

# Opossum Lake

## Cumberland County

### Warmwater / Coolwater Fishery Restoration Update - 2018

[Opossum Lake](#) is a recently reclaimed Pennsylvania Fish and Boat Commission (PFBC) impoundment managed for recreational angling as an Approved Trout Water and Warmwater/Coolwater fishery. The impoundment is located 5 miles west-northwest of Carlisle in Lower Frankford Township, Cumberland County.



*Aerial photo of Opossum Lake, Cumberland County.*

This 59 acre impoundment was dewatered in the fall of 2008 to repair the dam and upgrade the spillway to meet [Pennsylvania's dam safety regulations](#). After repairs fish habitat structures ([Opossum Lake Habitat Plan](#)) were added to the basin in 2011. The Lake was re-filled to a smaller 47 ac impoundment in spring 2013. The lake is currently being managed under [Miscellaneous Special Regulations](#) to provide seasonal angling opportunities for stocked trout while protecting all other fish through catch and release regulations as their populations rebuild to desirable self-sustaining levels. To re-

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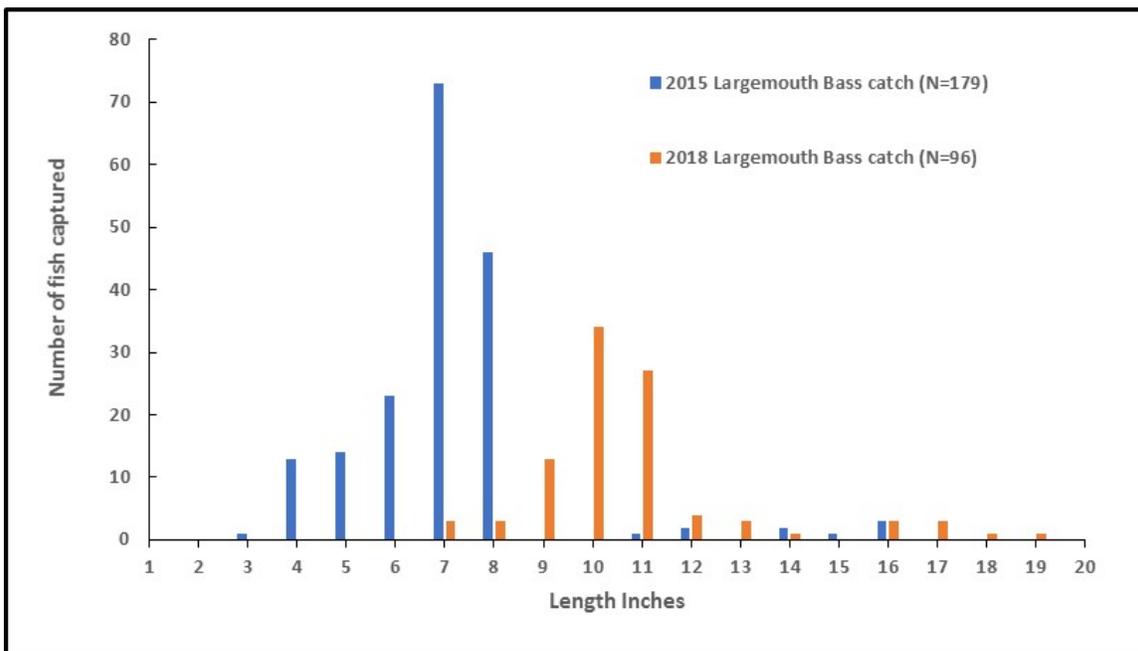
establish the popular self-sustaining Warmwater/Coolwater (WW/CW) fishery the lake was stocked with forage and sportfish species from 2013 through 2017 (Table 1).

Table 1. PFBC Warmwater/Coolwater hatchery fish stockings for Opossum Lake from 2013 through 2017.

Species	Life Stage	Stocking year
Largemouth Bass	fingerling	2013-2015
Fathead Minnow	adult	2013-2014
White Crappie	fingerling	2014-2015
Bluegill	fingerling	2014-2015
Brown Bullhead	fingerling	2014
Muskellunge	fingerling	2015 - 2016
Golden Shiner	fingerling	2017

This report summarizes results from trap net and electrofishing surveys conducted in 2015 and 2018 to evaluate the developing WW/CW sportfish fish populations in terms of stocked fish survival, fish community composition, and population abundance and size structure. Inquiries from anglers pertaining to the anticipated duration of currently applied catch and release fishing regulations for species other than trout prompted this status update whose goal is to inform anglers regarding the status of developing fish populations and their management.

On May 21, 2015 and May 24, 2018 biologists from the southcentral Area 7 Fisheries Management Office conducted night boat electrofishing surveys for Largemouth Bass and other sportfish. A total of 179 and 96 Largemouth Bass were captured in 2015 and 2018, respectively. Largemouth Bass lengths ranged from 3 to 16 inches in 2015 and from 7 to 19 inches in 2018 (Figure 1).



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Figure 1. Length frequency distributions for Largemouth Bass sampled May 21, 2015 and May 24, 2018 at Opossum Lake, Cumberland County.

In 2015, Largemouth Bass abundance was high as evidenced by a catch rate of 178 fish/hour where 66% of the catch was comprised of bass between 7 and 8 inches in length (Figures 1 and 2). In 2018 the catch rate was 78 fish/hour where 63% of the catch was comprised of bass between 10 to 11 inches in length (Figures 1 and 2). Catch rates for Largemouth Bass  $\geq 12$  and  $\geq 15$  inches increased from 2015 to 2018 indicating recruitment of individuals to quality and preferred sizes, respectively (Figure 2). Further improvement in the quality of the fishery is anticipated under continued catch and release management in 2019.

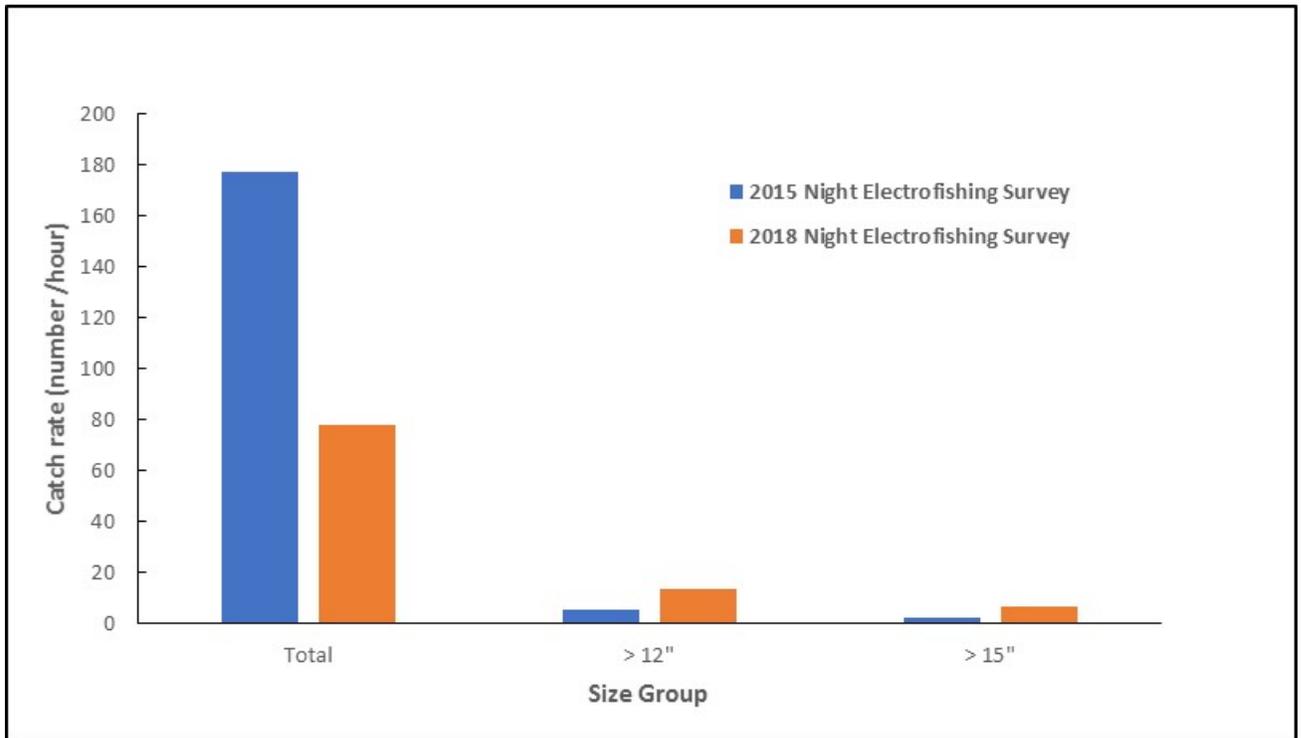


Figure 2. Catch rates of Largemouth Bass sampled during May 2015 and 2018 at Opossum Lake, Cumberland County.

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Ben Fricke holds a Largemouth Bass from Opossum Lake in 2018

A trap net survey was conducted May 14 through May 18, 2018 to evaluate WW/CW fish stockings. A summary of fish species collected is presented in Table 2.

Table 2. Number and size range for fish captured during May 2018 trap net survey at Opossum Lake (**Bold = PFBC stocked**).

Species	Number Caught	Size Range (Inches)	Comments
Black Crappie	171	5 - 14	82% less than 9 inches
<b>Bluegill</b>	<b>180</b>	<b>2 – 6.5</b>	<b>100% less than 7 inches, 63% less than 6 inches</b>
<b>Brook Trout</b>	<b>3</b>	<b>10 - 11</b>	<b>catchable trout stocked during spring</b>
<b>Brown Bullhead</b>	<b>1,258</b>	<b>4 - 16</b>	<b>99% less than 8 inches</b>
<b>Golden Shiner</b>	<b>2</b>	<b>8</b>	<b>Forage</b>
Green Sunfish	3	6	
<b>Largemouth Bass</b>	<b>4</b>	<b>11 - 19</b>	
<b>Muskellunge</b>	<b>3</b>	<b>18 - 21</b>	
Pumpkinseed	8	2 - 6	
Rock Bass	1	8	
<b>White Crappie</b>	<b>129</b>	<b>5 - 12</b>	<b>71% less than 9 inches</b>
White Sucker	4	>12	
Yellow Bullhead	18	8 - 10	
Yellow Perch	3	12 - 13	

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The plant of Brown Bullhead fingerlings in 2014 was successful as evidenced by their observed abundance during the May 2015 night electrofishing survey. Results from the 2018 trap net survey confirmed observations made during electrofishing in 2015 that Brown Bullhead exhibited high fingerling survival and recruitment based on their dominance (N=1,259) in the trap net catch, comprising 70% of the total number of fish collected. The abundance of Brown Bullhead is expected to decrease as density dependent factors affect the population.

The stocking of Bluegill fingerlings in 2014 and 2015 produced a trap net catch of 180 individuals ranging from 2 to almost 6.5 inches in total length. Most Bluegill (63%) were less than six inches in length indicating more time is required before Bluegill can offer quality angling opportunities. No further Bluegill stockings are necessary since fingerling plants have established a reproducing population.

The stocking of White Crappie fingerlings in 2014 and 2015 produced a trap net catch of 129 individuals ranging from 5 and 12 inches in total length. In addition, 171 Black Crappie between 5 and 14 inches in total length were collected that weren't credited to PFBC stocking. Eight-two percent of White Crappie and 71% of Black Crappie were less than a minimum quality size of nine inches suggesting more time is needed for their size structures to improve and offer better quality fishing. No further stockings of White Crappie are recommended at this time based on recruitment of individuals to spawning size.

The catch of Black Crappie, Pumpkinseed, Green Sunfish, Rock Bass, White Sucker, Yellow Bullhead and Yellow Perch suggests these species survived the drawdown by finding refuge in Opossum Creek or several smaller tributaries entering the impoundment. Populations of these sportfish may increase overtime and compliment the panfish fishery.

Three Muskellunge ranging from 18 to 21 inches in length were captured. These fish were credited to recent stockings from 2015 and 2016. The Muskellunge population will be maintained through stocking and eventually offer a "trophy" angling component to the lake's fishery.



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Muskellunge captured from Opossum Lake in 2018.

Stocked minnow forage in Opossum Lake included Fathead Minnow and Golden Shiner. Fathead Minnow were stocked in 2013 and 2014 to immediately establish a reproducing population while Golden Shiner were stocked in 2017 to add an additional reproducing species to the forage base. The absence of Fathead Minnow in the trap net catch was expected since their small size prevents them from being collected in nets.

The PFBC's Fisheries Management Division plans to continue monitoring the developing WW/CW fishery at Opossum Lake in 2019 while providing angling opportunities for catchable trout during spring. If you plan to fish at Opossum Lake, please be advised that only electric powered motors are permitted. All species except trout are currently being managed under immediate catch and release regulations. The lake has three boat access points one improved for watercraft with trailers and two for non-powered watercraft. The lake also offers an angler access trail, a mooring area, an ADA accessible fishing pier as well as ample vehicle parking in a rural setting.

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