

# Canoe Creek Lake

## Blair County

### 2021 Muskellunge Trap Net Survey

Canoe Creek Lake is a Pennsylvania Department of Conservation and Natural Resources (DCNR) impoundment offering recreational fishing and boating opportunities within [Canoe Creek State Park](#) (Figure 1).

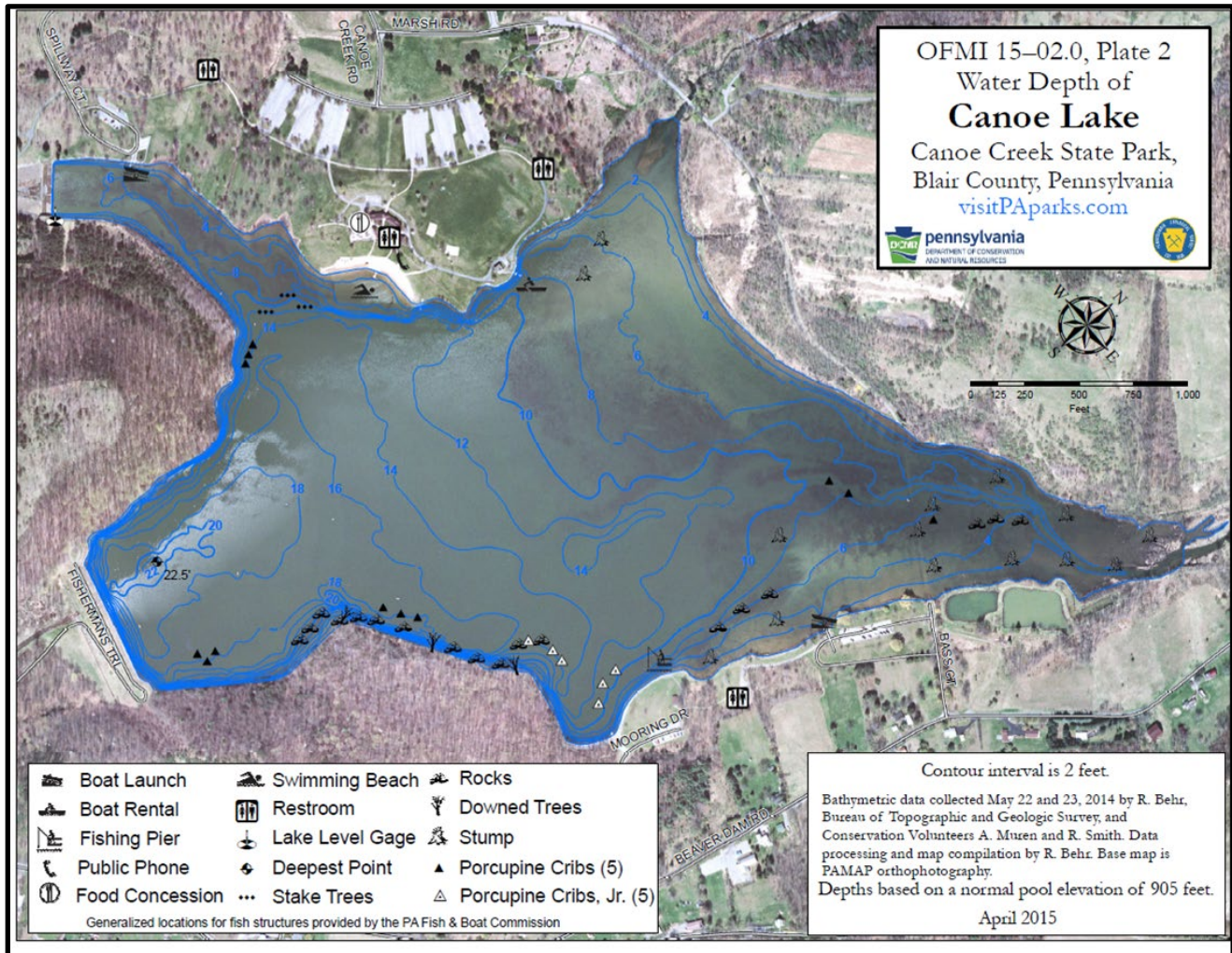


Figure 1. [DCNR map](#) of Canoe Creek Lake, Blair County.

This 155-acre reservoir is located 12 miles east of the City of Altoona in Frankstown Township and supports year-round angling opportunities for warmwater sportfish species and catchable trout during spring and fall. Only non-powered and electric motorized boats are permitted. There are two public boat launches, one located on the east shore and another on the west shore where there is also a boat rental concession. Shore angling opportunities are plentiful with most locations easily accessible from designated parking areas. The popular Fisherman's Path hiking trail offers several additional lakeside fishing opportunities as it meanders along the east shore's day use area. There is also an ADA-accessible fishing pier located next to pavilion #3.

The warmwater fishery at Canoe Creek Lake is supported mostly by self-sustaining fish populations with maintenance stocking of Muskellunge by the Pennsylvania Fish and Boat Commission (PFBC) (Table 1). The impoundment also offers seasonal angling opportunities for catchable trout stocked by the PFBC and is managed as a [Stocked Trout Water Open to Year-Round Fishing](#). Fishing is regulated under [Commonwealth Inland Water Regulations](#) for most sportfish species except black bass species (i.e., Largemouth Bass), which are managed in the [Big Bass Program](#). In addition, Channel Catfish were stocked in 2019 and 2021 to initiate population development for enhancing summer season catfish angling opportunities as a new management initiative recommended in the [Strategic Plan for Management of Catfishes in Pennsylvania](#).

Table 1. Year, life stage, number, and density (estimated number / acre) of Muskellunge stocked at Canoe Creek Lake from 2005 to present.

<b>Year</b>	<b>Life Stage</b>	<b>Number</b>	<b>Estimated Number/Acre</b>
2005	Fingerling	146	0.9
2006	Fingerling	300	1.9
2007	Fingerling	300	1.9
2008	Fingerling	600	3.9
2009	Fingerling	820	5.8
2010	Fingerling	600	3.9
2012	Fingerling	600	3.9
2013	Fingerling	600	3.9
2014	Fingerling	900	5.8
2015	Fingerling	500	3.2
2016	Fingerling	500	3.2
2017	Fingerling	150	1.0
<b>2019</b>	<b>Yearling</b>	<b>125</b>	<b>0.8</b>
<b>2021</b>	<b>Yearling</b>	<b>125</b>	<b>0.8</b>

Muskellunge stocking at Canoe Creek Lake has continued through the present following a 2012 trap net survey's catch having met the minimum catch rate objective of 0.01 fish per hour established in [Pennsylvania's Muskellunge Management Plan](#). That catch rate is the minimum required for inclusion in the Muskellunge annual stocking program. For background, the 2012 survey was conducted as a component of new evaluations executed on stocked Muskellunge waters that were initiated to evaluate statewide management changes enacted in 2007 that included a minimum length limit increase from 30 to 40 inches, a creel limit reduction from 2 to 1 per day, and stocking rate increases on select waters. In April of 2021, biologists re-visited Canoe Creek Lake to assess the population and evaluate the lake's performance to these regulatory and management changes.

Twelve trap nets were set in Canoe Creek Lake between April 12 and 15, 2021. Four trap nets were set daily in water depths ranging from 3 to 9 feet and remained overnight for approximately 22 hours before tending the next day (Figure 2). In general, all fish captured were identified, counted, measured, and released after processing each net's daily catch. In addition, Muskellunge were implanted with Passive Integrated Transponder (PIT) tags to identify recaptures during future surveys. The PIT tags are microchips that carry a unique numerical code to identify individuals when scanned using a tag reader. This technology helps biologists determine whether a fish was previously marked (i.e., recapture) or represents a new or unmarked capture during subsequent surveys. Ultimately, information gathered through PIT tag returns will benefit our understanding of growth rates and population dynamics to maintain and/or enhance angling opportunities.



Figure 2. Top of trap net in set position below surface (left) and crew lifting net's pot to remove catch. Note, pictures illustrate trap net gear and are not specific to Canoe Creek Lake's survey.

The April 2021 trap net catch of 28 Muskellunge was one of the highest recorded statewide and resulted in a catch rate of 0.10 fish/ hour or roughly nine Muskellunge for every four trap net sets. This catch rate exceeded the minimum management benchmark by ten-fold and ranked Canoe Creek Lake's 2021 catch within the top five percent statewide, qualifying the lake as one of [Pennsylvania's Best Muskellunge Fishing Waters](#). The length of individuals ranged from 27 to 47 inches with the largest Muskellunge weighing 34 pounds (Figures 3 and 4). In addition, the quality of the fishery was highlighted by the capture of nine Muskellunge exceeding the 40-inch minimum length limit.

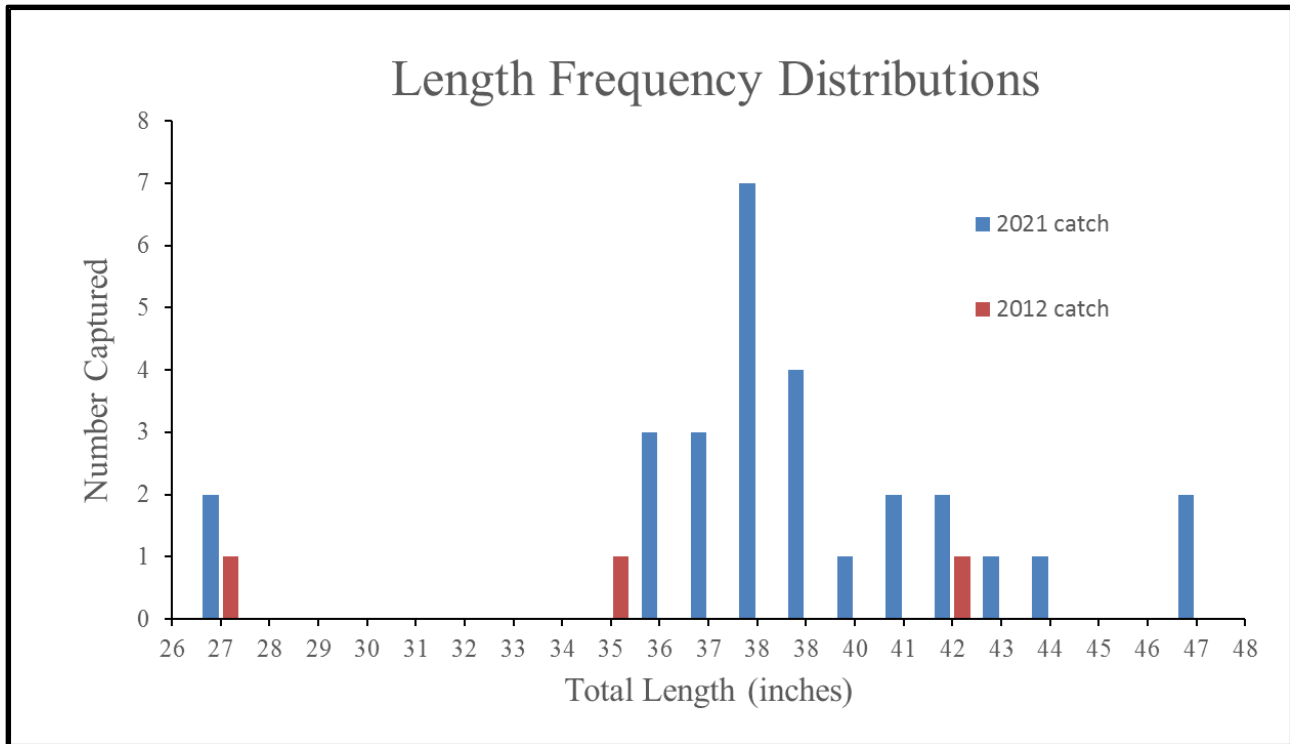


Figure 3. Length frequency distributions for Muskellunge collected during 2012 and 2021 surveys at Canoe Creek Lake, Blair County. Graph includes one tiger muskellunge collected in 2012.



Figure 4. Largest Muskellunge measuring 47 inches and weighing 34 pounds.

Many of the Muskellunge captured were sexually mature and in spawning condition. Although some spawning may occur in Canoe Creek Lake, it is unlikely that it would be successful to sustain the fishery. Therefore, management of the fishery is dependent on hatchery stocking that is currently scheduled for alternate (odd) years with the next plant occurring in 2023. The next Muskellunge trap net evaluation is scheduled for April 2022 to monitor the population and capitalize on the opportunity presented to gain additional information from the adults collected and tagged in 2021.

In addition to Muskellunge, 16 other fish species were captured during the 2021 survey (Table 2).

Table 2. Species, number caught, and length range for fish captured during the April 2021 trap net survey of Canoe Creek Lake, Blair County.

Species	Number Caught	Length Range (Inches)	Comments
Crappie	1,488	2 – 17	11% $\geq$ 9"
Black Crappie	317	2 – 17	28% $\geq$ 9 "
White Crappie	1,171	3 – 17	6% $\geq$ 9"
Bluegill	300	2 – 8	12% $\geq$ 7"
Pumpkinseed	19	2 – 7	
Bullhead	46		
Brown Bullhead	20	8 – 16	
Yellow Bullhead	26	8 – 13	
Channel Catfish	6	10 – 14	Stocked 2019
Chain Pickerel	3	17 – 25	
Common Carp	2	Not measured	
Golden Shiner	77	Not measured	
Largemouth Bass	2	4 – 17	
Muskellunge	28	27 – 47	32% $\geq$ 40"
Rainbow Trout – Hatchery	33	Not measured	
Walleye	6	22 – 24	
White Sucker	3	10 – 18	
Yellow Perch	19	4 – 10	

Crappies dominated the trap net catch with eleven percent (n=163) of the total measuring  $\geq$  9 inches in length. White Crappies outnumber Black Crappies by nearly 4:1; however, a greater percentage of Black Crappies (25%) were of sizes  $\geq$  9 inches. The largest crappies collected measured 17 inches and a nice distribution of fish between  $\geq$  9 and 12 inches should provide panfish anglers with some quality fish mixed in among their catch of smaller sizes since most (89%) crappies collected measured  $\leq$  8-inches in length and corresponding with younger age classes (Figures 4 and 5).

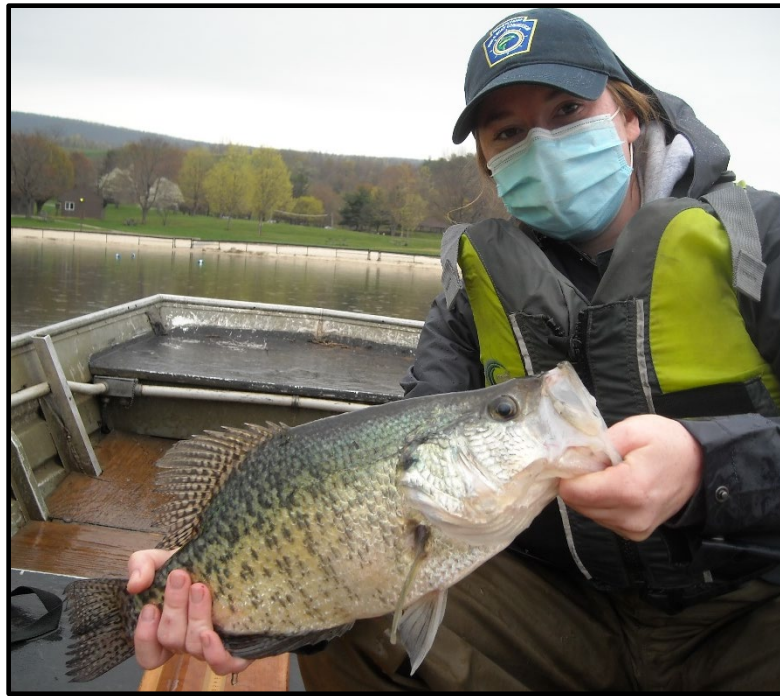


Figure 4. Fisheries Biologist Aide Kelly Hinerman holds a 17-inch White Crappie



Figure 5. Three quality size Black Crappies

Sunfish, predominately Bluegills, including some Pumpkinseeds were second most common in the trap net catch with 12% of the total measuring  $\geq 7$  inches. The capture of six Channel Catfish between 10 and 14 inches was an encouraging indication that yearlings ( $\sim 8$ "") stocked in October 2019 were present as larger individuals after one full growing season (i.e., 2020) in the lake. Channel Catfish management through annual plants are projected to gradually increase summer fishing opportunities for this popular sportfish as the cumulative impacts of multiple stockings result in more individuals recruiting to adult sizes in the coming years. Few Largemouth Bass were captured, which was expected since it is well established that trap nets are not an effective gear type for capturing (i.e., sampling) bass. However, a night electrofishing survey conducted on May 23, 2018, found a worthwhile Largemouth Bass fishery under "[Big Bass](#)" management with a total catch rate of 111 fish/hour where 33 and 11 percent of the catch measured  $\geq 12$  and  $\geq 15$  inches in length, respectively. The catch of six adult Walleyes showed persistence of this sportfish population from when Canoe Creek Lake was included in the Walleye stocking program but since removed for not achieving statewide management objectives supportive of maintaining a desirable fishery.