239,270		$487,350		$444,870	$613,742
Smallmouth Bass		$18,570		$189,920	$96,750		$35,800		$2,813,400		$6,190	$526,772
Spotted Bass		$1,570		$3,530	$0		$0		$0		$0	$850

Largemouth Bass, Cherokee Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	5.6	3.7			2.4	1.6	N/A	5.3	8.0	5.2	4.6
Density (electrofishing data - CPUE = # fish/hour)											
PSD	82%	85%			87%	95%	86%	65%	90%	85%	84%
RSD - Preferred	41%	53%	No	No	49%	71%	64%	50%	54%	65%	56%
CPUE	47.5	62.1			40.0	44.8	25.9	45.1	41.2	46.2	44.1
CPUE ≥ Stock	36.3	58.4	Survey	Survey	37.6	43.2	22.9	39.7	33.2	41.0	39.0
CPUE > MLL (15-inches)	17.1	29.6			18.1	30.1	14.7	20	17.2	27.0	21.7
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	86.2	76.8			84.2	83.4	79.9	87.2	82.5	82.7	82.9
Quality - Preferred	88.2	82.2	No	No	86.7	83.1	81.9	100.3	85.2	84.7	86.5
Preferred - Memorable	89.3	84.1			86.2	81.8	78.0	84.2	86.4	84.8	84.4
Memorable - Trophy	89.8	None	Survey	Survey	87.1	None	None	104.5	94.2	81.9	91.5
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.72		0.50	0.60		0.86		1.53		1.02	0.87
Harvest Rate	0.15	No	0.02	0.01	No	0.30	No	0.02	No	0.21	0.12
Percent Harvested	23.3%	Survey	3.8%	1.7%	Survey	2.4%	Survey	1.0%	Survey	1.9%	5.7%
Mean Weight (pounds)	2.96		1.09	2.62		3.74		None		None	2.60

* Increased electrofishing sites from 15-20 in 2021.

Smallmouth Bass, Cherokee Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.5			0.8	0.0	2.7	0.3	2.2	2.6	1.1
***Density** (electrofishing data - CPUE = # fish/hour)											
PSD	95%	84%	No Survey	No Survey	100%	67%	70%	83%	74%	63%	80%
RSD - Preferred	73%	64%			100%	44%	48%	78%	64%	47%	65%
CPUE	9.9	12.3			3.7	2.4	13.3	9.9	11.6	27.2	11.3
CPUE ≥ Stock	9.9	11.7			2.9	2.4	10.7	9.6	9.4	24.6	10.2
CPUE ≥ MSL (18")	0.5	0.1			1.3	0.5	0.5	1.9	1.4	2.2	1.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	4.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.2
Mean TL at Age-3 (mm)	N/A	N/A	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13
Relative Weight (electrofishing data)											
Stock - Quality	85.2	78.3	No Survey	No Survey	76.0	75.4	83.0	84.7	82.3	81.7	80.8
Quality - Preferred	81.4	81.6			79.1	90.5	76.0	81.7	86.7	81.0	82.3
Preferred - Memorable	82.2	78.4			80.6	84.0	75.2	89.6	84.0	76.3	81.3
Memorable - Trophy	80.7	74.2			83.2	83.1	72.2	85.0	80.0	77.0	79.4
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	46.0%	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	46.0%
Fishing Success (creel survey data)											
Catch Rate	0.72	No Survey	0.91	0.24	No Survey	0.76	No Survey	0.98	No Survey	0.49	0.68
Harvest Rate	0.15		0.05	0.00		0.07		0.00		0.21	0.08
Percent Harvested	23.3%		6.6%	1.0%		4.7%		0.0%		4.1%	6.6%
Mean Weight (pounds)	2.96		3.08	2.88		2.78		None		0.00	2.34

* Increased electrofishing sites from 15-20 in 2021.

Spotted Bass, Cherokee Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	1.3	0.3			4.8	0	0.5	0.3	0.2	0.2	1.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	66%	59%	No Survey	No Survey	51%	44%	60%	88%	57%	74%	62%
RSD - Preferred	None	18%			10%	3%	20%	38%	None	21.0%	18%
CPUE	9.1	4.8			17.9	9.1	1.9	2.4	1.6	4.0	6.3
CPUE ≥ Stock	7.8	4.5			13.1	9.1	1.3	2.1	2.3	3.8	5.5
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	98.9	85.2	No Survey	No Survey	94.5	96.7	91.3	92.5	96.1	92.8	93.5
Quality - Preferred	95.5	89.4			86.0	86.1	88.8	97.7	102.5	90.5	92.1
Preferred - Memorable	None	88.9			92.2	83.0	83.5	101.3	None	87.6	89.4
Memorable - Trophy	None	None			None	None	None	None	None	None	None
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.40	No Survey	0.29	No Survey	No Survey	0.00	No Survey	0.00	No Survey	0.00	0.14
Harvest Rate	0.00		0.14			0.00		0.00		0.00	0.03
Percent Harvested	22.0%		2.7%			1.0%		0%		0%	5.1%
Mean Weight (pounds)	2.30		None			None		None		0	1.15

Black Crappie, Cherokee Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (trap net data) - CPUE = # fish/net night)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.1	0.6	0.6	0.1	0.2	1.1	0.4	0.9	1.1	0.1	0.5
Density (trap net data) - CPUE = # fish/net night)											
PSD	95%	77%	67%	85%	83%	87%	76%	63%	65%	83%	78%
RSD - Preferred	75%	57%	18%	57%	50%	45%	24%	41%	29%	44%	44%
CPUE	2.9	2.8	3.6	2.5	1.1	2.5	3.2	2.8	4.7	2.8	2.9
CPUE ≥ Stock	2.8	2.2	2.9	2.4	0.9	1.4	2.7	1.9	3.6	2.7	2.4
CPUE ≥ MSL (10")	2.0	1.2	0.5	1.3	0.5	0.6	0.7	0.7	0.9	1.1	0.9
Growth (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (trap net data)											
Stock - Quality	97.7	75.1	99.5	92.8	85.4	96.7	107.4	99.3	92.0	96.0	94.2
Quality - Preferred	90.5	92.9	96.6	93.1	86.6	92.5	104.0	95.6	90.4	92.1	93.4
Preferred - Memorable	92.4	88.9	92.7	96.5	87.0	90.0	96.9	96.2	92.3	92.8	92.6
Memorable - Trophy	93.7	87.9	92.8	96.6	86.1	91.1	95.6	93.5	90.8	90.8	91.9
Trophy	None	None	None	None	None	None	None	None	None	None	None
Mortality (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking(372+374)											
#	41,937	116,004	252,781	165,143	298,758	128,379	40,423	139,019	148,759	0	133,120
# per Acre	1.4	3.8	8.3	5.5	9.9	4.2	1.3	4.6	4.9	0.0	4.4
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	41,750	No Survey	14,809	44,625	No Survey	85,678	No Survey	50,952	No Survey	68,179	50,999
Angler Hours/Acre	1.4		0.5	1.5		2.8		1.7		2.3	1.7
Fishing Success (creel survey data)											
Catch Rate(any crappie)	2.36	No Survey	0.76	1.67	No Survey	1.87	No Survey	0.89	No Survey	2.14	1.62
Harvest Rate(any crappie)	0.86		0.71	1.04		1.21		0.70		1.65	1.03
Percent Harvested(bc)	33.8%		100%	68.3%		88.7%		97.6%		80.6%	78.2%
Mean Weight (#'s bc)	0.45		0.57	0.56		0.54		None		None	0.53
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$158,520	No Survey	$39,230	$112,980	No Survey	$233,030	No Survey	$135,060	No Survey	$258,010	$156,138

Blacknose Crappie, Cherokee Reservoir

Blacknose Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (trap net data) - CPUE = # fish/net night)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (trap net data) - CPUE = # fish/net night)											
PSD	88%	None	50%	None	None	89%	83%	75%	71%	67%	75%
RSD - Preferred	50%	None	None	None	None	33%	33%	75%	14%	None	41%
CPUE	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1
CPUE ≥ Stock	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1
CPUE ≥ MSL (10")	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Growth (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (trap net data)											
Stock - Quality	96.5	None	100.7	None	95.2	None	107.4	89.1	98.8	85.7	96.2
Quality - Preferred	87.0	None	87.4	None	None	83.7	103.8	None	91.3	98.7	92.0
Preferred - Memorable	92.2	None	None	None	None	None	96.9	91.2	89.0	None	92.3
Memorable - Trophy	102.5	None	None	None	None	None	87.3	None	None	None	94.9
Trophy	None	None	None	None	None	None	None	None	None	None	None
Mortality (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking(372+374)											
#	41,937	116,004	252,781	165,143	298,758	128,379	40,423	139,019	148,759	0	133,120
# per Acre	1.4	3.8	8.3	5.5	9.9	4.2	1.3	4.6	4.9	0.0	4.4
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	41,750	No Survey	14,809	44,625	No Survey	85,678	No Survey	50,952	No Survey	68,179	50,999
Angler Hours/Acre	1.4		0.5	1.5		2.8		1.7		2.3	1.7
Fishing Success (creel survey data)											
Catch Rate(any crappie)	2.36	No Survey	0.76	1.67	No Survey	1.87	No Survey	0.89	No Survey	2.14	1.62
Harvest Rate(any crappie)	0.86		0.71	1.04		1.21		0.70		1.65	1.03
Percent Harvested(bc)	33.8%		100%	68.3%		88.7%		97.6%		80.6%	78.2%
Mean Weight (#'s bc)	0.45		0.57	0.56		0.54		None		None	0.53
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$158,520	No Survey	$39,230	$112,980	No Survey	$233,030	No Survey	$135,060	No Survey	$258,010	$156,138

White Crappie, Cherokee Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (trap net data) - CPUE = # fish/net night)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.2	0.3	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.1
Density (trap net data) - CPUE = # fish/net night)											
PSD	50%	None	86%	None	None	None	83%	40%	100%	None	72%
RSD - Preferred	None	None	14%	None	None	None	33%	20%	75%	None	36%
CPUE	0.0	0.2	0.4	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.1
CPUE ≥ Stock	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
CPUE ≥ MSL (10")	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Growth (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (trap net data)											
Stock - Quality	96.6	None	80.6	None	None	None	113.0	71.4	None	100.0	92.3
Quality - Preferred	103.7	None	97.5	None	None	None	108.0	105.0	95.9	None	102.0
Preferred - Memorable	None	None	95.1	None	None	None	104.9	None	94.4	None	98.1
Memorable - Trophy	None	122.1	None	None	None	None	None	92.9	81.0	None	98.7
Trophy	None	None	None	None	None	None	None	None	None	None	None
Mortality (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	41,750	No Survey	14,809	44,625	No Survey	85,678	No Survey	50,952	No Survey	68,179	50,999
Angler Hours/Acre	1.4		0.5	1.5		2.8		1.7		2.3	1.7
Fishing Success (creel survey data)											
Catch Rate(any crappie)	2.36	No Survey	0.76	1.67	No Survey	1.87	No Survey	0.89	No Survey	2.14	1.62
Harvest Rate(any crappie)	0.86		0.71	1.04		1.21		0.70		1.65	1.03
Percent Harvested(wc)	33.8%		100%	68.3%		88.7%		85.3%		80.6%	76.1%
Mean Weight (#'s wc)	0.45		0.57	0.56		0.54		0.47		None	0.52
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$158,520	No Survey	$39,230	$112,980	No Survey	$233,030	No Survey	$135,060	No Survey	$258,010	$156,138

Walleye, Cherokee Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	No Survey	N/A	0.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	No Survey	78%	100%	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	89%
RSD - Preferred		22%	33%								28%
CPUE		1.5	0.9								1.2
CPUE ≥ Stock		1.1	0.9								1.0
CPUE ≥ MSL (15")		0.9	0.9								0.9
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (winter gill net data)											
Stock - Quality	No Survey	None	None	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	None
Quality - Preferred		89.9	94.8								92.4
Preferred - Memorable		103.9	96.1								100.0
Memorable - Trophy		None	None								None
Trophy		None	None								None
Mortality (winter gill net data)											
Total Mortality	No Survey	N/A	N/A	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	N/A
Stocking											
#	42,504	109,940	80,150	0	82,580	88,158	82,257	18,820	156,197	109,774	77,038
# per Acre	1.4	3.6	2.6	0.0	2.7	2.9	2.7	0.6	5.2	3.6	2.5
Angling Pressure (creel survey data)											
Angler Hours	931	No Survey	17,796	10,380	No Survey	16,243	No Survey	15,243	No Survey	17,619	13,035
Angler Hours/Acre	0.0		0.6	0.3		0.5		0.5		0.6	0.4
Fishing Success (creel survey data)											
Catch Rate	0.00	No Survey	0.32	0.77	No Survey	0.15	No Survey	0.28	No Survey	0.72	0.37
Harvest Rate	0.00		0.17	0.32		0.09		0.28		0.57	0.24
Percent Harvested	100%		53.5%	29.7%		54.6%		88.9%		80.9%	67.9%
Mean Weight (pounds)	1.66		2.15	2.07		1.93		1.75		None	1.91
Value of Fishery (creel survey data - trip expenditures)											
Walleye	$1,870	No Survey	$68,370	$43,980	No Survey	$46,700	No Survey	$103,610	No Survey	$142,120	$67,775

Saugeye, Cherokee Reservoir

Saugeye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	No Survey	0.0	0.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	No Survey	4%	100%	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	52%
RSD - Preferred		None	None								None
CPUE		3.5	0.4								2.0
CPUE ≥ Stock		0.1	0.4								0.3
CPUE ≥ MSL (15")		0.1	0.4								0.3
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (winter gill net data)											
Stock - Quality	No Survey	None	None	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	None
Quality - Preferred		103.4	100.5								102.0
Preferred - Memorable		None	None								None
Memorable - Trophy		None	None								None
Trophy		None	None								None
Mortality (winter gill net data)											
Total Mortality	No Survey	N/A	N/A	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	N/A
Stocking											
#	104,322	195,020	0	69,483	0	14,464	0	21,507	0	0	40,480
# per Acre	3.4	6.4	0.0	2.3	0.0	0.5	0.0	0.7	0.0	0.0	1.3
Angling Pressure (creel survey data)											
Angler Hours	0	No Survey	0	4,868	No Survey	6,796	No Survey	9,588	No Survey	5,535	4,465
Angler Hours/Acre	0.0		0.0	0.2		0.2		0.3		0.2	0.1
Fishing Success (creel survey data)											
Catch Rate	0.00	No Survey	0.00	0.66	No Survey	0.38	No Survey	0.83	No Survey	0.67	0.42
Harvest Rate	0.00		0.00	0.52		0.22		0.64		0.51	0.32
Percent Harvested	0.0%		0.0%	100%		76.7%		86.3%		76.0%	56.5%
Mean Weight (pounds)	None		None	2.95		2.30		None		0.00	1.75
Value of Fishery (creel survey data - trip expenditures)											
Saugeye	$0	No Survey	$0	$25,040	No Survey	$15,730	No Survey	$79,740	No Survey	$60,870	$30,230

Striped Bass, Cherokee Reservoir

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	No Survey	1.4	0.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	0.7
Density (winter gill net data - CPUE = # fish/net night)											
PSD	No Survey	25%	47%	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	36%
RSD - Preferred		None	None								None
CPUE		1.9	2.5								2.2
CPUE ≥ Stock		1.4	2.5								1.9
CPUE ≥ MSL (15")		0.5	1.7								1.1
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	N/A	N/A	18.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.2
Mean TL at Age-3 (mm)	N/A	N/A	23.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23.2
Relative Weight (winter gill net data)											
Stock - Quality	No Survey	None	92.5	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	92.5
Quality - Preferred		92.5	92.5								92.5
Preferred - Memorable		None	None								None
Memorable - Trophy		None	None								None
Trophy		None	None								None
Mortality (winter gill net data)											
Total Mortality	No Survey	N/A	N/A	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	N/A
Stocking											
#	92,180	25,399	71,748	39,906	70,654	53,771	60,416	41,539	72,169	62,787	59,057
# per Acre	3.0	0.8	2.4	1.3	2.3	1.8	2.0	1.4	2.4	2.1	2.0
Angling Pressure (creel survey data)											
Angler Hours	87,431	No Survey	18,162	43,499	No Survey	41,116	No Survey	11,113	No Survey	12,467	35,631
Angler Hours/Acre	2.9		0.6	1.4		1.4		0.4		0.4	1.2
Fishing Success (creel survey data)											
Catch Rate	0.33	No Survey	0.28	0.18	No Survey	0.24	No Survey	0.15	No Survey	0.15	0.22
Harvest Rate	0.15		0.02	0.05		0.11		0.08		0.04	0.08
Percent Harvested	48.2%		24.2%	22.9%		29.0%		48.5%		13.0%	31.0%
Mean Weight (pounds)	7.19		4.79	4.53		16.00		None		None	8.13
Value of Fishery (creel survey data - trip expenditures)											
Striped Bass	$408,570	No Survey	$78,290	$377,190	No Survey	$78,290	No Survey	$88,070	No Survey	$186,100	$202,752

Hybrid Striped Bass, Cherokee Reservoir

Hybrid Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	No Survey	0.0	0.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	No Survey	95%	100%	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	98%
RSD - Preferred		57%	94%								76%
CPUE		4.6	1.7								3.2
CPUE ≥ Stock		4.6	1.7								3.2
CPUE ≥ MSL (15")		3.3	1.7								2.5
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	N/A	N/A	17.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.2
Mean TL at Age-3 (mm)	N/A	N/A	20.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.7
Relative Weight (winter gill net data)											
Stock - Quality	No Survey	91.2	None	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	91.2
Quality - Preferred		93.4	97.7								95.6
Preferred - Memorable		97.9	98.3								98.1
Memorable - Trophy		103.5	95.7								99.6
Trophy		None	None								None
Mortality (winter gill net data)											
Total Mortality	No Survey	N/A	N/A	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	N/A
Stocking											
#	22,512	53,997	74,501	58,857	40,838	41,410	41,758	0	67,430	62,787	46,409
# per Acre	0.7	1.8	2.5	1.9	1.3	1.4	1.4	0.0	2.2	2.2	1.5
Angling Pressure (creel survey data)											
Angler Hours	0	No Survey	33,309	36,589	No Survey	46,038	No Survey	23,642	No Survey	21,575	26,859
Angler Hours/Acre	0.0		1.1	1.2		1.5		0.8		0.7	0.9
Fishing Success (creel survey data)											
Catch Rate	0.00	No Survey	0.29	0.34	No Survey	0.56	No Survey	0.44	No Survey	0.76	0.40
Harvest Rate	0.00		0.07	0.21		0.26		0.12		0.41	0.18
Percent Harvested	0.0%		43.6%	99.0%		43.2%		46.9%		38.4%	45.2%
Mean Weight (pounds)	None		6.11	5.17		6.26		None		None	5.85
Value of Fishery (creel survey data - trip expenditures)											
Hybrid Striped Bass	$0	No Survey	$195,800	$296,070	No Survey	$259,500	No Survey	$58,130	No Survey	$267,690	$179,532

White Bass, Cherokee Reservoir

White Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	No Survey	0.0	0.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	No Survey	None	100%	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	100%
RSD - Preferred		None	100%								100%
CPUE		0.0	0.8								0.4
CPUE ≥ Stock		0.0	0.8								0.4
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (winter gill net data)											
Stock - Quality	No Survey	None	None	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	None
Quality - Preferred		None	None								None
Preferred - Memorable		None	81.8								81.8
Memorable - Trophy		None	92.4								92.4
Trophy		None	None								None
Mortality (winter gill net data)											
Total Mortality	No Survey	N/A	N/A	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	N/A
Angling Pressure (creel survey data)											
Angler Hours	2,752	No Survey	3,085	0	No Survey	12,381	No Survey	4,949	No Survey	7,437	5,101
Angler Hours/Acre	0.1		0.1	0.0		0.4		0.2		0.2	0.2
Fishing Success (creel survey data)											
Catch Rate	0.50	No Survey	1.17	2.07	No Survey	0.00	No Survey	1.38	No Survey	1.12	1.04
Harvest Rate	0.15		1.17	1.87		0.00		1.16		1.05	0.90
Percent Harvested	0.0%		42.9%	69.7%		0.0%		76.2%		75.3%	44.0%
Mean Weight (pounds)	None		1.85	0.84		None		0.54		None	1.08

Shad, Cherokee Reservoir

Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Density (summer shad gill net data - geometric mean density)											
Gizzard Shad	No Survey	1.0	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	1.0
Threadfin Shad		2.5									2.5
Alewife		1.4									1.4

Redear Sunfish, Cherokee Reservoir

Redear Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Stocking (began 2015)											
#	None	None	205,227	221,774	0	267,732	202,150	84,054	319,146	134,401	179,311
# per Acre	None	None	7.1	7.7	0.0	9.3	6.7	2.8	10.5	4.4	6.1
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	0	No Survey	0	0	No Survey	0	No Survey	0	No Survey	0	0
Angler Hours/Acre	0.0		0.0	0.0		0.0		0.00		0.00	0.0
Fishing Success (creel survey data - bluegill only)											
% Effort	None	No Survey	None	None	No Survey	0.00	No Survey	0.00	No Survey	0.00	0.00
# Caught	None		None	None		260		1,313		737	770
% Harvested	None		None	None		0.0%		0.0%		20.5%	6.8%
Mean Weight	None		None	None		None		None		None	None
Value of Fishery (creel survey data - trip expenditures)											
Redear	None	No Survey	None	None	No Survey	$0	No Survey	$0	No Survey	$0	$0

Sunfish, Cherokee Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	17,537	No Survey	3,442	0	No Survey	3,406	No Survey	36,753	No Survey	19,422	13,427
Angler Hours/Acre	0.6		0.1	0.00		0.1		1.2		0.6	0.4
Fishing Success (creel survey data - bluegill only)											
Catch Rate (any sunfish)	1.45	No Survey	3.46	0.00	No Survey	2.54	No Survey	1.93	No Survey	2.67	2.01
Harvest Rate (any sunfish)	0.54		2.85	0.00		2.18		1.93		2.62	1.69
% Harvested (bluegill)	35.1%		39.5%	5.6%		50.2%		79.6%		97.8%	51.3%
Mean Weight (bluegill)	0.18		0.17	N/A		0.30		0.20		None	0.21
Value of Fishery (creel survey data - trip expenditures)											
Any Sunfish	$40,870	No Survey	$3,530	$0	No Survey	$6,420	No Survey	$122,360	No Survey	$49,770	$37,158

Catfish, Cherokee Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Stocking											
#	None	None	None	None	None	5,694	11,857	5,712	0	0	4,653
# per Acre	None	None	None	None	None	0.2	0.4	0.2	0.0	0.0	0.2
Angling Pressure (creel survey data - any catfish)											
Angler Hours	14,782	No Survey	10,909	9,998	No Survey	28,144	No Survey	19,787	No Survey	9,534	15,526
Angler Hours/Acre	0.5		0.4	0.3		0.9		0.7		0.3	0.5
Fishing Success (creel survey data)											
Catch Rate (any catfish)	0.54	No Survey	0.52	0.89	No Survey	0.78	No Survey	1.66	No Survey	0.00	0.73
Harvest Rate (any catfish)	0.33		0.41	0.80		0.66		1.57		0.00	0.63
% Harvested (channel)	54.2%		85.1%	66.2%		80.6%		88.7%		89.6%	77.4%
Mean Weight (channel)	1.37		3.01	1.82		2.17		None		None	2.09
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	$75,770	No Survey	$40,850	$50,780	No Survey	$81,160	No Survey	$101,540	No Survey	$38,190	$64,715

Habitat Enhancement, Cherokee Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Cedar Trees	Cedar trees, Bamboo, Cedar stakes	382	504
Reef Balls		0	0

Water Quality Monitoring, Cherokee Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	July- September	Normal
Dissolved Oxygen	July - September	Normal

Douglas Reservoir

Description

Surface Area: 30,400 acres
Counties: Jefferson, Sevier, Cocke
Full Pool Elevation: 994 feet above mean sea level
Maximum Depth: 129 feet
Mean Chlorophyll (Forebay): 6.8 parts per million
Trophic Status (Forebay): Mesotrophic
Hydraulic Retention Time: 105 days
Total Fishing Effort: N/A

Shoreline Distance: 127 miles
Drainage Area: 4541 square miles
Mean Annual Fluctuation: 50 feet
Thermocline Depth: 23 feet
Shoreline Development: 17%
Trophic Index, Carlson (1977): 49.3
Reservoir Age: 79 years (dam completed 1943)
Total Value by Anglers: N/A

Summary:

Electrofishing

The 2022 smallmouth bass total catch rates were well above average, with a CPUE of 50.1fish/hour. This was the second highest catch rate recorded in the last 10 years. We also saw good numbers of fish collected under 7-inches (35%). The large number of smallmouth bass collected under 7-inches, the last few years, should help smallmouth populations remain stable and fishing should continue to improve. The relative weights for smallmouth bass were above average for Douglas Reservoir.

The 2022 largemouth bass catch rates were below average, with a CPUE of 76.3 fish/hour. The Douglas Reservoir largemouth bass size structure is very good as indicated by a PSD value of 70. (PSD Proportional Stock Density is the proportion of quality size fish to stock size fish within a population with the objective range being values of 40-70). This indicates a good mix of fish lengths in the population. The large number of smaller fish in the largemouth bass population will help to ensure a stable and quality fishery for the next several years. The relative weights for largemouth were average for Douglas Reservoir.

Trap Netting

Trap nets were used to sample Douglas Reservoir crappie populations in November of 2022. These nets were set from just above Nina Creek to Flat Creek. The TWRA collected a total of 192 black crappie, 7 white crappie, and 1 black-nose black crappie in 90 trap net sets.

During sampling this year, 19.1% of the black crappie collected were less than 5-inches, which indicates there was a successful spawn in 2022. The CPUE for black crappie was slightly below average this year at 2.1 fish per net night. The overall numbers of white crappie collected this year was well below average at 0.1 fish per net night. We did collect a few white that crappie were less than 5-inches, which would indicate that some successful spawning occurred in 2022.

We have documented successful crappie spawning on Douglas Reservoir for the past several years with the collection of young of the year crappie in our fall trap-netting samples. We are hopeful that even though spawning success was limited in 2022, it will be enough to sustain the crappie populations on Douglas Reservoir.

Gill Netting

Experimental gillnets were used to collect walleye and sauger on Douglas Reservoir. We collected 17 sauger and 91 walleye in six experimental gill nets. The gill nets were set from Indian Creek to Muddy Creek. All the fish collected were weighed and measured. Otoliths were collected from all sauger. Otoliths and left pectoral fin clips were collected from all walleye.

The catch rates for sauger were 2.8 fish per net night. This was slightly below the 10-year average cpue of 3.5 fish per net night. The number of sauger over 16-inches was also slightly below average at 0.7 fish per net night. We hope that stocking efforts, combined with the current (1 fish over 16-inches) regulation, will help sauger populations recover on Douglas Reservoir.

The overall catch rates for walleye was above average for the fourth year in a row at 15.2 fish per net night. A large percentage of these fish were under 12-inches (48%). This is probably an indication of natural spawning combined with successful recruitment and survival of stocked walleye. Douglas Reservoir was stocked with walleye for the first time in recent history in 2020 with 112,777 fingerlings. Douglas Reservoir was also stocked in 2021 with 313,120 fingerling and again in 2022 with 184,688 fingerlings. These stocking efforts combined with natural reproduction should improve the Douglas Reservoir walleye fishery over the next several years.

Shad Netting

There was no shad netting conducted on Douglas Reservoir in 2022.

Habitat Enhancement

There were several habitat enhancement projects conducted on Douglas Reservoir in 2022. There were 165 reef ball habitat structures placed at various locations. There were cedar trees attached to these reef balls to enhance their fish holding capabilities. There were also stake beds placed at various locations for habitat improvement.

Water Quality

Water quality sampling was conducted at two sites on Douglas Reservoir during the months of July, August, and September. These samples were normal for Douglas Reservoir.

Lake wide Angling Summary

Total Effort and Expenditures

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angler Hours	no survey	581,862	276,669	no survey	370,340	no survey	326,527	no survey	420,356	no survey	395,151
Angler Hours Per Acre	no survey	19.1	9.1	no survey	12.2	no survey	10.7	no survey	13.6	no survey	12.9
Angler Trips	no survey	98,479	49,233	no survey	76,581	no survey	64,398	no survey	111,173	no survey	79,973
Value of Fishery (angler expenditures creel)											
All Species	no survey	$2,332,710	$928,230	no survey	$1,658,380	no survey	$1,332,070	no survey	$2,415,400	no survey	$1,733,358

Black Bass, Douglas Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	No Survey	179,745	72,219	No Survey	156,255	No Survey	146,256	No Survey	130,541	No Survey	137,003
	(hrs/acre)		6	2.4		5.1		4.8		4.3		4.5
Any Black Bass	(hrs)		51,624	34,939		10,426		73,706		60,870		46,313
	(hrs/acre)		2	1.1		0.3		2.4		2.0		1.5
Largemouth Bass	(hrs)		128,121	36,758		145,259		68,110		60,401		87,730
	(hrs/acre)		4	1.2		4.8		2.2		2.0		2.9
Smallmouth Bass	(hrs)		0	522		570		4,440		9,270		2,960
	(hrs/acre)		0	0.0		0.0		0.1		0.1		0.0
Spotted Bass	(hrs)		0	0		0		0		0		0
	(hrs/acre)		0	0.0		0.0		0.0		0.0		0.0
Tournaments (BITE program)												
# Tournaments (BITE)		No Survey	No Survey	No Survey	No Survey	No Survey	No Survey	none reported	No Survey	No Survey	No Survey	none
Pounds/Angler Day (BITE)												none
Bass/Angler Day (BITE)												none
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		No Survey	$975,610	$351,230	No Survey	$828,260	No Survey	$722,650	No Survey	$1,230,500	No Survey	$821,650
Any Black Bass			$249,780	$193,930		$44,100		$433,380		$689,170		$322,072
Largemouth Bass			$725,830	$157,100		$781,260		$268,510		$479,050		$482,350
Smallmouth Bass			$0	$200		$2,900		$20,760		$62,280		$17,228
Spotted Bass			$0	$0		$0		$0		$0		$0

Largemouth Bass, Douglas Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	no survey	33.1	18.9	13.0	20.7	11.0	14.0	10.3	42.7	12.3	19.6
Density (electrofishing data - CPUE = # fish/hour)											
PSD	no survey	56%	63%	75%	71%	65%	81%	66%	57%	70%	67%
RSD - Preferred	no survey	23%	28%	20%	32%	23%	34%	34%	29%	23%	27%
CPUE	no survey	126.6	83.4	83.0	81.3	99.7	112.7	116.7	138.3	76.3	102.0
CPUE ≥ Stock	no survey	93.4	64.6	70.0	60.7	88.7	98.7	106.3	95.7	64.0	82.5
CPUE ≥ MSL	No Minimum Size Limit										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	no survey	81.5	83.0	84.8	85.6	86.9	91.4	90.0	82.8	95.1	86.8
Quality - Preferred	no survey	88.8	91.0	90.2	89.7	91.4	95.6	94.8	86.8	89.8	90.9
Preferred - Memorable	no survey	90.1	90.0	91.0	94.8	94.0	94.8	91.9	85.7	86.8	91.0
Memorable - Trophy	no survey	98.5	92.0	95.7	99.9	101.2	97.5	none	none	95.0	97.1
Trophy	no survey	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	0.58	0.38	No Survey	0.84	No Survey	0.93	No Survey	1.31	No Survey	0.81
Harvest Rate		0.11	0.00		0.09		0.00		0.02		0.04
Percent Harvested		19.5%	0.0%		11.3%		0.0%		1.6%		6.5%
Mean Weight (pounds)		2.91	N/A		2.88		N/A		N/A		2.895

Smallmouth Bass, Douglas Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	2.1	0.6	4.7	10.8	0.8	0.7	10.6	1.8	21.5	15.9	7.0
***Density** (electrofishing data - CPUE = # fish/hour)											
PSD	80%	59%	59%	22%	53%	70%	49%	56%	60%	63%	57%
RSD - Preferred	55%	33%	38%	12%	29%	42%	40%	45%	30%	42%	37%
CPUE	37.4	29.3	26.3	28.8	32.8	26.4	15.7	20.6	58.4	50.1	32.6
CPUE ≥ Stock	22.6	28.6	21.5	18.0	32.0	25.6	26.4	18.8	36.9	34.3	26.5
CPUE ≥ MSL (15")**	0.6	0.0	0.5	1.0	6.8	7.7	5.2	6.8	4.8	10.0	4.3
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	134	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	83.8	80.3	82.3	80.0	81.5	84.3	84.2	85.2	84.0	84.1	83.0
Quality - Preferred	85.3	80.4	80.1	75.9	84.0	89.9	82.3	85.3	85.4	84.0	83.3
Preferred - Memorable	87.0	82.3	85.9	77.6	84.5	94.0	83.7	88.2	86.5	85.8	85.6
Memorable - Trophy	88.3	80.5	88.5	88.4	87.3	91.6	89.7	84.8	84.6	85.7	86.9
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	49%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.3	0.3	0.2	0.0	0.1	0.1	0.5	0.0	0.0	0.0	0.2
Fishing Success (creel survey data)											
Catch Rate	No Survey	0.03	0.05	No Survey	0.00	No Survey	0.22	No Survey	0.27	No Survey	0.11
Harvest Rate		0.00	0.00		0.00		0.00		0.00		0.00
Percent Harvested		8.1%	0.0%		0.0%		0.0%		0.8%		1.8%
Mean Weight (pounds)		3.00	N/A		N/A		N/A		N/A		3.00

**Smallmouth Bass size limit changed to seasonal regulation in 2015: 1 fish over 18 inches from June 1st- October 15. 5 fish over 15 inches October 16 - May 31. 2007-2015 data is for 20" MSL

White Crappie, Douglas Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (trap net data) - CPUE = # fish/ net night)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.1	10.3	3.6	0.6	0.0	2.1	0.4	0.1	0.4	0.1	1.8
Density (trap net data) - CPUE = # fish/ net night)											
PSD	93%	89%	91%	57%	100%	57%	79%	94%	92%	100%	85%
RSD - Preferred	80%	81%	55%	57%	86%	43%	63%	71%	58%	100%	69%
CPUE	0.4	10.7	4.0	0.8	0.1	2.2	0.6	0.3	0.6	0.1	2.0
CPUE ≥ Stock	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2
CPUE ≥ MSL (10")	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Growth (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (trap net data)											
Stock - Quality	83.1	115.0	108.2	81.1	none	106.3	82.1	105.3	none	none	97.3
Quality - Preferred	104.7	105.8	100.5	none	76.4	94.7	96.7	101.4	106.3	none	98.3
Preferred - Memorable	100.1	95.9	91.6	90.0	70.0	none	104.7	95.8	94.1	92.2	92.7
Memorable - Trophy	97.8	91.5	91.7	88.0	90.1	75.3	78.6	79.5	79.8	88.5	86.1
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	268,444	116,903	No Survey	143,270	No Survey	96,126	No Survey	152,204	No Survey	155,389
Angler Hours/Acre		8.8	3.8		4.7		3.2		5.0		5.1
Fishing Success (cree		data)									
Catch Rate		2.36	1.08		2.49		2.00		2.78		2.14
Harvest Rate		1.43	0.79		1.37		1.00		1.94		1.31
Percent Harvested		61.8%	64.8%		56.1%		48.0%		82.6%		62.7%
Mean Weight (pounds)		0.55	0.55		0.47		0.53		N/A		0.53
Value of Fishery (cree		data - trip expenditures)									
Any Crappie		$655,830	$285,560		$448,060		$317,480		$546,130		$450,612

Black Crappie, Douglas Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (trap net data) - CPUE = # fish/ net night)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	3.3	2.1	1.5	0.2	0.2	1.2	0.2	0.1	0.8	0.4	1.0
Density (trap net data) - CPUE = # fish/ net night)											
PSD	92%	80%	84%	81%	93%	96%	90%	91%	90%	81%	88%
RSD - Preferred	61%	46%	60%	42%	53%	63%	37%	55%	46%	30%	49%
CPUE	7.0	5.4	5.9	2.7	2.9	2.8	3.7	1.5	2.3	2.1	3.6
CPUE ≥ Stock	3.7	3.4	4.4	2.5	2.7	1.6	3.5	1.4	1.5	1.7	2.6
CPUE ≥ MSL (10")	1.8	1.2	2.0	0.9	1.0	0.9	1.2	0.8	0.6	0.5	1.1
Growth (trap net data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (trap net data)											
Stock - Quality	101.9	90.1	81.6	90.3	93.3	126.3	107.8	94.3	none	108.0	99.3
Quality - Preferred	97.0	103.6	93.4	99.1	96.7	100.1	108.2	102.8	103.0	109.0	101.3
Preferred - Memorable	94.8	95.2	96.8	94.5	95.8	96.3	103.3	101.5	104.9	103.0	98.6
Memorable - Trophy	83.7	91.3	92.5	91.1	94.1	89.6	90.6	89.7	100.4	100.6	92.4
Trophy	none	none	none	none	none	none	none	none	91.5	none	none
Mortality (trap net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	268,444	116,903	No Survey	143,270	No Survey	96,126	No Survey	152,204	No Survey	155,389
Angler Hours/Acre		8.8	3.8		4.7		3.2		5.0		5.1
Fishing Success (creel data)											
Catch Rate		0.15	0.05		0.14		0.22		0.25		0.16
Harvest Rate		0.11	0.05		0.08		0.12		0.19		0.11
Percent Harvested		76.3%	86.9%		57.3%		52.1%		83.6%		71.2%
Mean Weight (pounds)		0.62	0.44		0.56		0.56		N/A		0.545
Value of Fishery (creel data - trip expenditures)											
Any Crappie		$655,830	$285,560		$448,060		$317,480		$546,130		$450,612

Sauger, Douglas Reservoir

Sauger

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	70%	96%	100%	64%	93%	91%	85%	94%	100%	94%	89%
RSD - Preferred	70%	74%	86%	27%	41%	57%	50%	44%	61%	41%	55%
CPUE	3.8	3.8	1.2	1.8	6.8	3.8	3.3	3.0	6.0	2.8	3.6
CPUE ≥ Stock	3.8	3.8	1.2	1.8	6.8	3.8	3.3	3.0	6.0	2.8	3.6
CPUE ≥ MSL (16")*	2.0	1.3	0.2	0.0	1.0	1.7	1.3	1.3	1.7	0.7	1.1
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	406	390	381	373	378	384	373	371	369	369	379
Mean TL at Age-3 (mm)	397	433	none	none	none	none	472	500	463	455	453
Relative Weight (winter gill net data)											
Stock - Quality	82.6	93.5	none	95.3	none	80.8	93.0	87.0	none	91.9	89.2
Quality - Preferred	none	94.0	89.6	96.7	108.0	88.5	95.1	94.6	96.3	96.2	95.4
Preferred - Memorable	96.9	97.5	94.3	101.7	93.4	95.9	102.9	103.2	95.0	101.8	98.3
Memorable - Trophy	none	none	none	none	none	none	none	108.2	none	none	none
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (winter gill net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	3.0	0.0	0.7	2.7	2.0	0.9	2.4	0.0	0.0	0.0	1.2
Angling Pressure (creel survey data - sauger data only)											
Angler Hours	No	2,375	2,500	No	1,759	No	1,296	No	14,177	No	4,421
Angler Hours/Acre		0.07	0.08		0.05		0.04		0.50		0.15
Fishing Success (cre		data - sauger data only									
Percent Harvested		81.0%	63.4%		22.4%		0.0%		77.5%		48.9%
Mean Weight (pounds)		1.59	1.67		1.31		N/A		N/A		1.52
Value of Fishery (cre		data - trip expenditures									
All Sanders	Survey	$166,090	$80,100	Survey	$59,900	Survey	$135,150	Survey	$332,070	Survey	$154,662
Sauger Data Only		$8,840	$6,950		$7,830		N/A		$82,460		$26,520

Walleye, Douglas Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.0	0.0	0.2	0.3	0.0	0.7	0.3	0.0	0.8	0.5	0.3
Density (winter gill net data - CPUE = # fish/net night)											
PSD	52%	54%	48%	35%	72%	24%	60%	47%	37%	39%	47%
RSD - Preferred	4%	0%	6%	0%	3%	6%	0%	1%	1%	1%	2%
CPUE	4.2	6.5	13.5	8.8	6.5	3.5	12.3	16.7	23.7	15.2	11.1
CPUE ≥ Stock	4.2	6.5	13.3	8.5	6.5	2.8	12.0	16.7	22.8	14.7	10.8
CPUE ≥ MSL (15")	2.2	3.0	5.2	2.3	4.0	0.7	7.0	7.8	8.3	5.7	4.6
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	403	407	407	390	404	none	403	413	399	381	401
Mean TL at Age-3 (mm)	480	427	600	430	none	510	none	none	512	477	491
Relative Weight (winter gill net data)											
Stock - Quality	85.0	94.1	87.4	88.3	90.0	89.4	90.5	87.5	91.0	97.4	90.1
Quality - Preferred	89.5	91.2	88.2	87.6	85.1	88.5	91.3	88.2	87.2	88.5	88.5
Preferred - Memorable	80.7	none	90.1	none	84.5	82.2	none	80.7	95.8	83.5	85.4
Memorable - Trophy	none	none	none	none	none	none	none	none	none	none	none
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (winter gill net data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	10.3	6.1	2.0
Angling Pressure (creel survey data - walleye data only)											
Angler Hours	No	43,028	24,509	No	13,059	No	24,596	No	36,126	No	28,264
Angler Hours/Acre		1.41	0.80		0.42		0.80		1.20		0.93
Fishing Success (cree		data - walleye data									
Percent Harvested		74.7%	55.3%		67.2%		65.5%		71.6%		66.9%
Mean Weight (pounds)		1.79	1.86		1.90		2.05		N/A		1.90
Value of Fishery (cree		data - trip expenditures)									
All Sanders	Survey	$166,090	$80,100	Survey	$59,900	Survey	$135,150	Survey	$332,070	Survey	$154,662
Walleye Data Only		$157,270	$73,150		$52,070		$135,150		$249,610		$133,450

Sunfish, Douglas Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	No	4,976	1,986	No	6,748	No	3,223	No	20,378	No	7,462
Angler Hours/Acre		0.16	0.06		0.22		0.11		0.70		0.25
Fishing Success (cree		data - bluegill only)									
Catch Rate (bluegill)	Survey	0.00	7.30	Survey	1.01	Survey	5.66	Survey	4.67	Survey	3.73
Harvest Rate (bluegill)		0.00	4.29		0.09		1.99		4.61		2.20
% Harvested (bluegill)		75.0%	51.5%		10.3%		54.8%		92.8%		56.9%
Mean Weight (bluegill)		0.07	0.22		0.08		0.12		N/A		0.12
Value of Fishery (cree		data - trip expenditures									
Any Sunfish		$5,690	$8,590		$11,550		$18,040		$64,040		$21,582

Catfish, Douglas Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	No Survey	3,835	9,372	No Survey	17,341	No Survey	15,310	No Survey	17,971	No Survey	12,766
Angler Hours/Acre		0.80	0.30		0.57		0.50		0.60		0.42
Fishing Success (cre		data)									
Catch Rate (channel cat)		0.00	0.26		0.50		0.74		1.03		0.51
Harvest Rate (channel cat)		0.00	0.11		0.31		0.65		0.92		0.40
% Harvested (channel cat)		27.0%	26.9%		61.1%		74.4%		84.2%		54.7%
Mean Weight (channel cat)		1.61	2.3		1.6		2.26		N/A		1.94
Value of Fishery (cre		data - trip expenditures									
Any Catfish		$101,500	$41,970		$61,640		$43,740		$49,770		$59,724

Habitat Enhancement, Douglas Reservoir

Type of Work	Details	Quantity	
		New	Renovated
Planted			
Rebrushed			
Checked and Refurbishe	Stake beds	4 units	
Added	Brush to Reef Balls	240 units	
Installed	Reef Balls	165 units	

Water Quality Monitoring, Douglas Reservoir

Parameter	Sampling Period	Water Quality
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

Fort Loudoun Reservoir 2022

Description

Surface Area: 14,600 Acres	**Shoreline Miles:** 379
Counties: Knox, Loudon, Blount	
Full Pool Elevation (feet-msl): ~ 813	**Winter Pool Elevation (feet-msl):** ~ 807
Dam Completion: 1943	**Reservoir Age:** 79
Total Fishing Effort (Angler Hours): No Survey	**Total Value by Anglers:** No Survey

Summary:

Electrofishing

Electrofishing surveys were conducted between the dates of 4/18/2022 and 4/19/2022. A total of 12 sites were sampled. The following species and numbers were collected during the survey:

Largemouth Bass – 170 Smallmouth Bass – 43 Black Crappie – 10 White Crappie – 11

The CPUE for Largemouth Bass in 2022 was 56.7. The CPUE for the last two years has been markedly down from the previous two years. However, the relative weights of the fish collected were comparable to the 10-year average. Additionally, the Largemouth Bass had a PSD of 61% and a RSD_p of 16% which indicates a stable Largemouth Bass population.

In 2022, the TWRA stocked 146,071 Florida Largemouth Bass. Florida Largemouth Bass have been stocked in Fort Loudoun for 8 consecutive years. Hopefully we will start to see more quality size Florida Largemouth Bass being caught in the next several years.

Management Plan: maintain current plan.

Smallmouth Bass numbers have increased for consecutive years in our electro-fishing surveys. Smallmouth Bass had a CPUE of 14.3 in 2022 which overtook last year's catch rate to become the highest in 10 years. Smallmouth bass had a PSD of 45% and a RSD_p of 21% which indicates a stable population.

Management Plan: maintain current plan.

Habitat Enhancement

There was no habitat enhancement accomplished on Fort Loudoun Reservoir in 2022.

Water Quality

Water quality was conducted at 3 sites on Fort Loudoun Reservoir in 2022 during the months of July, August, and September. These samples were normal for Fort Loudoun Reservoir.

Lakewide Angling Survey

Total Effort and Expeditures

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure											
Angler Hours	No Survey	No Survey	148,479	No Survey	159,335	No Survey	136,804	No Survey	103,027	No Survey	136,911
Angler Hours Per Acre			10.2		10.9		9.4		7.1		9.4
Angler Trips			33,188		33,392		28,389		21,138		29,027
Value of Fishery (angler expenditures creel)											
All Species	No Survey	No Survey	$605,250	No Survey	$559,740	No Survey	$525,940	No Survey	$378,330	No Survey	$517,315

**** Creel was only accomplished from January-August in 2021.**

Black Bass, Fort Loudoun Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	No Survey	No Survey	71,400	No Survey	70,284	No Survey	75,245	No Survey	59,542	No Survey	69,118
	(hrs/acre)			4.9		4.8		5.2		4.1		4.7
Any Black Bass	(hrs)			26,275		4,007		31,691		12,193		18,542
	(hrs/acre)			1.8		0.3		2.2		0.8		1
Largemouth Bass	(hrs)			42,507		61,780		41,535		44,995		47,704
	(hrs/acre)			2.9		4.2		2.8		3.1		3
Smallmouth Bass	(hrs)			2,618		4,497		2,019		2,354		2,872
	(hrs/acre)			0.2		0.3		0.1		0.2		0.2
Spotted Bass	(hrs)			0		0		0		0		0
	(hrs/acre)			0.0		0.0		0.0		0.0		0.0
Tournaments (BITE program)												
# Tournaments (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pounds/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bass/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		No Survey	No Survey	$361,060	No Survey	$326,820	No Survey	$620,040	No Survey	$252,070	No Survey	$389,998
Any Black Bass				$141,640		$25,620		$263,500		$54,930		$121,423
Largemouth Bass				$208,920		$285,730		$339,900		$187,910		$255,615
Smallmouth Bass				$10,500		$15,470		$16,640		$9,230		$12,960
Spotted Bass				$0		$0		$0		$0		$0

**** Creel was only accomplished from January-August in 2021.**

Largemouth Bass, Fort Loudoun Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	3.6	0.4			7.0	8.0	10.0	26.3	23.2	13.0	11.4
Density (electrofishing data - CPUE = # fish/hour)											
PSD	65%	79%	No Survey	No Survey	64%	72%	77%	58%	61%	61%	67%
RSD - Preferred	29%	44%			70%	22%	21%	14%	30%	16%	31%
CPUE	44.8	43.6			108.7	61.0	103.0	109.0	55.7	56.7	72.8
CPUE ≥ Stock	41.2	43.2			101.7	53.0	93.0	82.7	32.5	43.7	61.4
CPUE ≥ MSL (14 inches)	16.8	22.8			20.0	20.0	32.3	24.7	13.1	10.7	20.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	188	N/A	N/A	N/A	N/A	N/A	N/A	N/A	188
Mean TL at Age-3 (mm)	N/A	N/A	338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	338
Relative Weight (electrofishing data)											
Stock - Quality	87.2	80.7	No Survey	No Survey	85.1	78.0	85.1	94.8	91.6	87.6	86.3
Quality - Preferred	90.2	85.0			83.5	82.8	87.1	95.4	90.4	87.0	87.7
Preferred - Memorable	92.4	94.2			83.7	89.8	86.6	96.8	91.5	87.8	90.3
Memorable - Trophy	91.9	95.3			90.1	86.3	96.7	103.6	102.6	89.1	94.4
Trophy	None	None			None	None	None	None	None	89.0	89.0
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	37.0%	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	37.0%
Stocking (Florida Largemouth)											
#	N/A	N/A	147,793	73,037	76,691	104,558	77,415	124,018	160,029	146,071	113,702
# per acre	N/A	N/A	10.1	5.0	5.3	7.2	5.3	8.5	11.0	10.0	7.8
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	1.26	No Survey	1.35	No Survey	0.91	No Survey	1.02	No Survey	1.14
Harvest Rate			0.00		0.00		0.01		0.02		0.01
Percent Harvested			0.3%		0.5%		1.5%		1.9%		1.1%
Mean Weight (pounds)			3.65		2.28		2.24		2.17		2.59

**** Creel was only accomplished from January-August in 2021.**

Smallmouth Bass, Fort Loudoun Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0			0.7	1.0	3.7	2.7	4.5	1.7	1.8
***Density** (electrofishing data - CPUE = # fish/hour)											
PSD	20%	40%	No Survey	No Survey	88%	67%	60%	41%	42%	45%	50%
RSD - Preferred	0%	20%			46%	57%	13%	29%	21%	21%	26%
CPUE	4.0	2.0			8.7	8.0	8.7	8.3	13.3	14.3	8.4
CPUE ≥ Stock	4.0	2.0			8.0	7.0	5.0	5.7	8.8	12.7	6.7
CPUE ≥ MSL (18")	0.0	0.4			0.7	0.7	0.0	0.7	0.5	0.3	0.4
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	158	N/A	N/A	N/A	N/A	N/A	N/A	N/A	158
Mean TL at Age-3 (mm)	N/A	N/A	328	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328
Relative Weight (electrofishing data)											
Stock - Quality	78.9	73.2	No Survey	No Survey	87.4	80.0	93.9	88.9	84.0	87.4	84.2
Quality - Preferred	69.5	70.5			78.0	72.9	90.7	81.4	81.2	83.0	78.4
Preferred - Memorable	None	79.5			78.7	78.1	88.9	87.1	82.6	80.0	82.1
Memorable - Trophy	None	None			67.2	82.9	85.2	90.4	69.9	81.6	79.5
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	0.56	No Survey	0.94	No Survey	0.06	No Survey	0.38	No Survey	0.49
Harvest Rate			0.00		0.00		0.00		0.00		0.00
Percent Harvested			99.8%		100%		0.9%		0.8%		50.4%
Mean Weight (pounds)			3.75		None		2.25		1.25		2.42

**** Creel was only accomplished from January-August in 2021.**

Spotted Bass, Fort Loudoun Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	100%	None	No Survey	No Survey	None	None	None	None	None	None	100%
RSD - Preferred	100%	None			None	None	None	None	None	None	100%
CPUE	0.4	0.4			0.0	0.0	0.0	0.0	0.0	0.0	0.1
CPUE ≥ Stock	0.4	0.4			0.0	0.0	0.0	0.0	0.0	0.0	0.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	None	None	No Survey	No Survey	None	None	None	None	None	None	None
Quality - Preferred	None	80.3			None	None	None	None	None	None	80.3
Preferred - Memorable	98.3	None			None	None	None	None	None	None	98.3
Memorable - Trophy	None	None			None	None	None	None	None	None	None
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	0.00	No Survey	0.00	No Survey	0.01	No Survey	0.00	No Survey	0.00
Harvest Rate			0.00		0.00		0.00		0.00		0.00
Percent Harvested			0.0%		0.0%		0.0%		0.0%		0.0%
Mean Weight (pounds)			None		None		None		None		None

**** Creel was only accomplished from January-August in 2021.**

Black Crappie, Fort Loudoun Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-0 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0			0.0	0.0	0.0	N/A	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	100%	90%	No Survey	No Survey	100%	100%	97%	92%	100%	100%	97%
RSD - Preferred	38%	19%			68%	89%	87%	85%	100%	60%	68%
CPUE	5.2	12.4			8.3	9.0	10.3	4.3	0.5	3.3	6.7
CPUE ≥ Stock	5.2	12.4			8.3	9.0	10.3	4.3	0.5	3.3	6.7
CPUE ≥ MSL (10")	2.0	2.0			5.3	7.0	9.0	3.3	0.5	2.0	3.9
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	None	83.2	No Survey	No Survey	None	None	93.9	111.1	None	None	96.1
Quality - Preferred	83.2	83.9			82.9	80.8	90.7	104.7	None	81.3	86.8
Preferred - Memorable	90.1	75.0			85.5	86.0	88.9	93.6	105.6	90.8	89.4
Memorable - Trophy	89.9	75.8			77.5	81.1	85.2	97.3	84.8	84.6	84.5
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking(372+374)											
#	0	0	0	0	0	0	0	0	0	0	0
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	No Survey	35,126	No Survey	22,307	No Survey	21,637	No Survey	12,750	No Survey	22,955
Angler Hours/Acre			2.4		1.5		1.5		0.9		1.6
Fishing Success (creel survey data)											
Catch Rate(any crappie)	No Survey	No Survey	2.09	No Survey	2.24	No Survey	1.38	No Survey	1.51	No Survey	1.81
Harvest Rate(any crappie)			1.00		0.98		0.01		0.77		0.69
Percent Harvested(bc)			46.5%		0.0%		100%		100%		61.6%
Mean Weight (#'s bc)			1.08		None		0.99		0.64		0.90
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	No Survey	No Survey	$109,490	No Survey	$72,620	No Survey	$124,250	No Survey	$47,270	No Survey	$88,408

**** Creel was only accomplished from January-August in 2021.**

White Crappie, Fort Loudoun Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-0 CPUE	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	94%	91%	No	No	100%	100%	100%	100%	None	100.0%	98%
RSD - Preferred	38%	35%			77%	86%	93%	56%	None	91.0%	68%
CPUE	26.0	21.6			10.0	7.0	9.7	5.3	0.0	3.7	10.4
CPUE ≥ Stock	26.0	21.6	Survey	Survey	10.0	7.0	9.7	5.3	0.0	3.7	10.4
CPUE ≥ MSL (10")	7.6	6.4			6.7	6.0	9.0	3.0	0.0	2.7	5.2
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	81.7	90.0	No	No	None	None	None	None	None	None	85.8
Quality - Preferred	89.8	86.7			86.9	85.2	89.4	97.8	None	94.8	90.1
Preferred - Memorable	88.1	89.5			84.9	85.3	93.4	97.7	None	84.5	89.1
Memorable - Trophy	89.6	83.3	Survey	Survey	84.7	83.3	93.2	97.6	None	91.0	89.0
Trophy	None	None			None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	No Survey	35,126	No Survey	22,307	No Survey	21,637	No Survey	12,750	No Survey	22,955
Angler Hours/Acre			2.4		1.5		1.5		0.9		1.6
Fishing Success (creel survey data)											
Catch Rate(any crappie)	No	No	2.09	No	2.24	No	1.38	No	1.49	No	1.80
Harvest Rate(any crappie)			1.00		0.98		0.75		0.77		0.88
Percent Harvested(wc)	Survey	Survey	40.3%	Survey	40.0%	Survey	49.4%	Survey	63.9%	Survey	48.4%
Mean Weight (#'s wc)			0.80		0.93		0.70		0.50		0.73
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	No Survey	No Survey	$109,490	No Survey	$72,620	No Survey	$124,250	No Survey	$47,270	No Survey	$88,408

**** Creel was only accomplished from January-August in 2021.**

Sunfish, Fort Loudoun Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	No Survey	No Survey	2,161	No Survey	4,545	No Survey	1,335	No Survey	1,085	No Survey	2,282
Angler Hours/Acre			0.1		0.3		0.1		0.1		0.2
Fishing Success (creel survey data - bluegill only)											
Catch Rate (any sunfish)	No	No	7.06	No	4.04	No	3.74	No	2.73	No	4.39
Harvest Rate (any sunfish)			3.83		2.55		2.42		1.42		2.56
% Harvested (bluegill)	Survey	Survey	26.5%	Survey	45.1%	Survey	25.7%	Survey	31.5%	Survey	32.2%
Mean Weight (bluegill)			0.45		0.56		0.37		0.36		0.44
Value of Fishery (creel survey data - trip expenditures)											
Any Sunfish	No Survey	No Survey	$5,350	No Survey	$12,090	No Survey	$5,330	No Survey	$2,560	No Survey	$6,333

**** Creel was only accomplished from January-August in 2021.**

Catfish, Fort Loudoun Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	No Survey	No Survey	6,201	No Survey	11,551	No Survey	11,164	No Survey	7,078	No Survey	8,999
Angler Hours/Acre			0.4		0.8		0.8		0.5		0.6
Fishing Success (creel survey data)											
Catch Rate (any catfish)	No Survey	No Survey	0.00	No Survey	0.59	No Survey	0.18	No Survey	0.25	No Survey	0.26
Harvest Rate (any catfish)			0.00		0.39		0.13		0.14		0.17
% Harvested (channel)			54.5%		58.6%		49.9%		31.1%		48.5%
Mean Weight (channel)			4.01		3.90		2.88		2.61		3.35
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	No Survey	No Survey	$28,670	No Survey	$29,270	No Survey	$45,170	No Survey	$14,160	No Survey	$29,318

**** Creel was only accomplished from January-August in 2021.**

Habitat Enhancement, Fort Loudoun Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Christmas Trees		0	0
Reef Balls		0	0

Water Quality Monitoring, Fort Loudoun Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	July - September	Normal
Dissolved Oxygen	July - September	Normal

Patrick Henry Reservoir

Description

Surface Area: 872 acres	**Shoreline Distance:** 127 miles
Counties: Sullivan	**Drainage Area:** 1903 square miles
Full Pool Elevation: 1263 feet above mean sea level	**Mean Annual Fluctuation:** 5 feet
Maximum Depth: 76 feet	**Thermocline Depth: 9** feet
Mean Chlorophyll (Forebay): 11.1 parts per million	**Shoreline Development:** 34%
Trophic Status (Forebay): Mesotrophic	**Trophic Index, Carlson (1977):** 54.2
Hydraulic Retention Time: 38 days	**Reservoir Age:** 68 years (dam completed 1954)
Total Fishing Effort: N/A	**Total Value by Anglers:** N/A

Summary:

Electrofishing

The 2022 largemouth bass catch rates were above average at 62.4 fish/hour. The overall size structure of largemouth bass in the reservoir was good. A PSD value of 52 indicates that the size structure is good for largemouth bass and inside the desired range of 40-70. An RSD-P value of 18 indicates that the population has a desired proportion of preferred length (15-inch) in the population. The relative weights for the larger fish were about average for East Tennessee reservoirs.

Smallmouth bass catch rates were about average with a catch rate of 33.6 fish/hour. The smallmouth bass size limit was changed to 15-inches in 2020. This is because we are not seeing a high percentage of fish over 18-inches after several years of this regulation being in place. We collected 8.0 fish/hour over the MLL of 15-inches. The relative weights for smallmouth were about average for east Tennessee reservoirs.

We are very excited that we are starting to see some of the Rockcastle strain walleye showing up in our samples. We collected 14 walleye during our electrofishing sample. We are hopeful that this reservoir will provide a good brood stock location and fishery for rock castle walleye in the future.

Gill Netting

There was not any gillnetting conducted on Ft. Patrick Henry in 2022. With the continued stocking efforts for the Rockcastle strain walleye, we plan to continue to monitor this population through electrofishing and gillnetting.

Trap Netting

There was no trap netting conducted on Ft. Patrick Henry reservoir in 2022.

Habitat Enhancement

There was no habitat enhancement work conducted on Ft. Patrick Henry reservoir in 2022.

Water Quality

There was no water quality sampling conducted on Ft. Patrick Henry in 2022.

Lake wide Angling Summary

Total Effort and Expenditures

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angler Hours	63,434	no survey	no survey	no survey	no survey	no survey	no survey	no survey	88,329	no survey	75,882
Angler Hours Per Acre	72.8	no survey	no survey	no survey	no survey	no survey	no survey	no survey	101.3	no survey	87.1
Angler Trips	15,491	no survey	no survey	no survey	no survey	no survey	no survey	no survey	23,157	no survey	19,324
Value of Fishery (angler expenditures creel)											
All Species	$177,420	no survey	no survey	no survey	no survey	no survey	no survey	no survey	$278,700	no survey	$228,060

Largemouth Bass, Patrick Henry

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	6.4	7.2	7.2	7.2	7.2	3.2	13.6	10.4	40.0	10.4	11.3
Density (electrofishing data - CPUE = # fish/hour)											
PSD	76%	66%	81%	69%	77%	53%	75%	73%	58%	52%	68%
RSD - Preferred	53%	36%	36%	42%	57%	33%	37%	38%	17%	18%	37%
CPUE	62.4	66.4	36.0	43.2	44.8	35.2	54.4	52.0	114.4	62.4	57.1
CPUE ≥ Stock	56.0	59.2	28.8	36.0	37.6	32.0	40.8	41.6	74.4	52.0	45.8
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	84.4	80.8	85.3	88.7	90.8	83.7	86.1	86.2	92.1	88.3	86.6
Quality - Preferred	96.7	87.4	92.8	88.6	93.7	93.9	86.0	90.2	84.3	89.0	90.3
Preferred - Memorable	103.7	93.4	93.7	93.2	99.6	87.4	92.1	97.6	84.1	86.3	93.1
Memorable - Trophy	106.3	109.0	101.3	105.3	104.0	none	95.5	89.1	83.2	88.7	98.0
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Smallmouth Bass, Patrick Henry

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	2.4	5.6	7.2	19.2	8.0	5.6	5.6	1.6	2.4	8.0	6.6
Density (electrofishing data - CPUE = # fish/hour)											
PSD	76%	78%	76%	70%	52%	56%	81%	88%	77%	78%	73%
RSD - Preferred	59%	50%	45%	48%	36%	30%	38%	71%	47%	63%	49%
CPUE	16.0	34.4	37.6	37.6	34.4	48.8	31.2	20.8	53.6	33.6	34.8
CPUE ≥ Stock	13.6	28.8	30.4	18.4	26.4	43.2	25.6	19.2	51.2	25.6	28.2
CPUE ≥ MSL (15")*	4.0	1.6	3.2	4.0	1.6	0.8	0.0	10.4	13.6	8.0	4.7
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	78.6	77.9	77.0	83.5	95.4	83.2	81.3	69.3	83.9	83.4	81.4
Quality - Preferred	79.5	80.1	87.0	87.9	84.1	80.2	81.4	85.1	81.2	84.7	83.1
Preferred - Memorable	88.4	76.0	80.7	76.4	80.6	79.6	78.9	77.9	77.1	76.9	79.3
Memorable - Trophy	85.7	73.5	101.3	78.4	80.0	80.6	72.6	77.5	70.8	74.8	79.5
Trophy	none	none	none	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* 15" MLL in effect in 2019

Habitat Enhancement - 2022

		Quantity	
Type of Work	**Details**	**New**	**Renovated**
Planted	n/a		
Rebrushed	n/a		
Checked and Refurbishe stake beds	n/a		
Rebrushed	n/a		
Added	n/a		
Installed	n/a		

Water Quality Monitoring - 2022

Parameter	**Sampling Period**	**Water Quality**
Temperature	July to September	n/a
Dissolved Oxyged	July to September	n/a

Melton Hill Reservoir 2022

Description

Surface Area: 5,690 Acres	**Shoreline Miles:** 170
Counties: Anderson, Knox, Loudon, Roane	
Full Pool Elevation(feet-msl): ~ 795	**Winter Pool Elevation (feet-msl):** ~ 792
Dam Completion: 1963	**Reservoir Age:** 59
Total Fishing Effort (Angler Hours): No Survey	**Total Value by Anglers:** No Survey

Summary:

Electrofishing

Electrofishing surveys were conducted on 5/02/2022. A total of 12 sites were sampled. The following species and numbers were collected during the survey:

Largemouth Bass – 367 Smallmouth Bass – 9 Black Crappie – 4 Black-Nosed Black Crappie – 3 White Crappie – 15

Largemouth Bass had a CPUE of 122.3 fish/hour. This number bested the 10-year mean by 45.4 fish/hour. Largemouth Bass had a PSD of 45% and a RSD_P of 12%, which is indicative of a good size distribution. Almost 76% of the of Largemouth Bass collected were ≤ 11 inches which could be indicative of good reproduction over the last several years. Another possibility, is the water temperatures quickly warmed this spring, likely moving bigger Largemouth Bass into deeper water. Relative weights for Largemouth Bass have remained stable over the past 5 years.

Management plan: maintain current plan.

Smallmouth Bass had a CPUE of 3.0 fish/hour which was slightly higher than the 10-year mean.

Management plan: maintain current plan.

Black Crappie CPUE's were considerably lower than last year, however White Crappie CPUE's were above the 10-year mean.

Management plan: maintain current plan.

We observed a good number of quality Bluegill and Redear Sunfish during our surveys.

Habitat Enhancement

A total of 70 habitat structures were deployed into Melton Hill Reservoir in 2022. Structures were made using Bamboo, Cedar trees, and Cedar stakes with concrete bases.

Lakewide Angling Survey

Total Effort and Expenditures

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure											
Angler Hours	No Survey	No Survey	No Survey	87,818	No Survey	72,748	No Survey	No Survey	No Survey	No Survey	80,283
Angler Hours Per Acre				16.1		13.3					14.7
Angler Trips				25,666		22,944					24,305
Value of Fishery (angler expenditures creel)											
All Species	No survey	No Survey	No Survey	$261,360	No Survey	$201,480	No Survey	No Survey	No Survey	No Survey	$231,420

Black Bass, Melton Hill Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	No Survey	No Survey	No Survey	36,895	No Survey	20,829	No Survey	No Survey	No Survey	No Survey	28,862
	(hrs/acre)				6.5		3.7					5.1
Any Black Bass	(hrs)				31,236		20,573					25,905
	(hrs/acre)				5.5		3.6					4.6
Largemouth Bass	(hrs)				5,244		256					2,750
	(hrs/acre)				0.9		0.0					0.5
Smallmouth Bass	(hrs)				415		86					251
	(hrs/acre)				0.1		0.0					0.0
Spotted Bass	(hrs)				0		0					0
	(hrs/acre)				0.0		0.0					0.0
Tournaments (BITE program)												
# Tournaments (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pounds/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA
Bass/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		No Survey	No Survey	No Survey	$208,190	No Survey	$137,210	No Survey	No Survey	No Survey	No Survey	$172,700
Any Black Bass					$192,620		$137,150					$164,885
Largemouth Bass					$15,570		$60					$7,815
Smallmouth Bass					$0		$0					$0
Spotted Bass					$0		$0					$0

Largemouth Bass, Melton Hill Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Substock CPUE					11.6	3.0		6.0	N/A	53.3	18.5
Density (electrofishing data - CPUE = # fish/hour)											
PSD	No Survey	No Survey	No Survey	No Survey	68%	40%	No Survey	77%	80%	45%	62%
RSD - Preferred					14%	7%		17%	21%	12%	14%
CPUE					100	29.0		74.0	59.0	122.3	76.9
CPUE ≥ Stock					89.2	40.0		68.0	51.0	69.0	63.4
CPUE > MLL (14-inches)					23.6	4		27.3	17.3	15.3	17.5
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	No Survey	No Survey	No Survey	No Survey	83.7	76.5	No Survey	84.5	81.5	83.1	81.9
Quality - Preferred					83.7	72.9		84.8	81.9	82.9	81.2
Preferred - Memorable					83.1	75.0		84.0	78.3	83.1	80.7
Memorable - Trophy					81.8	None		None	None	None	81.8
Trophy					None	None		None	None	None	None
Mortality (electrofishing data)											
Total Mortality	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	1.31	No Survey	3.00	No Survey	No Survey	No Survey	No Survey	2.16
Harvest Rate				0.00		0.00					0.00
Percent Harvested				2.1%		0.0%					1.1%
Mean Weight (pounds)				1.82		None					1.82

Smallmouth Bass, Melton Hill Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Substock CPUE					0.0	0.3		0.0	0.3	1.3	0.4
***Density** (electrofishing data - CPUE = # fish/hour)											
PSD	No Survey	No Survey	No Survey	No Survey	60%	38%	No Survey	None	83%	80%	65%
RSD - Preferred					20%	13%		None	25%	40%	25%
CPUE					2.0	3.0		0.0	4.3	3.0	2.5
CPUE ≥ Stock					2.0	2.7		0.0	4.0	1.7	2.1
CPUE ≥ MSL (18")					0.0	0.0		0.0	0.3	0.0	0.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	No Survey	No Survey	No Survey	No Survey	80.9	75.8	No Survey	None	86.3	103.9	86.7
Quality - Preferred					82.1	69.9		None	80.0	77.2	77.3
Preferred - Memorable					76.3	70.5		None	74.8	70.5	73.0
Memorable - Trophy					76.2	None		None	68.5	None	72.4
Trophy					None	None		None	None	None	None
Mortality (electrofishing data)											
Total Mortality	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Stocking											
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	0.38	No Survey	1.11	No Survey	No Survey	No Survey	No Survey	0.75
Harvest Rate				0.00		0.00					0.00
Percent Harvested				0.0%		0.0%					0.0%
Mean Weight (pounds)				None		2.80					2.80

Spotted Bass, Melton Hill Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Substock CPUE					0.0	0.0		0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	No Survey	No Survey	No Survey	No Survey	None	None	No Survey	None	None	None	None
RSD - Preferred					None	None		None	None	None	None
CPUE					0.4	0.0		0.0	0.0	0.0	0.1
CPUE ≥ Stock					0.4	0.0		0.0	0.0	0.0	0.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	No Survey	No Survey	No Survey	No Survey	None	None	No Survey	None	None	None	None
Quality - Preferred					None	None		None	None	None	None
Preferred - Memorable					None	None		None	None	None	None
Memorable - Trophy					None	None		None	None	None	None
Trophy					None	None		None	None	None	None
Mortality (electrofishing data)											
Total Mortality	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	0.00	No Survey	0.00	No Survey	No Survey	No Survey	No Survey	0.00
Harvest Rate				0.00		0.00					0.00
Percent Harvested				0.0%		0.0%					0.0%
Mean Weight (pounds)				None		None					None

Black Crappie, Melton Hill Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing)											
Age-0 CPUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.1	0.6	0.6	0.1	0.2	1.1	0.4	0.0	0.0	0.0	0.3
Density (electrofishing)											
PSD	No Survey	No Survey	No Survey	No Survey	100%	None	No Survey	100%	95%	100%	99%
RSD - Preferred					68%	None		100%	62%	75%	76%
CPUE					3.6	0.0		0.7	7.0	1.3	2.5
CPUE ≥ Stock					3.6	0.0		0.7	7.0	1.3	2.5
CPUE ≥ MSL (10")					3.2	0.0		0.3	4.0	1.0	1.7
Growth (electrofishing)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing)											
Stock - Quality	No Survey	No Survey	No Survey	No Survey	None	None	No Survey	None	None	None	None
Quality - Preferred					73.0	None		None	78.4	85.0	78.8
Preferred - Memorable					78.4	None		87.0	85.2	81.8	83.1
Memorable - Trophy					81.6	None		84.4	75.7	78.9	80.2
Trophy					None	None		None	None	None	None
Mortality (trap net data)											
Total Mortality	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Stocking (372+374)											
#	0	0	0	0	0	0	0	0	0	0	0
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours(any crappie)	No Survey	No Survey	No Survey	0	No Survey	8,114	No Survey	No Survey	No Survey	No Survey	4,057
Angler Hours/Acre				0.0		1.4					0.7
Fishing Success (creel survey data)											
Catch Rate(any crappie)	No Survey	No Survey	No Survey	3.02	No Survey	0.45	No Survey	No Survey	No Survey	No Survey	1.74
Harvest Rate(any crappie)				0.15		0.35					0.25
Percent Harvested(bc)				3.3%		37.8%					20.6%
Mean Weight(#'s bc)				0.80		0.77					0.79
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	No Survey	No Survey	No Survey	$13,920	No Survey	$5,320	No Survey	No Survey	No Survey	No Survey	$9,620

White Crappie, Melton Hill Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing)											
Age-0 CPUE	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Substock CPUE					N/A	N/A		N/A	N/A	N/A	N/A
Density (electrofishing)											
PSD	No Survey	No Survey	No Survey	No Survey	100%	100%	No Survey	100%	97%	100%	99%
RSD - Preferred					100%	50%		100%	47%	80%	75%
CPUE					1.6	0.7		6.3	10.0	5.0	4.7
CPUE ≥ Stock					1.6	0.7		6.3	10.0	5.0	4.7
CPUE ≥ MSL (10")					1.6	0.1		6.0	4.0	4.0	3.1
Growth (electrofishing)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing)											
Stock - Quality	No Survey	No Survey	No Survey	No Survey	None	None	No Survey	None	None	None	None
Quality - Preferred					None	85.1		None	77.4	81.9	81.5
Preferred - Memorable					None	70.5		89.4	75.4	87.5	80.7
Memorable - Trophy					78.2	None		90.9	88.8	82.2	85.0
Trophy					None	None		None	None	None	None
Mortality (trap net data)											
Total Mortality	No Survey	No Survey	No Survey	No Survey	N/A	N/A	No Survey	N/A	N/A	N/A	N/A
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours(any crappie)	No Survey	No Survey	No Survey	0	No Survey	8,114	No Survey	No Survey	No Survey	No Survey	4,057
Angler Hours/Acre				0.0		1.4					0.7
Fishing Success (creel survey data)											
Catch Rate(any crappie)	No Survey	No Survey	No Survey	3.02	No Survey	0.45	No Survey	No Survey	No Survey	No Survey	1.74
Harvest Rate(any crappie)				0.15		0.35					0.25
Percent Harvested(wc)				6.5%		63.8%					35.2%
Mean Weight(#'s wc)				0.78		0.77					0.78
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	No Survey	No Survey	No Survey	$13,920	No Survey	$5,320	No Survey	No Survey	No Survey	No Survey	$9,620

Musky, Melton Hill Reservoir

Musky

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Stocking											
#	4,565	2,973	5,007	2,000	500	300	2,400	0	400	0	1,815
#per acre	0.8	0.5	0.9	0.4	0.1	0.1	0.4	0.0	0.1	0.0	0.3
Angling Pressure (creel survey data)											
Angler Hours	No Survey	No Survey	No Survey	2,097	No Survey	2,495	No Survey	No Survey	No Survey	No Survey	2,296
Angler Hours/Acre				0.4		0.4					0.4
Fishing Success (creel survey data - bluegill only)											
Catch Rate (intended)	No Survey	No Survey	No Survey	0.01	No Survey	0.00	No Survey	No Survey	No Survey	No Survey	0.01
Harvest Rate (intended)				0.00		0.00					0.00
% Harvested				0.0%		0.0%					0.0%
Mean Weight				None		None					None
Value of Fishery (creel survey data - trip expenditures)											
Musky	No Survey	No Survey	No Survey	$12,510	No Survey	$5,800	No Survey	No Survey	No Survey	No Survey	$9,155

Striped Bass, Melton Hill Reservoir

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)											
Angler Hours	No Survey	No Survey	No Survey	231	No Survey	1,197	No Survey	No Survey	No Survey	No Survey	714
Angler Hours/Acre				0.0		0.2					0.1
Fishing Success (creel survey data)											
Catch Rate (intended)	No Survey	No Survey	No Survey	0.13	No Survey	0.00	No Survey	No Survey	No Survey	No Survey	0.07
Harvest Rate (intended)				0.00		0.00					0.00
% Harvested				0.0%		0.0%					0.0%
Mean Weight				None		None					None
Value of Fishery (creel survey data - trip expenditures)											
Striped Bass	No Survey	No Survey	No Survey	None	No Survey	$4,710	No Survey	No Survey	No Survey	No Survey	$4,710

Sunfish, Melton Hill Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	No Survey	No Survey	No Survey	2,376	No Survey	2,348	No Survey	No Survey	No Survey	No Survey	2,362
Angler Hours/Acre				0.4		0.4					0.4
Fishing Success (creel survey data)											
Catch Rate (any sunfish)	No Survey	No Survey	No Survey	1.93	No Survey	0.91	No Survey	No Survey	No Survey	No Survey	1.42
Harvest Rate (any sunfish)				0.00		0.24					0.12
% Harvested (bluegill)				5.8%		18.2%					12.0%
Mean Weight (bluegill)				0.27		0.29					0.28
Value of Fishery (creel survey data - trip expenditures)											
Any Sunfish	No Survey	No Survey	No Survey	None	No Survey	$2,850	No Survey	No Survey	No Survey	No Survey	$2,850

Catfish, Melton Hill Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	No Survey	No Survey	No Survey	1,913	No Survey	3,938	No Survey	No Survey	No Survey	No Survey	2,926
Angler Hours/Acre				0.3		0.7					0.5
Fishing Success (creel survey data)											
Catch Rate (any catfish)	No Survey	No Survey	No Survey	0.09	No Survey	0.11	No Survey	No Survey	No Survey	No Survey	0.10
Harvest Rate (any catfish)				0.04		0.00					0.02
% Harvested (channel)				20.8%		0.9%					10.9%
Mean Weight (channel)				3.88		3.40					3.64
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	No Survey	No Survey	No Survey	N/A	No Survey	$1,610	No Survey	No Survey	No Survey	No Survey	$1,610

Habitat Enhancement, Melton Hill Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Cedar Trees	Cedar trees, Bamboo, Cedar stakes	70	0
Reef Balls		0	0

Water Quality Monitoring, Melton Hill Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	N/A	N/A
Dissolved Oxygen	N/A	N/A

Norris Reservoir 2022

Description

Surface Area: 34,200 Acres	**Shoreline Miles:** 809
Counties: Anderson, Campbell, Claiborne, Grainger, Union	
Full Pool Elevation (feet-msl): ~ 1,070	**Winter Pool Elevation (feet-msl):** ~ 1,040
Dam Completion: 1936	**Reservoir Age:** 86
Total Fishing Effort (Angler Hours): 237,563	**Total Value by Anglers: $1,690,620**

Summary:

Electrofishing

Electrofishing surveys were conducted between the dates of 4/20/2022 and 4/22/2022. A total of 30 sites were sampled. The following species and numbers were collected during the survey:

Largemouth Bass – 207 Smallmouth Bass – 115 Black Crappie – 33

Black-Nosed Black Crappie – 2 Walleye – 7

Largemouth Bass had a CPUE of 27.6 fish/hour, which was slightly lower than the10-year mean. Additionally, the relative weights were consistent with the 10-year mean. Fortunately, of the Largemouth Bass collected, 84% were 12 inches or larger which should equate to good numbers of fish over the 14-inch MML for anglers to catch next year.

Management plan: habitat enhancement.

Smallmouth Bass had a CPUE of 15.3 fish/hour which was considerably lower than last year's CPUE of 29.3 fish/hour. Of the Smallmouth Bass collected 22% were 15 inches or larger. However, only 4 Smallmouth Bass ≥ the 18-inch minimum length limit were collected during the standardized sampling. In addition, we conducted a targeted Smallmouth Bass survey this spring. During this sample, we collected a total of 314 Smallmouth Bass, with an effort of 10.7 hours. We collected nine fish that were 18 inches, and only 1 fish that measured 19 inches. The CPUE for fish over the 18-inch minimum length limit was .94 fish/hour.

Management plan: propose a decrease of the minimum length limit to 15 inches with a creel limit of five fish per day between the dates of Oct. 16th and May 31rst and a minimum length limit of 18 inches with a creel limit of 1 fish per day between the dates of June 1rst and Oct. 15th.

Angler catch-rates for both crappie and Walleye were the second lowest rates over the last ten years. Hopefully continued stocking efforts will improve the availability of crappie and Walleye in the coming years. A total of 103,760 (Black-Nosed + Black Crappie) and 241,699 Walleye were stocked in Norris Reservoir in 2022.

Management plan: consider increased stocking rates and habitat enhancement.

Winter Gill Netting

Winter gill netting surveys were conducted on the 29th of November and the 6th of December 2022. A total of 15 nets were set to collect Striped Bass and Walleye. The surveys produced 31 Striped Bass and 60 Walleye.

A Striped Bass CPUE of 2.1 was recorded for 2022, which was comparable to the 10-year average. The relative weights of Striped Bass were slightly lower than the 10-year average.

Management plan: maintain current stocking rates.

The CPUE for Walleye has decreased for two consecutive years. A CPUE of 4.0 was recorded for Walleye, which was the lowest over a 10-year span. Local hatcheries stocked a total of 241,699 Walleye in 2022. Hopefully continued stocking efforts will improve the Walleye fishery on Norris Reservoir in coming years.

Management plan: increased stocking efforts.

Habitat Enhancement

No habitat enhancement was accomplished on Norris Reservoir in 2022.

Water Quality

Water quality was conducted at 4 sites on Norris Reservoir in 2022 during the months of July, August, and September. These samples were normal for Norris Reservoir.

Lakewide Angling Survey

Total Effort and Expenditures

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure											
Angler Hours	221,108	238,886	228,567	324,385	289,118	275,329	284,396	147,600	234,790	237,563	248,174
Angler Hours Per Acre	6.5	7.0	6.7	9.5	8.5	8.1	8.4	4.3	6.9	6.9	7.3
Angler Trips	50,515	54,734	49,241	72,624	61,467	60,616	67,686	36,102	62,035	57,778	57,280
Value of Fishery (angler expenditures creel)											
All Species	$845,120	$1,360,120	$1,149,440	$4,785,170	$1,270,320	$954,580	$1,256,730	$675,950	$1,725,030	$1,690,620	$1,571,308

Black Bass, Norris Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	118,438	114,460	118,547	182,587	171,293	140,024	157,268	77,986	154,527	129230	136,436
	(hrs/acre)	3.5	3.3	3.5	5.3	5.0	4.1	4.6	2.3	4.5	3.8	4.0
Any Black Bass	(hrs)	78,858	79,410	72,625	124,441	112,373	113,431	137,943	73,585	135,550	100,653	102,887
	(hrs/acre)	2.3	2.3	2.1	3.6	3.3	3.3	4.0	2.2	4.0	2.9	3.0
Largemouth Bass	(hrs)	6,182	4,665	3,178	836	6,404	2,653	628	0	1,273	1,115	2,693
	(hrs/acre)	0.2	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1
Smallmouth Bass	(hrs)	33,398	30,385	42,744	57,310	51,729	21,783	18,697	4,401	17,704	27,462	30,561
	(hrs/acre)	1.0	0.9	1.2	1.7	1.5	0.6	0.5	0.1	0.5	0.8	0.9
Spotted Bass	(hrs)	0	0	0	0	787	2,157	0	0	0	0	294
	(hrs/acre)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Tournaments (BITE program)												
# Tournaments (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pounds/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bass/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		$596,350	$626,970	$547,720	$4,488,450	$971,300	$511,053	$938,970	$403,210	$1,395,130	$1,120,320	$1,159,947
Any Black Bass		$454,560	$493,310	$330,850	$4,227,310	$627,680	$438,200	$853,510	$384,870	$1,276,290	$996,080	$1,008,266
Largemouth Bass		$23,710	$11,520	$16,330	$0	$12,140	$543	$3,810	$0	$9,730	$0	$7,778
Smallmouth Bass		$118,080	$122,140	$200,540	$261,140	$331,480	$72,310	$81,650	$18,340	$109,110	$124,240	$143,903
Spotted Bass		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Largemouth Bass, Norris Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.7	4.5	3.3		3.9	2.3	7.2	4.5	0.8	1.2	3.1
Density (electrofishing data - CPUE = # fish/hour)											
PSD	84%	80%	81%	No Survey	52%	76%	82%	74%	79%	87%	77%
RSD - Preferred	39%	38%	40%		22%	46%	39%	39%	40%	36%	38%
CPUE	19.3	32.9	37.3		20.7	29.3	40.6	30.8	26.1	27.6	29.4
CPUE ≥ Stock	18.6	28.4	34.0		16.8	27.1	33.4	20.3	25.3	26.4	25.6
CPUE > MLL (14-inches)	10.8	15.3	18.4		4.9	15.5	16.3	12.9	13.5	15.3	13.7
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	84.0	81.0	82.5	No Survey	None	81.8	87.7	85.7	79.4	82.7	83.1
Quality - Preferred	82.6	80.2	80.8		88.6	80.2	81.1	79.9	78.7	83.5	81.7
Preferred - Memorable	82.7	81.6	81.5		85.0	79.8	81.0	77.7	79.6	84.0	81.4
Memorable - Trophy	97.1	77.3	92.7		80.7	82.3	79.0	74.6	75.5	84.3	82.6
Trophy	None	None	None		None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.38	0.41	0.64	0.46	0.12	0.48	0.18	0.00	0.17	0.33	0.32
Harvest Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Harvested	0.7%	0.6%	5.1%	0.0%	1.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.8%
Mean Weight (pounds)	1.90	2.20	2.31	None	2.60	3.50	None	None	None	None	2.50

Smallmouth Bass, Norris Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.1	3.5	2.5		3.9	0.7	2.8	2.3	4.1	1.7	2.4
***Density** (electrofishing data - CPUE = # fish/hour)											
PSD	70%	56%	62%	No Survey	50%	61%	65%	67%	70%	76%	64%
RSD - Preferred	29%	27%	34%		35%	31%	30%	36%	39%	43%	34%
CPUE	7.6	24.9	16.4		10.8	19.3	14.6	24.8	29.3	15.3	18.1
CPUE ≥ Stock	7.5	21.4	13.9		6.9	18.7	11.9	22.5	25.2	13.6	15.7
CPUE ≥ MSL (18")	0.1	0.5	0.5		0.8	0.7	0.1	1.2	0.7	0.5	0.6
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	82.4	86.6	83.7	No Survey	87.6	81.2	85.2	85.8	83.6	86.8	84.8
Quality - Preferred	79.1	77.6	79.0		83.5	76.7	78.2	77.6	79.3	83.6	79.4
Preferred - Memorable	78.4	72.8	77.6		72.9	70.6	74.1	72.1	73.9	76.6	74.3
Memorable - Trophy	76.5	71.2	73.3		72.0	68.6	66.8	68.5	68.5	69.3	70.5
Trophy	None	None	None		None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	38%	N/A
Fishing Success (creel survey data)											
Catch Rate	0.39	0.58	0.74	0.58	0.70	0.50	0.27	1.20	0.24	0.56	0.58
Harvest Rate	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Percent Harvested	1.3%	0.0%	0.9%	2.4%	1.5%	0.0%	0.0%	2.9%	0.0%	0.0%	0.9%
Mean Weight (pounds)	4.02	None	1.80	2.97	3.43	None	None	0.90	None	None	2.62

Spotted Bass, Norris Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.8	0.7	0.7		1.5	0.7	0.9	0.4	2.5	0.3	0.9
Density (electrofishing data - CPUE = # fish/hour)											
PSD	41%	43%	41%	No Survey	29%	43%	57%	33%	19%	64%	41%
RSD - Preferred	6%	3%	1%		6%	4%	3%	8%	3%	9%	5%
CPUE	7.6	20.4	11.5		5.6	7.7	5.4	2.0	6.7	3.2	7.8
CPUE ≥ Stock	6.8	19.7	10.8		4.1	7.1	4.8	1.6	4.1	2.9	6.9
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	90.8	88.3	87.6	No Survey	103.4	94.6	99.3	93.5	89.2	91.3	93.1
Quality - Preferred	86.1	82.3	82.7		88.4	84.1	87.4	76.9	82.7	81.9	83.6
Preferred - Memorable	89.2	79.2	91.6		79.8	92.4	68.3	76.0	83.2	79.7	82.2
Memorable - Trophy	None	None	None		None	None	None	None	None	None	None
Trophy	None	None	None		None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.00	0.00	0.00	0.00	0.00	0.23	0.01	0	0.02	0	0.03
Harvest Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Harvested	8.9%	1.2%	8.2%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	2.1%
Mean Weight (pounds)	0.84	1.10	1.55	None	None	None	1.75	None	None	None	1.31

Black Crappie, Norris Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-0 CPUE	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0	0.0		0.1	0.0	0.1	0.0	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	100%	100%	100%	No Survey	94%	99%	100%	97%	100%	97%	99%
RSD - Preferred	91%	76%	80%		61%	72%	100%	77%	89%	76%	80%
CPUE	7.6	15.6	18.0		6.9	21.5	5.0	4.1	2.5	4.4	9.5
CPUE ≥ Stock	7.6	15.6	18.0		6.8	21.5	4.8	4.1	2.5	4.4	9.5
CPUE ≥ MSL (10")	6.7	11.7	13.8		4.0	15.1	4.5	5.4	2.3	3.2	7.4
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	None	None	None	No Survey	81.9	None	79.7	75.0	None	101.1	84.4
Quality - Preferred	89.0	86.7	84.0		82.8	81.6	80.4	77.5	99.8	91.8	85.9
Preferred - Memorable	86.3	85.8	82.1		80.1	79.7	79.2	77.8	83.7	85.4	82.2
Memorable - Trophy	83.2	80.8	78.5		76.7	77.3	None	71.9	77.3	77.0	77.8
Trophy	None	None	None		None	None	None	None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking(372+374)											
#	118,247	155,114	102,311	107,306	103,242	102,490	105,159	103,231	111,147	103,760	111,201
# per Acre	3.5	4.5	3.0	3.1	3.0	3.0	3.1	3.0	3.3	3.0	3.3
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	14,175	18,908	14,499	28,606	30,094	20,728	17,583	11,420	33,996	25,590	21,560
Angler Hours/Acre	0.4	0.6	0.4	0.8	0.9	0.6	0.5	0.3	1.0	0.7	0.6
Fishing Success (creel survey data)											
Catch Rate(any crappie)	0.35	0.43	0.81	0.47	0.87	0.73	0.53	1.47	0.53	0.37	0.66
Harvest Rate(any crappie)	0.28	0.31	0.57	0.23	0.72	0.46	0.26	1.25	0.46	0.23	0.48
Percent Harvested(bc)	76.6%	68.9%	88.7%	53.5%	84.0%	44.0%	56.9%	74.5%	90.3%	71.7%	70.9%
Mean Weight (#'s bc)	0.85	0.64	0.89	0.83	0.77	0.79	0.88	0.92	0.72	0.97	0.83
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$40,290	$36,200	$38,920	$17,270	$72,000	$42,320	$195,570	$37,150	$112,230	$62,160	$65,411

Striped Bass, Norris Reservoir

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.2	0.0	0.0	No Survey	0.0	0.3	0.1	0.4	0.0	0.0	0.1
Density (winter gill net data - CPUE = # fish/net night)											
PSD	0.29%	0.40%	0.29%	No Survey	74%	37%	35%	33%	43%	71%	33%
RSD - Preferred	0.29%	0.40%	0.29%		6%	6%	8%	5%	1%	6%	4%
CPUE	0.3	0.0	0.3		1.3	2.8	3.7	4.9	4.7	2.1	2.2
CPUE ≥ Stock	0.3	0.0	0.3		1.2	2.5	3.6	4.6	4.7	2.1	2.2
CPUE ≥ MSL (15")	0.3	0.0	0.3		1.2	2.4	3.6	4.1	4.5	2.1	2.1
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	17.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.6
Mean TL at Age-3 (mm)	23.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23.1
Relative Weight (winter gill net data)											
Stock - Quality	93.1	94.1	96.2	No Survey	87.0	92.4	85.5	94.8	89.6	87.1	91.1
Quality - Preferred	89.2	91.8	87.7		85.8	85.9	85.6	82.6	84.0	85.3	86.4
Preferred - Memorable	81.9	82.5	78.5		80.2	87.9	81.4	65.3	82.2	75.7	79.5
Memorable - Trophy	None	None	None		None	None	None	57.1	None	None	57.1
Trophy	None	None	None		None	None	None	None	None	None	None
Mortality (winter gill net data)											
Total Mortality	N/A	N/A	N/A	No survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
#	104,228	109,330	107,415	90,930	105,166	104,010	110,660	103,321	107,910	102,389	104,536
# per Acre	3.0	3.2	3.1	2.7	3.1	3.0	3.2	3.0	3.2	3.0	3.1
Angling Pressure (creel survey data)											
Angler Hours	19,258	65,708	35,324	40,038	27,963	43,313	45,195	23,472	19,569	29,336	34,918
Angler Hours/Acre	0.6	1.9	1.0	1.2	0.8	1.3	1.3	0.7	0.6	0.9	1.0
Fishing Success (creel survey data)											
Catch Rate	0.20	0.22	0.39	0.00	0.14	0.19	0.27	0.17	0.1	0.3	0.20
Harvest Rate	0.07	0.06	0.10	0.00	0.13	0.03	0.03	0	0	0.06	0.05
Percent Harvested	31.6%	30.5%	23.9%	29.8%	10.6%	6.9%	21.2%	0.0%	0.0%	13.6%	16.8%
Mean Weight (pounds)	10.45	12.60	10.84	19.31	18.04	8.40	8.47	None	None	9.25	12.17
Value of Fishery (creel survey data - trip expenditures)											
Striped Bass	$100,540	$551,890	$423,490	$18,246	$97,820	$295,510	$445,500	$76,850	$95,250	$295,970	$240,107

*** Increased number of nets from 14 to 15 in 2021.**

Walleye, Norris Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0
Density (winter gill net data - CPUE = # fish/net night)											
PSD	98%	98%	97%	97%	92%	86%	96%	76%	94%	98%	93%
RSD - Preferred	19%	35%	32%	33%	16%	21%	27%	25%	18%	22%	25%
CPUE	5.4	6.3	8.1	7.2	8.0	13.4	8.1	11.6	5.2	4.0	7.7
CPUE ≥ Stock	5.4	6.3	8.1	7.2	8.0	13.4	8.0	11.5	5.2	3.9	7.7
CPUE ≥ MSL (15")	5.2	6.2	7.9	6.9	7.3	11.6	7.7	8.7	4.8	3.8	7.0
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	11.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.6
Mean TL at Age-3 (mm)	18	N/A	17.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.6
Relative Weight (winter gill net data)											
Stock - Quality	93.1	91.8	95.2	88.4	88.4	94.9	88.8	93.1	89.3	85.3	90.8
Quality - Preferred	89.2	91.1	91.7	87.9	85.6	87.7	82.0	88.2	84.2	87.3	87.5
Preferred - Memorable	88.5	91.0	90.0	86.4	83.1	82.6	82.4	83.9	81.4	84.1	85.3
Memorable - Trophy	80.9	None	85.9	80.7	74.5	None	75.6	None	None	None	79.5
Trophy	None	None	None	None	None	None	None	None	None	None	None
Mortality (winter gill net data)											
Total Mortality	45.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.0%
Stocking											
#	240,267	212,123	198,837	250,369	258,013	227,830	248,352	235,991	266,938	241,699	238,042
# per Acre	7.0	6.2	5.8	7.3	7.5	6.7	7.3	6.9	7.8	7.1	7.0
Angling Pressure (creel survey data)											
Angler Hours	21,801	11,240	12,944	20,740	13,019	17,889	21,033	11,828	10,514	9,808	15,082
Angler Hours/Acre	0.6	0.3	0.4	0.6	0.4	0.5	0.6	0.3	0.3	0.3	0.4
Fishing Success (creel survey data)											
Catch Rate	0.11	0.21	0.33	0.24	0.36	0.53	0.06	0.37	0.28	0.14	0.26
Harvest Rate	0.11	0.11	0.30	0.19	0.24	0.45	0.06	0.35	0.16	0.14	0.21
Percent Harvested	88.9%	50.3%	84.0%	82.7%	75.2%	96.2%	94.7%	94.7%	56.7%	93.2%	81.7%
Mean Weight (pounds)	3.18	1.75	2.86	1.88	1.74	2.38	2.36	2.60	2.35	2.12	2.32
Value of Fishery (creel survey data - trip expenditures)											
Walleye	$37,850	$34,360	$16,470	$33,140	$35,700	$64,350	$36,850	$14,920	$84,280	$59,060	$41,698

*** Increased number of nets from 14 to 15 in 2021.**

Sunfish, Norris Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	16,305	7,400	20,501	18,555	21,657	16,337	22,133	3,017	4,071	9,974	13,995
Angler Hours/Acre	0.5	0.2	0.6	0.5	0.6	0.5	0.6	0.1	0.1	0.3	0.4
Fishing Success (creel survey data - bluegill only)											
Catch Rate (any sunfish)	3.75	2.42	4.07	2.93	2.00	2.57	1.22	0.50	2.26	0.73	2.25
Harvest Rate (any sunfish)	2.10	1.63	2.08	2.24	1.15	1.65	0.64	0.25	1.75	0.26	1.38
% Harvested (bluegill)	None	51.7%	39.7%	66.0%	51.5%	46.1%	37.6%	56.3%	76.4%	28.7%	50.4%
Mean Weight (bluegill)	None	0.31	0.37	0.48	0.34	0.42	0.38	0.28	0.36	0.45	0.38
Value of Fishery (creel survey data - trip expenditures)											
Any Sunfish	$38,160	$17,190	$44,810	$24,280	$38,720	$13,410	$28,960	$7,540	$9,790	$90,890	$31,375

Catfish, Norris Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Stocking											
#	None	None	None	None	None	5,694	None	None	None	None	5,694
# per Acre	None	None	None	None	None	0.2	None	None	None	None	0.2
Angling Pressure (creel survey data - any catfish)											
Angler Hours	2,840	677	1,590	2,504	3,571	1,181	0	0	0	2,740	1,510
Angler Hours/Acre	0.1	0.0	0.0	0.07	0.1	0.0	0.00	0.00	0.00	0.08	0.0
Fishing Success (creel survey data)											
Catch Rate (any catfish)	0.74	0.00	0.05	0.00	0.00	0.54	0.00	0.00	0.00	0.21	0.15
Harvest Rate (any catfish)	0.74	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
% Harvested (channel)	59.1%	53.2%	18.4%	35.3%	18.8%	18.3%	15.9%	100.0%	3.7%	25.9%	34.9%
Mean Weight (channel)	3.48	2.9	4.3	2.44	4.4	4.41	2.5	1.9	3.25	2.44	3.20
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	$0	$0	$0	$0	$5,080	$0	$0	$0	$0	$0	$508

Habitat Enhancement, Norris Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Christmas Trees		0	0
Reef Balls		0	0

Water Quality Monitoring, Norris Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	July - September	Normal
Dissolved Oxygen	July - September	Normal

South Holston Reservoir

Description

Surface Area: 7,580 acres	**Shoreline Distance:** 182 miles
Counties: Sullivan, Washington (VA)	**Drainage Area:** 703 square miles
Full Pool Elevation: 1,729 feet above mean sea level	**Mean Annual Fluctuation:** 39 feet
Maximum Depth: 245 feet	**Thermocline Depth:** 13 feet
Mean Chlorophyll (Forebay): 4.2 parts per million	**Shoreline Development:** 14%
Trophic Status (Forebay): Mesotrophic	**Trophic Index, Carlson (1977):** 44.7
Hydraulic Retention Time: 340 days	**Reservoir Age:** 72 years (dam completed 1950)
Total Fishing Effort: N/A	**Total Value by Anglers: N/A**

Summary:

Electrofishing

The largemouth bass catch rates were about average at 19.0 fish/hour. A PSD value of 77 would indicate that the size structure is dominated by larger fish. There were good numbers of largemouth collected under 10-inches, which should keep the quality of this fishery stable.

The total number of smallmouth bass collected was well above average at 51.8 fish/hour. The number of smallmouth over the MLL of 15-inches was also well above average at 23.2 fish/hour. A PSD value of 79 indicates that the size structure for smallmouth is also dominated by larger fish. The desired range for PSD is 40-70.

We only collected 1spotted bass in our electrofishing sample this year. Spotted bass rarely reach quality size in east Tennessee reservoirs and they compete with other more desirable black bass species. Spotted bass have also been shown to hybridize and prey on other black bass species.

The number of black crappie collected in 2022 was below average at 2.8 fish/hour. We hope that continued black crappie stocking efforts will continue to provide a stable black crappie fishery on the reservoir.

Gill Netting

We collected 53 walleye in six experimental gill nets on South Holston Reservoir. The gill nets were set from Observation Knob Park downstream to Big Creek. The catch rates were below average at 8.8 fish per net night. A large percentage of the fish collected, (51%) were above the 18-inch size limit, indicating that the fish are recruiting well and surviving to make it into the larger size classes. The large percentage of walleye collected over 18-inches should indicate that there will be plenty of keeper size walleye for anglers to catch on South Holston Reservoir in 2023.

Trap Netting

There was no trap netting conducted on South Holston Reservoir in 2022.

Habitat Enhancement

There was no habitat enhancement on South Holston Reservoir in 2022.

Water Quality

Water quality samples were collected at two sites on South Holston Reservoir during July, August, and September 2022. The results from these samples were normal for South Holston Reservoir.

Lake wide Angling Summary

Total Effort and Expenditures

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angler Hours	no survey	no survey	164,139	no survey	no survey	195,703	no survey	233,508	no survey	no survey	197,783
Angler Hours Per Acre	no survey	no survey	21.7	no survey	no survey	31.0	no survey	36.9	no survey	no survey	29.9
Angler Trips	no survey	no survey	26,676	no survey	no survey	33,333	no survey	38,716	no survey	no survey	32,908
Value of Fishery (angler expenditures creel)											
All Species	no survey	no survey	$507,250	no survey	no survey	$650,640	no survey	$817,550	no survey	no survey	$658,480

Black Bass, South Holston Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	No Survey	No Survey	121,227	No Survey	No Survey	140,216	No Survey	197,944	No Survey	No Survey	153,129
	(hrs/acre)			16.0			18.5		31.3			21.9
Any Black Bass	(hrs)			112,882			123,052		159,115			131,683
	(hrs/acre)			14.9			16.2		25.1			18.7
Largemouth Bass	(hrs)			1,346			3,940		4,709			3,332
	(hrs/acre)			0.2			0.5		0.7			0.5
Smallmouth Bass	(hrs)			6,316			13,224		34,120			17,887
	(hrs/acre)			0.8			1.7		5.4			2.6
Spotted Bass	(hrs)			683			253		0			312
	(hrs/acre)			0.1			0.0		0.0			0.0
Tournaments (BITE program & creel survey data)												
# Tournaments (BITE)		none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported
Pounds/Angler Day (BITE)												
Bass/Angler Day (BITE)												
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		No Survey	No Survey	$439,120	No Survey	No Survey	$546,300	No Survey	$745,520	No Survey	No Survey	$576,980
Any Black Bass				$404,160			$504,940		$612,200			$507,100
Largemouth Bass				$12,080			$7,450		$19,610			$13,047
Smallmouth Bass				$21,550			$32,910		$113,710			$56,057
Spotted Bass				$1,330			$1,000		$0			$777

Largemouth Bass, South Holston Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	1.2	1.8	no survey	2.8	1.8	0.4	1.6	no survey	3.0	1.8	1.8
Density (electrofishing data - CPUE = # fish/hour)											
PSD	81%	85%	no survey	78%	81%	86%	88%	no survey	74%	77%	81%
RSD - Preferred	43%	58%	no survey	57%	51%	58%	70%	no survey	50%	44%	54%
CPUE	23.2	23.8	no survey	29.6	18.0	18.0	11.6	no survey	19.4	19.0	20.3
CPUE ≥ Stock	22.0	22.0	no survey	26.8	16.2	17.6	10.0	no survey	16.4	17.2	18.5
CPUE ≥ MSL	No Minimum Size Limit										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	87.1	86.7	no survey	83.0	87.5	93.0	89.8	no survey	97.6	90.4	89.4
Quality - Preferred	91.7	91.2	no survey	88.7	91.9	89.8	91.5	no survey	92.0	89.9	90.8
Preferred - Memorable	93.7	94.6	no survey	93.3	97.0	97.2	93.8	no survey	92.2	92.1	94.2
Memorable - Trophy	96.1	92.4	no survey	94.9	91.6	82.6	95.6	no survey	95.3	90.9	92.4
Trophy	none	none	no survey	none	none	none	none	no survey	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	0.26	No Survey	No Survey	0.21	No Survey	0.23	No Survey	No Survey	0.23
Harvest Rate			0.01			0.00		0.00			0.00
Percent Harvested			2.0%			0.0%		0.3%			0.8%
Mean Weight (pounds)			2.38			none		5.9			4.115

Smallmouth Bass, South Holston Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	1.0	3.2	no survey	6.0	4.4	1.0	1.8	no survey	3.6	3.8	3.1
Density (electrofishing data - CPUE = # fish/hour)											
PSD	82%	70%	no survey	58%	67%	82%	83%	no survey	78%	79%	75%
RSD - Preferred	65%	49%	no survey	39%	51%	59%	60%	no survey	51%	63%	55%
CPUE	25.8	28.8	no survey	43.2	38.0	32.6	36.2	no survey	41.2	51.8	37.2
CPUE ≥ Stock	24.8	25.6	no survey	37.2	33.6	31.6	34.4	no survey	37.6	48.0	34.1
CPUE ≥ MSL*	10.2	8.6	no survey	10.4	11.4	13.2	15.2	no survey	13.6	23.2	13.2
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	86.8	81.2	no survey	84.3	84.8	90.6	94.6	no survey	87.5	89.2	87.4
Quality - Preferred	89.2	86.0	no survey	86.0	90.2	93.2	87.2	no survey	88.4	85.6	88.2
Preferred - Memorable	88.6	84.4	no survey	82.7	86.8	89.1	83.9	no survey	85.4	82.3	85.4
Memorable - Trophy	89.7	80.4	no survey	85.2	84.0	84.3	79.4	no survey	83.8	80.1	83.4
Trophy	none	none	no survey	none	none	none	none	no survey	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	0.38	No Survey	No Survey	0.43	No Survey	0.64	No Survey	No Survey	0.48
Harvest Rate			0.01			0.02		0.02			0.02
Percent Harvested			2.9%			4.9%		5.7%			4.5%
Mean Weight (pounds)			3.98			3.70		3.85			3.84

Spotted Bass, South Holston Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.0	no survey	0.0	0.0	0.0	0.0	no survey	0.0	0.0	0.0
Density (electrofishing data - CPUE = # fish/hour)											
PSD	none	none	no survey	none	none	50%	100%	no survey	60%	N/A	none
RSD - Preferred	none	none	no survey	none	none	33%	none	no survey	20%	N/A	none
CPUE	0.2	0.2	no survey	0.0	0.0	1.2	0.4	no survey	1.0	0.2	0.4
CPUE ≥ Stock	0.2	0.0	no survey	0.0	0.0	1.2	0.4	no survey	1.0	0.2	0.4
CPUE ≥ MSL	No Minimum Size Limit										
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	97.3	118.2	no survey	none	none	105.8	none	no survey	109.1	none	107.6
Quality - Preferred	none	none	no survey	none	none	91.8	97.3	no survey	101.4	94.9	none
Preferred - Memorable	none	none	no survey	none	none	99.6	none	no survey	111.8	none	none
Memorable - Trophy	none	none	no survey	none	none	none	none	no survey	none	none	none
Trophy	none	none	no survey	none	none	none	none	no survey	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	0.01	No Survey	No Survey	0.10	No Survey	0.02	No Survey	No Survey	0.04
Harvest Rate			0.01			0.00		0.00			0.00
Percent Harvested			41%			23%		6%			23%
Mean Weight (pounds)			1.73			1.98		none			1.855

Black Crappie, South Holston Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour)											
Age-0 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Substock CPUE	0.4	0.2	no survey	0.0	0.0	0.0	0.0	no survey	0.0	0.0	0.1
Density (electrofishing data) - CPUE = # fish/ hour)											
PSD	96%	76%	no survey	99%	100%	97%	100%	no survey	89%	93%	94%
RSD - Preferred	80%	49%	no survey	80%	97%	92%	88%	no survey	74%	64%	78%
CPUE	21.0	29.4	no survey	27.2	13.4	7.8	3.4	no survey	5.4	2.8	13.8
CPUE ≥ Stock	20.6	29.2	no survey	27.2	13.4	7.8	3.4	no survey	5.4	2.8	13.7
CPUE ≥ MSL (10")	15.0	12.8	no survey	19.8	12.8	7.2	3.0	no survey	3.6	1.8	9.5
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	93.1	95.3	no survey	99.8	none	118.2	none	no survey	119.3	none	105.1
Quality - Preferred	96.4	95.5	no survey	93.9	105.1	108.3	103.0	no survey	99.0	96.0	99.7
Preferred - Memorable	92.1	92.6	no survey	92.8	92.9	92.2	93.6	no survey	100.2	93.2	93.7
Memorable - Trophy	90.3	88.9	no survey	91.3	91.0	89.3	86.9	no survey	89.9	87.4	89.4
Trophy	none	none	no survey	none	none	none	none	no survey	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	no survey	N/A	N/A	N/A	N/A	no survey	N/A	N/A	N/A
Stocking											
# per Acre	8.3	9.5	8.0	6.6	8.4	9.1	2.0	12.0*	6.7	0.0	6.5
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	No Survey	8,437	No Survey	No Survey	3,340	No Survey	4,098	No Survey	No Survey	5,292
Angler Hours/Acre			1.1			0.4		0.6			0.2
Fishing Success (cr											
Catch Rate			1.41			0.84		1.89			1.38
Harvest Rate			0.70			0.57		1.39			0.89
Percent Harvested			65.5%			79.9%		76.6%			74.0%
Mean Weight (pounds)			1.39			1.12		1.56			1.36
Value of Fishery (cr			expenditu								
Any Crappie			$14,310			$8,050		$10,140			$10,833

Walleye, South Holston Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.00	0.00	0.00	no sample	no sample	0.20	0.00	0.00	no sample	0.80	0.14
Density (winter gill net data - CPUE = # fish/net night)											
PSD	93%	100%	92%	no sample	no sample	92%	97%	81%	no sample	65%	89%
RSD - Preferred	60%	54%	45%	no sample	no sample	64%	30%	25%	no sample	44%	46%
CPUE	6.7	15.0	10.7	no sample	no sample	17.6	14.3	6.0	no sample	8.8	11.3
CPUE ≥ Stock	6.7	15.0	10.7	no sample	no sample	17.4	14.3	6.0	no sample	8.0	11.2
CPUE ≥ MSL (18")	5.0	11.30	7.0	no sample	no sample	15.0	8.3	3.8	no sample	4.5	7.8
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	452	no sample	436	no sample	no sample	no sample	416	no sample	no sample	421	431
Mean TL at Age-3 (mm)	518	no sample	548	no sample	no sample	no sample	550	no sample	no sample	none	539
Relative Weight (winter gill net data)											
Stock - Quality	98.6	none	97.2	no sample	no sample	105.8	88.3	97.9	no sample	99.1	97.8
Quality - Preferred	105.2	97.8	101.0	no sample	no sample	99.6	92.3	92.2	no sample	97.0	97.9
Preferred - Memorable	102.6	99.2	101.4	no sample	no sample	96.4	84.1	89.2	no sample	96.7	95.7
Memorable - Trophy	99.5	99.7	99.5	no sample	no sample	118.1	89.4	79.3	no sample	92.7	96.9
Trophy	none	none	none	no sample	no sample	none	none	none	no sample	none	none
Mortality (winter gill net data)											
Total Mortality	N/A	N/A	N/A	no sample	no sample	N/A	N/A	N/A	no sample	N/A	N/A
Stocking*											
# per Acre	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
Angling Pressure (creel survey data - walleye data only)											
Angler Hours	No Survey	No Survey	4,573	No Survey	No Survey	5,941	No Survey	No Survey	5,840	No Survey	5,451
Angler Hours/Acre			0.60			0.78			0.77		0.18
Fishing Success (cr… …leye data or…											
Catch Rate			not calculated			not calculated			not calculated		not calculated
Harvest Rate			not calculated			not calculated			not calculated		not calculated
Percent Harvested			93.1%			90.1%			87.1%		90.1%
Mean Weight (pounds)			6.08			5.88			5.37		5.78
Value of Fishery (cr… …y… …expenditu…											
Walleye Data Only			$10,210			$17,770			$17,050		$15,010

* Does not include fish stocked by Virginia Dept. of Game and Inland Fisheries

Trout, South Holston Reservoir

Trout

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Trout	(hrs)	No Survey	No Survey	14,911	No Survey	No Survey	18,996	No Survey	5,949	No Survey	No Survey	13,285
	(hrs/acre)			2.0			2.5		0.9			1.8
Any Trout	(hrs)			5,317			5,661		394			3,791
	(hrs/acre)			0.7			0.7		0.1			0.5
Rainbow Trout	(hrs)			0			0		0			0
	(hrs/acre)			0.0			0.0		0.0			0.0
Brown Trout	(hrs)			0			0		0			0
	(hrs/acre)			0.0			0.0		0.0			0.0
Lake Trout	(hrs)			9,594			13,335		5,555			9,495
	(hrs/acre)			1.3			1.8		0.9			1.3
Value of Fishery (creel survey data - trip expenditures)												
All Trout		No Survey	No Survey	$22,340	No Survey	No Survey	$34,950	No Survey	$11,230	No Survey	No Survey	$22,840
Any Trout				$12,130			$8,580		$370			$7,027
Rainbow Trout				$0			$0		$0			$0
Brown Trout				$0			$0		$0			$0
Lake Trout				$10,210			$26,370		$10,860			$15,813

Lake Trout, South Holston Reservoir

Lake Trout

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	not calculated	No Survey	No Survey	not calculated	No Survey	not calculated	No Survey	No Survey	not calculated
Harvest Rate			not calculated			not calculated		not calculated			not calculated
Percent Harvested			60.3%			48.3%		0.0%			36.2%
Mean Weight (pounds)			5.43			3.37		none			4.4

Sunfish, South Holston Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	No Survey	No Survey	6,431	No Survey	No Survey	9,609	No Survey	12,489	No Survey	No Survey	9,510
Angler Hours/Acre			0.80			1.26		1.97			0.31
Fishing Success (cre… …egill only)											
Catch Rate (bluegill)			1.58			2.42		2.58			2.19
Harvest Rate (bluegill)			0.00			0.00		0.00			0.00
% Harvested (bluegill)			0.0%			0.0%		0.0%			0.0%
Mean Weight (bluegill)			none			none		none			none
Value of Fishery (cr… …expenditur…											
Any Sunfish			$6,960			$18,710		$19,820			$15,163

* Bluegill only

Catfish, South Holston Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2020	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	No Survey	No Survey	252	No Survey	No Survey	764	No Survey	No Survey	1,714	No Survey	910
Angler Hours/Acre			0.03			0.10			0.27		0.03
Fishing Success (cre											
Catch Rate (channel cat)			0.00			0.51			0.37		0.29
Harvest Rate (channel cat)			0.00			0.27			0.31		0.19
% Harvested (channel cat)			0.0%			29.6%			35.8%		21.8%
Mean Weight (channel cat)			none			4.51			none		4.51
Value of Fishery (cre			expenditur								
Any Catfish			$370			$2,370			$2,340		$1,693

Shad, South Holston Reservoir

Shad

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Density (summer shad gill net data - geometric mean density)											
Gizzard Shad	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	No Sample	0.24	No Sample	0.24
Threadfin Shad									0.74		0.74
Alewife									0.81		0.81

Habitat Enhancement South Holston Reservoir

		Quantity	
Type of Work	**Details**	**New**	**Renovated**
N/A			
N/A			
N/A			
N/A			
N/A			
N/A			
N/A			

Water Quality Monitoring South Holston Reservoir

Parameter	Sampling Period	Water Quality
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

Tellico Reservoir 2022

Description

Surface Area: 16,056 Acres	**Shoreline Miles:** 357
Counties: Blount, Loudon, Monroe	
Full Pool Elevation(feet-msl): ~ 813	**Winter Pool Elevation (feet-msl):** ~ 807
Dam Completion: 1979	**Reservoir Age:** 43
Total Fishing Effort (Angler Hours): No Survey	**Total Value by Anglers:** No Survey

Summary:

Electrofishing

Electrofishing surveys were conducted between the dates of 4/18/2022 and 4/19/2022. A total of 15 sites were sampled. The following species and numbers were collected during the survey:

Largemouth Bass - 144 Smallmouth Bass - 107 Spotted Bass - 22 Black Crappie - 8

White Crappie - 20 Walleye - 6

Largemouth Bass had a PSD of 57% and an RSD_P of 15% which is indicative of a good size distribution. The CPUE for Largemouth Bass in 2022 was 38.4 fish/hour, which was the lowest rate over a 10-year span. Relative weights for Largemouth have remained stable over the last 10 years.

Management plan: maintain current plan.

The CPUE for Smallmouth Bass increased for the second consecutive year. The CPUE in 2022 was 28.5 fish/hour which is the highest recorded CPUE in the last 10 years. This rate eclipsed last year's rate (the previous 10-year high) by 7.5 fish/hour. Hopefully this trend will continue, and the Smallmouth Bass fishery will thrive on Tellico Reservoir.

Management plan: maintain current plan.

Habitat Enhancement

There was no habitat enhancement accomplished on Tellico Reservoir in 2022.

Water Quality

Water quality was conducted at 3 sites on Tellico Reservoir in 2022 during the months of July, August, and September These samples were normal for Tellico Reservoir.

Lakewide Angling Survey

Total Effort and Expenditures

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure											
Angler Hours	147,269	No Survey	109,694	135,910	No Survey	119,324	No Survey	158,097	No Survey	No Survey	134,059
Angler Hours Per Acre	9.5		7.0	8.7		7.7		9.8			8.6
Angler Trips	31,374		24,972	29,634		25,531		33,993			29,101
Value of Fishery (angler expenditures creel)											
All Species	$609,580	No Survey	$422,800	$506,900	No Survey	$434,280	No Survey	$600,770	No Survey	No Survey	$514,866

Black Bass, Tellico Reservoir

Black Bass

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Black Bass	(hrs)	58,837	No Survey	47,929	57,418	No Survey	52,408	No Survey	58,109	No Survey	No Survey	54,940
	(hrs/acre)	3.7		2.9	3.5		3.2		3.6			3.4
Any Black Bass	(hrs)	0		15,687	1,813		16,666		21,790			11,191
	(hrs/acre)	0.0		1.0	0.1		1.0		1.4			0.7
Largemouth Bass	(hrs)	56,708		32,058	54,526		32,892		56,727			46,582
	(hrs/acre)	3.5		1.9	3.3		2.0		3.5			2.9
Smallmouth Bass	(hrs)	2,129		184	1,079		2,850		1,382			1,525
	(hrs/acre)	0.1		0.0	0.1		0.2		0.1			0.1
Spotted Bass	(hrs)	0		0	0		0		0			0
	(hrs/acre)	0.0		0.0	0.0		0.0		0.0			0.0
Tournaments (BITE program)												
# Tournaments (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pounds/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bass/Angler Day (BITE)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value of Fishery (creel survey data - trip expenditures)												
All Black Bass		$338,880	No Survey	$240,030	$270,510	No Survey	$244,060	No Survey	$341,310	No Survey	No Survey	$286,958
Any Black Bass		$0		$89,740	$19,260		$90,750		$97,400			$59,430
Largemouth Bass		$328,930		$149,720	$244,330		$141,760		$235,210			$219,990
Smallmouth Bass		$9,950		$570	$6,920		$11,550		$8,700			$7,538
Spotted Bass		$0		$0	$0		$0		$0			$0

Largemouth Bass, Tellico Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A
Substock CPUE	6.3	3.7	0.0		14.0			6.1	12.3	4.0	6.6
Density (electrofishing data - CPUE = # fish/hour)											
PSD	62%	61%	None	No Survey	59%	No Survey	No Survey	72%	70%	57%	64%
RSD - Preferred	16%	11%	None		4%			20%	17%	15%	14%
CPUE	48.0	54.7	0.0		59.0			44.3	62.7	38.4	43.9
CPUE ≥ Stock	41.7	51.0	0.0		45.0			38.1	50.3	34.4	37.2
CPUE ≥ MSL (14 inches)	12.3	8.6	0.0		4.3			14.7	17.7	7.5	9.3
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	7.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.3
Mean TL at Age-3 (mm)	N/A	N/A	12.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.8
Relative Weight (electrofishing data)											
Stock - Quality	78.9	76.7	81.8	No Survey	79.1	No Survey	No Survey	79.6	81.4	81.7	79.9
Quality - Preferred	78.8	81.1	85.2		79.5			78.0	78.9	76.5	79.7
Preferred - Memorable	86.6	79.9	93.0		81.8			78.5	78.7	77.7	82.3
Memorable - Trophy	90.4	96.6	99.3		89.8			97.1	95.8	None	94.8
Trophy	None	None	None		None			None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	35.0%	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	35.0%
Stocking (Florida Largemouth)											
# per acre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.92	No Survey	1.21	1.23	No Survey	1.20	No Survey	0.84	No Survey	No Survey	1.08
Harvest Rate	0.05		0.01	0.00		0.00		0.00			0.01
Percent Harvested	3.7%		1.8%	0.5%		2.6%		1.0%			1.9%
Mean Weight (pounds)	2.88		1.81	2.07		3.13		2.42			2.46

Smallmouth Bass, Tellico Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A
Substock CPUE	0.0	0.7	0.0		0.3			0.8	6.7	4.3	1.8
Density (electrofishing data - CPUE = # fish/hour)											
PSD	33%	67%	None	No Survey	75%	No Survey	No Survey	58%	44%	41%	53%
RSD - Preferred	17%	17%	None		25%			35%	23%	13%	22%
CPUE	4.0	2.7	0.0		1.7			13.6	21.0	28.5	10.2
CPUE ≥ Stock	4.0	2.0	0.0		1.3			12.8	14.3	24.3	8.4
CPUE ≥ MSL (18 inches)	0.0	0.0	0.0		0.0			0.3	0.0	0.3	0.1
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.8
Mean TL at Age-3 (mm)	N/A	N/A	11.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.9
Relative Weight (electrofishing data)											
Stock - Quality	80.6	78.7	76.5	No Survey	107.7	No Survey	No Survey	80.1	77.3	81.4	83.2
Quality - Preferred	81.3	77.3	74.8		71.1			75.1	77.2	72.0	75.5
Preferred - Memorable	74.5	75.0	76.9		64.8			72.6	67.7	68.4	71.4
Memorable - Trophy	None	None	81.6		None			74.1	None	62.9	72.9
Trophy	None	None	None		None			None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	34.0%	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	34.0%
Stocking											
# per acre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.41	No Survey	1.20	0.54	No Survey	0.42	No Survey	0.13	No Survey	No Survey	0.54
Harvest Rate	0.00		0.00	0.00		0.03		0.06			0.02
Percent Harvested	0.0%		0.0%	1.9%		2.0%		2.0%			1.2%
Mean Weight (pounds)	None		None	2.02		3.64		2.38			2.68

Spotted Bass, Tellico Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-1 CPUE	N/A	N/A	N/A	No Survey	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A
Substock CPUE	1.3	1.3	0.0		0.0			0.8	0.7	0.8	0.7
Density (electrofishing data - CPUE = # fish/hour)											
PSD	16%	21%	None	No Survey	27%	No Survey	No Survey	50%	24%	74%	35%
RSD - Preferred	5%	None	None		9%			50%	24%	26%	23%
CPUE	7.7	9.3	0.0		3.7			2.8	13.8	5.9	6.2
CPUE ≥ Stock	6.3	8.0	0.0		3.7			1.7	12.3	5.1	5.3
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	87.6	84.9	None	No Survey	85.5	No Survey	No Survey	83.7	86.0	83.5	85.2
Quality - Preferred	77.2	78.4	None		80.6			90.5	84.3	81.0	82.0
Preferred - Memorable	82.8	None	None		81.9			None	None	None	82.4
Memorable - Trophy	None	None	None		None			None	None	None	None
Trophy	None	None	None		None			None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	No Survey	N/A	N/A	N/A	N/A	N/A
Stocking											
#	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
# per acre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	0.00	No Survey	0.00	0.00	No Survey	0.00	No Survey	0.00	No Survey	No Survey	0.00
Harvest Rate	0.00		0.00	0.00		0.00		0.00			0.00
Percent Harvested	0.0%		0.0%	0.0%		0.0%		0.0%			0.0%
Mean Weight (pounds)	None		None	None		None		0			0.0

Black Crappie, Tellico Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-0 CPUE	N/A	N/A	N/A	No Survey	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A
Substock CPUE	N/A	N/A	N/A		N/A			N/A	N/A	N/A	N/A
Density (electrofishing data - CPUE = # fish/hour)											
PSD	93%	100%	None	No Survey	67%	No Survey	No Survey	100%	100%	50%	85%
RSD - Preferred	47%	29%	None		33%			83%	75%	38%	51%
CPUE	5.0	2.3	0.0		1.0			1.60	2.70	2.10	2.1
CPUE ≥ Stock	5.0	2.3	0.0		1.0			1.60	2.70	2.10	2.1
CPUE ≥ MSL (10")	2.0	0.7	0.0		0.3			1.10	1.70	0.80	0.9
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	None	None	None	No Survey	75.8	No Survey	No Survey	92.5	None	85.5	84.6
Quality - Preferred	79.7	76.9	None		75.9			75.9	84.8	76.1	78.2
Preferred - Memorable	79.9	80.4	None		74.1			80.5	80.2	78.4	78.9
Memorable - Trophy	73.5	70.7	None		None			None	84.8	None	76.3
Trophy	None	None	None		None			None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	No Survey	N/A	No Survey	N/A	N/A	N/A	N/A	N/A
Stocking (372+374)											
#	0	0	0	0	0	0	0	0	0	0	0
# per Acre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	53,193	No Survey	42,261	45,225	No Survey	32,292	No Survey	32,066	No Survey	No Survey	41,007
Angler Hours/Acre	3.3		2.6	2.7		2.0		2.0			2.5
Fishing Success (creel survey data)											
Catch Rate(any crappie)	2.10	No Survey	2.36	1.75	No Survey	2.45	No Survey	1.52	No Survey	No Survey	2.04
Harvest Rate(any crappie)	0.56		1.12	1.01		0.79		0.84			0.86
Percent Harvested (bc)	6.2%		100%	None		79.1%		69.6%			63.7%
Mean Weight(#'s bc)	1.33		1.04	None		1.09		0.75			1.05
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$180,740	No Survey	$128,860	$150,840	No Survey	$96,190	No Survey	$116,490	No Survey	No Survey	$134,624

White Crappie, Tellico Reservoir

White Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data - CPUE = # fish/hour)											
Age-0 CPUE	N/A	N/A	N/A	No Survey	N/A	No Survey	No Survey	N/A	N/A	N/A	N/A
Substock CPUE	N/A	N/A	N/A		N/A			N/A	N/A	N/A	N/A
Density (electrofishing data - CPUE = # fish/hour)											
PSD	100%	97%	None	No Survey	100%	No Survey	No Survey	100%	100%	100%	100%
RSD - Preferred	33%	26%	None		87%			71%	100%	80%	66%
CPUE	19.3	25.3	0.0		10.0			1.90	3.70	5.30	9.4
CPUE ≥ Stock	19.3	25.3	0.0		10.0			1.90	3.70	5.30	9.4
CPUE ≥ MSL (10")	5.3	4.0	0.0		7.0			0.50	3.70	4.30	3.5
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	None	87.9	None	No Survey	None	No Survey	No Survey	85.8	None	None	86.9
Quality - Preferred	82.1	77.8	None		76.4			78.6	None	83.7	79.7
Preferred - Memorable	79.3	76.9	None		73.2			None	79.1	80.7	77.8
Memorable - Trophy	78.4	92.9	None		70.9			None	78.9	85.6	81.3
Trophy	None	None	None		None			None	None	None	None
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	No Survey	N/A	No Survey	N/A	N/A	N/A	N/A	N/A
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	53,193	No Survey	42,261	45,225	No Survey	32,292	No Survey	32,066	No Survey	No Survey	41,007
Angler Hours/Acre	3.3		2.6	2.7		2.0		2.0			2.5
Fishing Success (creel survey data)											
Catch Rate(any crappie)	2.10	No Survey	2.36	1.75	No Survey	2.45	No Survey	1.52	No Survey	No Survey	2.04
Harvest Rate(any crappie)	0.56		1.12	1.01		0.79		0.84			0.86
Percent Harvested (wc)	24.2%		40.6%	51.0%		35.7%		42.2%			38.7%
Mean Weight(#'s wc)	1.10		0.83	0.79		0.86		0.45			0.81
Value of Fishery (creel survey data - trip expenditures)											
Any crappie	$180,740	No Survey	$128,860	$150,840	No Survey	$96,190	No Survey	$116,490	No Survey	No Survey	$134,624

Walleye, Tellico Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Stocking											
#	60,960	159,753	63,200	82,278	72,824	73,603	143,377	0	34,166	47,899	73,806
#per acre	3.8	9.9	3.8	5.0	4.4	4.5	9.0	0.0	2.1	3.0	4.6
Angling Pressure (creel survey data)											
Angler Hours	5,128	No Survey	2,700	1,491	No Survey	3,198	No Survey	5,761	No Survey	No Survey	3,656
Angler Hours/Acre	0.3		0.2	0.1		0.2		0.4			0.2
Fishing Success (creel survey data)											
Catch Rate (intended)	0.12	No Survey	0.03	0.00	No Survey	0.39	No Survey	0.17	No Survey	No Survey	0.14
Harvest Rate (intended)	0.05		0.02	0.00		0.18		0.08			0.07
% Harvested	45.7%		66.7%	None		65.0%		46.8%			56.1%
Mean Weight	3.41		3.65	None		2.62		3.07			3.19
Value of Fishery (creel survey data - trip expenditures)											
Walleye	$31,580	No Survey	$12,970	$7,720	No Survey	$15,970	No Survey	$30,040	No Survey	No Survey	$19,656

Striped Bass, Tellico Reservoir

Striped Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)											
Angler Hours	866	No Survey	184	2,354	No Survey	1,529	No Survey	1,157	No Survey	No Survey	1,218
Angler Hours/Acre	0.1		0.0	0.1		0.1		0.07			0.1
Fishing Success (creel survey data)											
Catch Rate (intended)	0.00	No Survey	0.00	0.23	No Survey	0.06	No Survey	0.24	No Survey	No Survey	0.11
Harvest Rate (intended)	0.00		0.00	0.04		0.00		0.06			0.02
% Harvested	None		None	21.6%		0.0%		7.9%			9.8%
Mean Weight	None		None	18.94		None		26.50			22.72
Value of Fishery (creel survey data - trip expenditures)											
Striped Bass	$4,410	No Survey	$1,510	$21,730	No Survey	$5,220	No Survey	$18,670	No Survey	No Survey	$10,308

Sunfish, Tellico Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	0	No Survey	2,404	2,927	No Survey	1,777	No Survey	2,518	No Survey	No Survey	1,925
Angler Hours/Acre	0.0		0.1	0.2		0.1		0.16			0.1
Fishing Success (creel survey data)											
Catch Rate (any sunfish)	0.00	No Survey	4.28	2.69	No Survey	2.38	No Survey	1.95	No Survey	No Survey	2.26
Harvest Rate (any sunfish)	0.00		1.89	1.40		1.39		0.68			1.07
% Harvested (bluegill)	15.6%		41.3%	45.5%		28.7%		17.9%			29.8%
Mean Weight (bluegill)	0.56		0.55	0.50		0.50		0.31			0.48
Value of Fishery (creel survey data - trip expenditures)											
Any Sunfish	$0	No Survey	$8,610	$7,280	No Survey	$4,580	No Survey	$6,070	No Survey	No Survey	$5,308

Catfish, Tellico Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	723	No Survey	0	1,139	No Survey	1,846	No Survey	2,258	No Survey	No Survey	1,193
Angler Hours/Acre	0.0		0.0	0.1		0.1		0.1			0.1
Fishing Success (creel survey data)											
Catch Rate (any catfish)	0.00	No Survey	0.00	0.13	No Survey	0.07	No Survey	0.28	No Survey	No Survey	0.10
Harvest Rate (any catfish)	0.00		0.00	0.13		0.07		0.11			0.06
% Harvested (channel)	None		None	0.0%		12.0%		28.8%			13.6%
Mean Weight (channel)	None		None	41.60		4.75		3.25			16.53
Value of Fishery (creel survey data - trip expenditures)											
Any Catfish	$820	No Survey	$0	$2,080	No Survey	$3,850	No Survey	$8,700	No Survey	No Survey	$3,090

Habitat Enhancement, Tellico Reservoir 2022

Type of Work	Details	Quantity	
		New	Renovated
Christmas Trees		0	0
Reef Balls		0	0

Water Quality Monitoring, Tellico Reservoir 2022

Parameter	Sampling Period	Water Quality
Temperature	July - September	Normal
Dissolved Oxygen	July - September	Normal

Watauga Reservoir

Description

Surface Area: 6,430 acres
Counties: Carter, Johnson
Full Pool Elevation: 1,959 feet above mean sea level
Maximum Depth: 312 feet
Mean Chlorophyll (Forebay): 4.0 parts per million
Trophic Status (Forebay): Mesotrophic
Hydraulic Retention Time: 400 days
Total Fishing Effort: N/A
Shoreline Distance: 105 miles
Drainage Area: 468 square miles
Mean Annual Fluctuation: 44 feet
Thermocline Depth: 30 feet
Shoreline Development: 21%
Trophic Index, Carlson (1977): 44.3
Reservoir Age: 74 years (dam completed 1948)
Total Value by Anglers: N/A

Summary:

Electrofishing

The largemouth bass catch rates for Watauga Reservoir were slightly below average in 2022 at 9.2 fish/hour. A PSD value of 83 would indicate that the reservoir size structure is dominated by larger fish. The number of largemouth bass collected over the 12-inch MLL was also slightly below average at 7.6 fish/hour. Largemouth bass relative weights were about average for Watauga Reservoir.

Smallmouth bass catch rates were above average at 23.8 fish /hour. The number of fish collected over the 15-inch MLL was also above average at 14.2 fish/hour. This should result in plenty of keeper size fish for anglers to catch. Smallmouth bass relative weights were about average for Watauga Reservoir.

There has been a steady increase in spotted bass populations in the reservoir. The catch rate in 2022 was 25.0 fish/hour, which is slightly above the 10-year average. We would highly encourage anglers to harvest this species when they are caught. Spotted bass have been shown to negatively affect smallmouth populations in reservoirs where both species are present.

Gill Netting

Experimental gill nets were used to collect walleye on Watauga Reservoir. We collected 44 walleye in 6 experimental nets. These nets were set from Roans Creek to the dam. The overall catch rates were below average at 7.3 fish/net night. There was a large percentage (77%) of fish collected over the 18-inch size limit. We are very excited about the large percentage of fish collected over 18-inches. This should mean there will be plenty of keeper size fish for anglers to catch in 2022. With stocking efforts continuing in 2023, we hope to see good recruitment and survival of walleye in the next few years.

Trap Netting

There was no trap netting conducted on South Holston Reservoir in 2022.

Habitat Enhancement

There was no habitat enhancement on South Holston Reservoir in 2022.

Water Quality

Water quality samples were collected at two sites on Watauga Reservoir during July and August 2022. The results from these samples were normal for Watauga Reservoir.

Lake wide Angling Summary

Total Effort and Expenditures

Angling Pressure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angler Hours	no survey	no survey	no survey	118,002	no survey	no survey	143,937	no survey	no survey	no survey	130,970
Angler Hours Per Acre	no survey	no survey	no survey	18.3	no survey	no survey	22.4	no survey	no survey	no survey	20.4
Angler Trips	no survey	no survey	no survey	20,798	no survey	no survey	22,289	no survey	no survey	no survey	21,544
Value of Fishery (angler expenditures creel)											
All Species	no survey	no survey	no survey	$314,280	no survey	no survey	$ 632,420	no survey	no survey	no survey	$ 473,350

Black Bass, Watauga Reservoir

Black Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)											
All Black Bass	No Survey	No Survey	No Survey	80,378 12.5	No Survey	No Survey	92,815 14.4	No Survey	No Survey	No Survey	86,597 13.5
Any Black Bass				74,131 11.5			84,516 13.1				79,324 12.3
Largemouth Bass				1,401 0.2			2,815 0.4				2,108 0.3
Smallmouth Bass				2,648 0.4			4,887 0.8				3,768 0.6
Spotted Bass				2,198 0.3			597 0.1				1,398 0.2
Tournaments (BITE program & creel survey data)											
# Tournaments (BITE) Pounds/Angler Day (BITE) Bass/Angler Day (BITE)	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported	none reported
Value of Fishery (creel survey data - trip expenditures)											
All Black Bass	No Survey	No Survey	No Survey	$251,040	No Survey	No Survey	$448,450	No Survey	No Survey	No Survey	$349,745
Any Black Bass				$235,140			$409,000				$322,070
Largemouth Bass				$3,460			$13,290				$8,375
Smallmouth Bass				$8,620			$24,310				$16,465
Spotted Bass				$3,820			$1,850				$2,835

Largemouth Bass, Watauga Reservoir

Largemouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.8	0.6	no survey	1.0	0.0	0.0	1.2	0.4	0.2	0.0	0.5
Density (electrofishing data - CPUE = # fish/hour)											
PSD	76%	86%	no survey	98%	88%	95%	95%	90%	92%	83%	89%
RSD - Preferred	55%	61%	no survey	80%	82%	76%	74%	83%	77%	65%	73%
CPUE	14.0	11.8	no survey	17.0	6.6	8.2	9.0	10.8	12.4	9.2	11.0
CPUE ≥ Stock	13.2	11.2	no survey	16.0	6.6	8.2	7.8	10.4	12.2	9.2	10.5
CPUE ≥ MSL (12")	9.6	9.0	no survey	15.6	5.8	7.6	7.4	9.4	11.2	7.6	9.2
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N//A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	83.8	86.6	no survey	79.8	84.8	87.4	103.9	104.2	90.5	88.6	89.9
Quality - Preferred	92.3	91.8	no survey	91.1	87.4	92.0	94.7	91.0	94.3	89.7	91.6
Preferred - Memorable	95.2	90.0	no survey	93.4	93.4	96.5	96.2	97.1	97.0	94.4	94.8
Memorable - Trophy	96.1	96.0	no survey	101.9	91.5	94.2	99.1	96.4	91.4	89.3	95.1
Trophy	none	none	no survey	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	0.21	No Survey	No Survey	0.25	No Survey	No Survey	No Survey	0.23
Harvest Rate				0.00			0.01				0.01
Percent Harvested				0.6%			2.6%				1.6%
Mean Weight (pounds)				2.87			3.71				3.29

Smallmouth Bass, Watauga Reservoir

Smallmouth Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Age-1 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.4	0.6	no survey	0.8	0.6	0.6	0.4	1.4	0.4	1.0	0.7
Density (electrofishing data - CPUE = # fish/hour)											
PSD	87%	91%	no survey	96%	96%	83%	94%	95%	95%	84%	91%
RSD - Preferred	81%	69%	no survey	88%	77%	60%	82%	89%	78%	71%	77%
CPUE	16.0	14.0	no survey	25.6	17.0	20.6	10.6	16.6	19.8	24.8	18.3
CPUE ≥ Stock	15.6	13.4	no survey	24.8	16.4	20.0	10.2	15.2	19.4	23.8	17.6
CPUE ≥ MSL (15")*	11.0	7.4	no survey	17.2	10.2	8.8	7.2	11.2	13.6	14.2	11.2
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	95.2	76.9	no survey	87.4	91.5	83.7	83.0	none	90.5	90.3	87.3
Quality - Preferred	88.6	89.2	no survey	91.6	90.6	86.7	85.6	92.8	94.1	95.3	90.5
Preferred - Memorable	86.3	82.9	no survey	87.2	88.2	87.7	84.8	87.4	91.5	90.8	87.4
Memorable - Trophy	86.3	78.8	no survey	83.8	86.1	84.2	77.0	83.2	83.2	82.9	82.8
Trophy	none	none	no survey	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	0.23	No Survey	No Survey	0.29	No Survey	No Survey	No Survey	0.26
Harvest Rate				0.01			0.01				0.01
Percent Harvested				3.5%			5.5%				4.5%
Mean Weight (pounds)				2.67			3.65				3.16

* 18" MLL in effect in 2008, 18" in 2009, and 15" in 2010

Spotted Bass, Watauga Reservoir

Spotted Bass

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data)											
Substock CPUE	1.40	0.80	no survey	2.00	0.60	2.00	3.20	1.60	1.20	1.00	1.53
Density (electrofishing data - CPUE = # fish/hour)											
PSD	68%	76%	no survey	65%	67%	68%	74%	93%	71%	68%	72%
RSD - Preferred	19%	21%	no survey	41%	27%	27%	21%	58%	35%	28%	31%
CPUE	12.8	14.8	no survey	21.4	18.4	25.4	22.2	16.4	20.0	25.0	19.6
CPUE ≥ Stock	11.4	14.0	no survey	19.4	17.8	23.4	19.0	14.8	18.8	24.0	18.1
CPUE ≥ MSL	No Minimum Size Limit										
Relative Weight (electrofishing data)											
Stock - Quality	103.8	104.5	no survey	94.5	104.7	106.8	105.3	120.9	107.6	107.7	106.2
Quality - Preferred	104.5	102.4	no survey	95.5	102.2	100.9	98.9	97.8	108.4	98.8	101.0
Preferred - Memorable	105.0	99.5	no survey	100.3	99.4	99.2	98.1	98.4	101.8	99.4	100.1
Memorable - Trophy	none	none	no survey	114.0	93.6	99.4	107.7	101.5	96.9	102.9	102.3
Trophy	none	none	no survey	none	none	none	none	none	none	none	none
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	0.3	No Survey	No Survey	0.34	No Survey	No Survey	No Survey	0.32
Harvest Rate				0.0			0.12				0.08
Percent Harvested				10.4%			33.9%				22.2%
Mean Weight (pounds)				2.04			1.84				1.94

Black Crappie, Watauga Reservoir

Black Crappie

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (electrofishing data) - CPUE = # fish/ hour											
Age-0 CPUE	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substock CPUE	0.00	0.00	no survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Density (electrofishing data) - CPUE = # fish/ hour											
PSD	86%	86%	no survey	91%	100%	91%	100%	100%	86%	100%	93%
RSD - Preferred	86%	57%	no survey	55%	100%	45%	75%	57%	71%	40%	65%
CPUE	2.80	1.40	no survey	2.20	0.40	2.20	0.80	2.80	1.40	1.00	1.67
CPUE ≥ Stock	2.80	1.40	no survey	2.20	0.40	2.20	0.80	2.80	1.40	1.00	1.67
CPUE ≥ MSL (10")	2.40	0.80	no survey	1.20	0.40	1.00	0.60	1.60	1.00	0.40	1.04
Growth (electrofishing data)											
Mean TL at Age-1 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean TL at Age-3 (mm)	N/A	N/A	no survey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relative Weight (electrofishing data)											
Stock - Quality	91.8	100.7	no survey	98.1	none	89.1	none	none	103.4	none	96.6
Quality - Preferred	89.3	92.3	no survey	92.1	none	86.8	80.0	101.9	118.6	102.3	95.4
Preferred - Memorable	88.7	105.4	no survey	82.5	94.0	91.2	102.7	104.0	92.4	87.1	94.2
Memorable - Trophy	none	92.0	no survey	88.1	75.7	86.6	90.4	89.8	95.9	92.4	88.9
Trophy	none	none	no survey	none	none	none	none	none	none	none	none
Mortality (electrofishing data)											
Total Mortality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stocking											
# per Acre	* 6.6 *	5.3 *	4.7 *	4.9 *	5.8 *	0.0 *	0.0* *	7.1 *	2.8*	0.0 *	3.5
Angling Pressure (creel survey data - **any crappie**)											
Angler Hours	No Survey	No Survey	No Survey	2,785	No Survey	No Survey	3,838	No Survey	No Survey	No Survey	3,312
Angler Hours/Acre				0.4			0.6				0.1
Fishing Success (cre d											
Catch Rate				0.56			0.63				0.60
Harvest Rate				0.40			0.38				0.39
Percent Harvested				76.7%			48.4%				62.6%
Mean Weight (pounds)				2.05			1.53				1.79
Value of Fishery (cre e ures)											
Any Crappie				$7,620			$10,980				$9,300

Walleye, Watauga Reservoir

Walleye

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Recruitment (winter gill net data)											
Substock CPUE	0.00	0.20	0.00	no survey	0.00	0.20	0.00	0.00	0.00	0.00	0.04
Density (winter gill net data - CPUE = # fish/net night)											
PSD	93%	92%	89%	no survey	89%	86%	95%	100%	90%	91%	92%
RSD - Preferred	57%	38%	37%	no survey	41%	37%	36%	63%	73%	59%	49%
CPUE	17.8	12.3	6.3	no survey	13.5	13.3	14.0	6.8	5.0	7.3	10.7
CPUE ≥ Stock	17.8	12.2	6.3	no survey	13.5	13.2	14.0	6.8	5.0	7.3	10.7
CPUE ≥ MSL (18")	15.0	6.3	3.7	no survey	9.5	8.5	9.8	6.7	4.3	5.7	7.7
Growth (winter gill net data)											
Mean TL at Age-1 (mm)	399	No	413	no survey	no survey	415	426	No	none	444	419
Mean TL at Age-3 (mm)	505	Sample	none	no survey	no survey	513	510	Sample	548	none	519
Relative Weight (winter gill net data)											
Stock - Quality	102.4	103.3	99.5	no survey	none	99.1	100.3	none	93.7	97.1	99.3
Quality - Preferred	99.3	96.3	93.7	no survey	94.0	94.2	98.1	100.0	121.8	98.2	99.5
Preferred - Memorable	95.2	97.3	95.8	no survey	90.0	93.5	96.5	90.7	95.4	91.3	94.0
Memorable - Trophy	91.7	147.7	91.9	no survey	87.6	88.6	none	86.4	82.5	92.2	96.1
Trophy	none	none	none	no survey	102.1	none	none	none	none	none	none
Mortality (winter gill net data)											
Total Mortality	not calc	not calc	not calc	no survey	no survey	32%	23%	no survey	not calc	not calc	32%
Stocking											
# per Acre	4.7	5.5	9.5	10.4	10.9	13.6	0.0	0.0	8.0	6.7	6.9
Angling Pressure (creel survey data)											
Angler Hours	No Survey	No Survey	No Survey	7,724	No Survey	No Survey	8,920	No Survey	No Survey	No Survey	8,322
Angler Hours/Acre				1.20			1.39				1.29
Fishing Success (cre											
Catch Rate				not calculated			not calculated				not calculated
Harvest Rate				not calculated			not calculated				not calculated
Percent Harvested				32.3%			91.9%				62.1%
Mean Weight (pounds)				5.27			6.05				5.66
Value of Fishery (cre / e ures)											
Walleye Data Only				$10,830			$42,010				$26,420

Trout, Watauga Reservoir

Trout

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data)												
All Trout	(hrs)	No Survey	No Survey	No Survey	19,172	No Survey	No Survey	19,611	No Survey	No Survey	No Survey	19,392
	(hrs/acre)				3.0			3.0				3.0
Any Trout	(hrs)				5,412			6,396				5,904
	(hrs/acre)				0.8			1.0				0.9
Rainbow Trout	(hrs)				1,350			440				895
	(hrs/acre)				0.2			0.1				0.1
Brown Trout	(hrs)				0			0				0
	(hrs/acre)				0.0			0.0				0.0
Lake Trout	(hrs)				5,084			12,775				8,930
	(hrs/acre)				0.8			2.0				1.4
Value of Fishery (creel survey data - trip expenditures)												
All Trout		No Survey	No Survey	No Survey	$18,150	No Survey	No Survey	$89,160	No Survey	No Survey	No Survey	$53,655
Any Trout					$12,550			$28,090				$20,320
Rainbow Trout					$1,990			$730				$1,360
Brown Trout					$0			$0				$0
Lake Trout					$3,610			$60,340				$31,975

Lake Trout, Watauga Reservoir

Lake Trout

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Fishing Success (creel survey data)											
Catch Rate	No Survey	No Survey	No Survey	not calculated	No Survey	No Survey	not calculated	No Survey	No Survey	No Survey	not calculated
Harvest Rate				not calculated			not calculated				not calculated
Percent Harvested				85.6%			62.9%				74.3%
Mean Weight (pounds)				5.1			4.85				4.975

Sunfish, Watauga Reservoir

Sunfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any sunfish)											
Angler Hours	No Survey	No Survey	No Survey	6,181	No Survey	No Survey	7,171	No Survey	No Survey	No Survey	6,676
Angler Hours/Acre				0.96			1.12				1.04
Fishing Success (cre											
Catch Rate (bluegill)				1.68			1.90				1.79
Harvest Rate (bluegill)				0.33			0.24				0.29
% Harvested (bluegill)				10.6%			5.0%				7.8%
Mean Weight (bluegill)				0.30			0.50				0.40
Value of Fishery (cr				ures)							
Any Sunfish				$6,870			$11,840				$9,355

Catfish, Watauga Reservoir

Catfish

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Mean
Angling Pressure (creel survey data - any catfish)											
Angler Hours	No Survey	No Survey	No Survey	1,141	No Survey	No Survey	1,557	No Survey	No Survey	No Survey	1,349
Angler Hours/Acre				0.17			0.24				0.04
Fishing Success (cre											
Catch Rate (channel cat)				1.87			0.10				0.99
Harvest Rate (channel cat)				1.20			0.09				0.65
% Harvested (channel cat)				59.4%			50.8%				55.1%
Mean Weight (channel cat)				3.98			3.15				3.565
Value of Fishery (cre				es)							
Any Catfish				$6,740			$7,090				$6,915

Habitat Enhancement Watauga Reservoir

		Quantity	
Type of Work	**Details**	**New**	**Renovated**
N/A			
N/A			
N/A			
N/A			
N/A			
N/A			
N/A			

Water Quality Monitoring Watauga Reservoir

Parameter	**Sampling Period**	**Water Quality**
Temperature	July to September	normal
Dissolved Oxyged	July to September	normal

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Glossary

Biomass: weight of species or group of species expressed in pounds per acre or kilograms per hectare

Catch-Curve: a graph representing the relative abundance of various year-classes of a fish species. Used to measure the total mortality effecting the various year-classes present in the population.

Density: The abundance of fish in a population measured through catch-per-unit of effort. E.g. bass density is measured in number of fish caught per hour of electrofishing.

Exploitation: fish harvested or removed from the population by the fisherman. Measured through creel survey trends and catch-curve analysis.

Florida Bass: a subspecies of largemouth bass (Micropterus salmoides floridanus) native to the lower Florida peninsula. Desired for their ability to obtain relatively large sizes and advanced ages.

Growth: change in fish length with time. Measured as the average length of the fish at each age or length at which it enters the fishery (mean length of Age 3 bass).

Interspecific competition: Competition between two or more species for food or space when (and only when) either is limited.

Memorable-Size: The size when fish become memorable to catch (e.g. 20-25" for largemouth bass).

Mortality: removal of fish from the population by death, either by natural causes of harvest by a fisherman. Total mortality is a combination of both factors, and is indirectly assessed with Proportional and Relative Stock Density indices. Fishing mortality alone is measured by exploitation studies for creel census surveys.

Preferred-size: The size preferred by most fishermen to catch. (e.g. 15"-20" for largemouth bass).

Proportional Stock Density: an index that expresses the proportion of quality-sized fish to stock size fish. Used as an indirect measure of total mortality.

Quality Size: The size at which most fishermen begin to keep fish of a particular species (12"-15" for largemouth bass).

Recruitment: number of fish spawned that survived to be captured by a particular sampling gear. (e.g. for bass it is measured as the number of Age 1 bass in spring electrofishing; Crappie – number of age 0 collected with fall trapnettings.

Relative Stock Density: an index that expresses the proportion of preferred-size fish to stock size fish.

Stock Size: The age 1 and age 2 fish at will grow replace larger fish that are removed by fishing or natural death.

Year-class: a species group spawned in the same year.

Young of the Year (YOY): Fish produced during the current with an assumed birthdate of January 1. Also referred to as Age-0 fish.