

# Lake Perez

## Huntingdon County

### Warm and Cool Water Fishery Update and 2021 Regulation Changes

Lake Perez, a 72-acre impoundment owned by the Pennsylvania State University, is located in Barree Township within the [Stone Valley Recreation Area](#), Huntingdon County, approximately three miles northeast from the Village of Neffs Mills. The dam impounds Shavers Creek at river mile 13.6 upstream from its confluence with the Juniata River.



Lake Perez

This reservoir was completely dewatered in late spring 2009 to complete dam and spillway repairs and modifications per Department of Environmental Protection [dam safety standards](#). Following completion of these repairs and modifications, refill occurred during 2014, and the Commission resumed annual adult trout stocking in 2015 to provide immediate angling opportunities. Additionally, the Commission stocked the lake from 2014 through 2018 with select juvenile fish species to establish self-sustaining, warmwater and coolwater fish populations (Table 1). The lake was also stocked with adult sportfish recovered from nearby Whipple Lake when it was drained for repairs in October 2019. Those species included Largemouth Bass, Bluegill and Pumpkinseed, Yellow Perch, Chain Pickerel and Brown Bullhead.

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Table 1. Fish species stocked in Lake Perez to re-establish warmwater and coolwater fish populations.

<b>Species</b>	<b>Life Stage</b>	<b>Year stocked</b>
Largemouth Bass	fingerling	2014 through 2017
Fathead Minnow	adult	2015, 2016 & 2018
Black Crappie	fingerling	2016 & 2017
White Crappie	fingerling	2016 & 2018
Bluegill	fingerling	2016 & 2017
Brown Bullhead	fingerling	2017
Chain Pickerel	fingerling	2018
Yellow Perch	Fingerling	2016 & 2017

Since 2015 angling at Lake Perez has been managed with temporary miscellaneous special regulations that allow for the harvest of trout under Commonwealth Inland Waters Regulations but no harvest of other fish species. The intent of these protective regulations was to facilitate rapid development of a warm and cool water sportfish community in the absence of harvest, and once re-established, the lake would be recommended for removal from this program in favor of alternative regulation programs to sustain a robust fishery that accommodates limited harvest.

This report summarizes trap net and night electrofishing surveys conducted in 2019 and 2020 to monitor progress of the developing populations to self-sustaining status and to identify when the fishery would support limited harvest as an additional angling benefit. Therefore, and based on maturity of the sportfish community the Commission removed the temporary miscellaneous regulations from Lake Perez at its January 2021 meeting and moved it to new management under [Commonwealth Inland Waters Regulations](#) and the [Panfish Enhancement Program](#). Evidence to support the community’s readiness for these regulatory changes is provided in this report.

**Largemouth Bass**

Largemouth Bass were evaluated by night electrofishing on the evenings of May 13, 2019 and May 28, 2020 to assess the population’s progress and its ability to sustain a high-quality fishery. A total of 316 and 162 Largemouth Bass were captured during each respective sampling effort with individuals ranging from 4 to 21 inches in total length (Figure 1).

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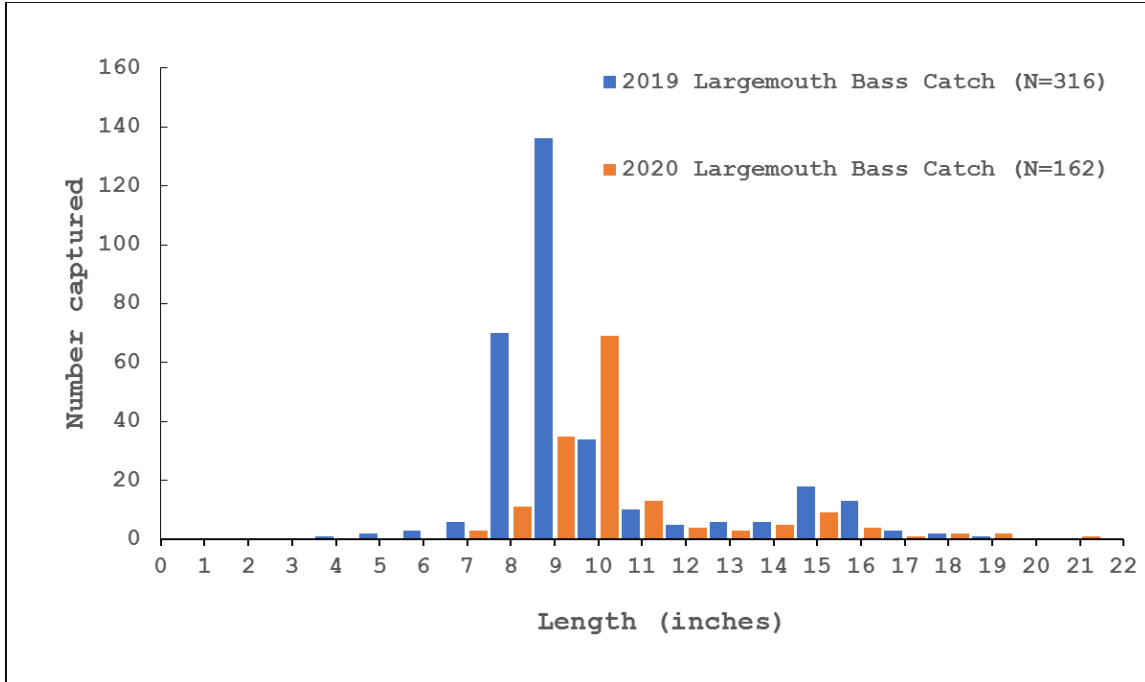


Figure 1. Length frequency distributions for Largemouth Bass captured during boat electrofishing surveys at Lake Perez, Huntingdon County, in 2019 and 2020.

Stocked fingerling Largemouth Bass were highly successful in creating a high-density population with good size structure. Total catch rates in 2019 and 2020 were 272 and 125 fish per hour, respectively. In 2019, 65% of the catch consisted of fish between 8 and 9 inches while 51% of the catch was between 10 to 11 inches in 2020. Catch rates for fish  $\geq 12$  and  $\geq 15$  inches showed favorable representation of quality and preferred sizes of Largemouth Bass present for anglers (Figures 1 and 2).

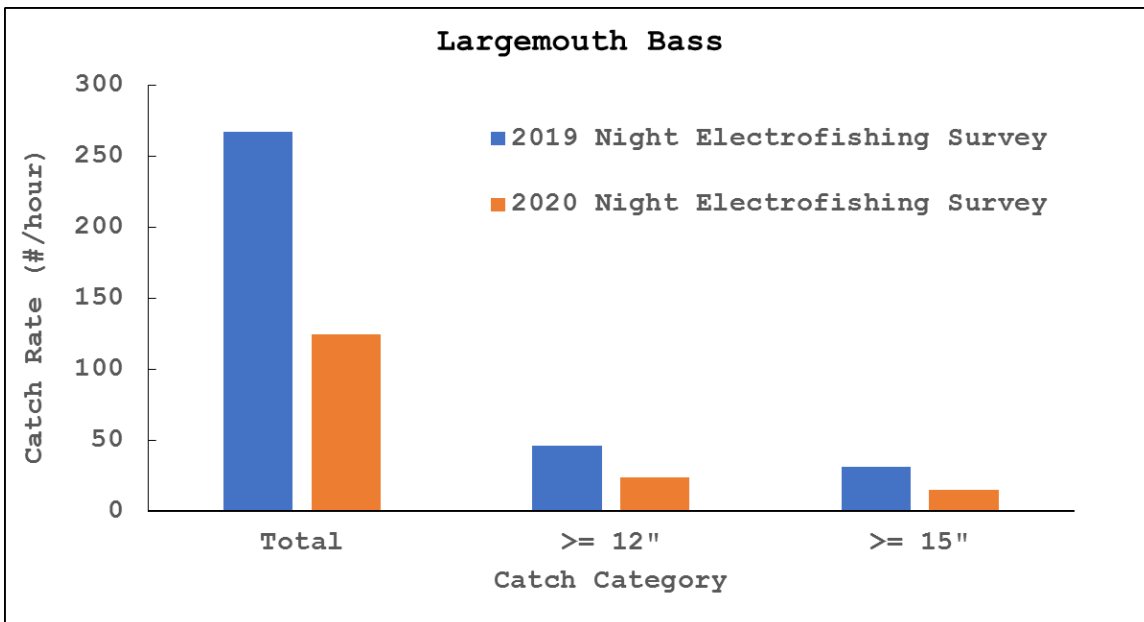


Figure 2. Comparison of catch rates for Largemouth Bass for the mid-May 2019 and late-May 2020 boat electrofishing surveys at Lake Perez, Huntingdon County.

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Lower catch rates across each category in 2020 suggests a decrease in Largemouth Bass density from 2019 as a result of the population adjusting to the habitat's carry capacity and available resources. Slight differences in time of year that surveys were completed also influenced catch rates since a two-week difference from the mid-May (2019) and late-May (2020) surveys resulted in sampling in water temperatures of 56 and 73-degree Fahrenheit respectively. This disparity in water temperature would have influenced fish behavior and bass catchability as measured by the electrofishing catch per hour statistic quantifying the population's relative abundance. Interpretation of individual fish scales to assess age and growth revealed slower than statewide average growth for nearly all ages collected and that it took an average of between 5 and 6 years for Largemouth Bass to reach 12 inches, the minimum legal length for Commonwealth Inland Waters regulation. Slow growth was a result of crowding (i.e., stockpiling) brought on by high survival of stocked fingerlings, limitation in prey availability, and protective angling regulations. The high catch rate of 272 fish/hour in 2019 was further evidence of the population's high density. This condition limited recruitment of individuals to larger sizes but likely benefitted panfish size structure and abundance due to high Largemouth Bass predation on juvenile crappie and sunfish, which prevented these panfish species from becoming overly abundant and slow growing. The noticeably lower total catch rate of 125 fish/hour in 2020 provides an encouraging sign that natural regulation of predator (Largemouth Bass) and prey (panfish) densities are occurring as with this reduced density, populations are becoming increasingly comprised of larger size individuals. The larger and legal-size individuals in the population will benefit now from limited angler harvest (see below) which will prevent any stockpiling and associated reductions in growth in this modestly productive reservoir.

Lake Perez's Largemouth Bass population has matured and expanded to a level where the Fishery Managers believe the fish population can be maintained and sustained through natural reproduction while offering some exceptional opportunities for anglers to experience high catch rates and some harvest of Largemouth Bass. As such, the Commission has approved removal of the temporary miscellaneous special regulations at its January 2021 meeting so the Largemouth Bass Fishery at Lake Perez can be managed under [Commonwealth Inland Waters Regulations](#). The regulation changes become effective on the date of publication in the Pennsylvania Bulletin, that publication was scheduled for April 3, 2021. After publication, these statewide regulations will permit anglers to harvest four black bass per day at a minimum length of 15 inches from January 1 through April 16 and from November 1 through December 31 for the upcoming 2021 season. Six black bass per day at a minimum length of 12 inches are permitted from June 12 through October 31. Catch and immediate release regulations apply from April 17 through June 11 to protect spawning activity. In addition, approved trout waters such as Lake Perez are closed to all fishing from March 1 until the opening day of trout season.

As a result of protective management, the temporary miscellaneous special regulations were successful in creating a quality Largemouth Bass population. Anglers can anticipate additional benefits through high catch rates from the stockpiling of fish less than 12 inches while pursuing larger individuals that were protected under catch-and-release management. As noted above when anglers harvest Largemouth Bass, adhering to size and creel limit regulations, they help maintain growth rates and overall population health. For anglers interested in harvesting fish please be reminded of the [PFBC](#) and [DEP](#) public health advisories in place to provide people with information on how to limit their exposure to contaminants in recreationally caught sportfish.

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**Panfish**

A 2019 trap net survey conducted from April 24 through April 26 to assess the developing panfish fishery produced encouraging results for crappie and sunfish anglers long anticipating when harvest restrictions would be lifted (Table 2).

Table 2. Number and sizes of fish species captured during the April 2019 trap net survey at Lake Perez, Huntingdon County. (**Bold = PFBC stocked species**).

<b>Species</b>	<b>Number Caught</b>	<b>Size Range (Inches)</b>	<b>Comments</b>
<b>Crappie (Black &amp; White)</b>	95	5 – 12	64% $\geq$ 9 inches
<b>Sunfish (Bluegill &amp; Pumpkinseed)</b>	111	2 – 8	91% $\geq$ 7 inches
<b>Rainbow Trout Hatchery</b>	2	10-12	
<b>Bullhead (Brown &amp; Yellow)</b>	6	12 - 14	
<b>Chain Pickerel</b>	2	7-15	
Golden Shiner	1	9	
<b>Largemouth Bass</b>	3	10 - 17	
Rock Bass	1	7	
White Sucker	35	-	Not measured
<b>Yellow Perch</b>	2	10	
<b>Fathead Minnow</b>	-	-	Not collected due to small size

**Crappie**

Fingerling plants of Black Crappie and White Crappie produced a total trap net catch of 95 individuals ranging from 5 to 12 inches with 64% of the catch  $\geq$  9 inches (Figure 3). Black Crappie accounted for 76% (n=72) of the crappie catch while White Crappie made up the remaining 24% (n=23) of the total. The mean trap net catch rate of 0.44 fish per hour for crappie greater than or equal 9 inches showcased the quality of the fishery by exceeding the minimum Panfish Enhancement objective catch rate of 0.25 fish/hour (Figure 4). Proportional and relative stock densities of 96 and 64 for crappie  $\geq$  8 and  $\geq$  9-inches quantified the population's size structure as offering attractive angling opportunities,

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especially as catch-and-release regulations provided added protections to these desirable size fish through 2020. Growth rates were above statewide averages for the initially stocked year classes with some individuals exhibiting rapid growth in reaching 9 inches by the end of their third growing season. Protective management through use of temporary miscellaneous special regulations have benefitted this anticipated component of the panfish fishery such that the only previous measure of its status was greatly exceeded (Figure 4).

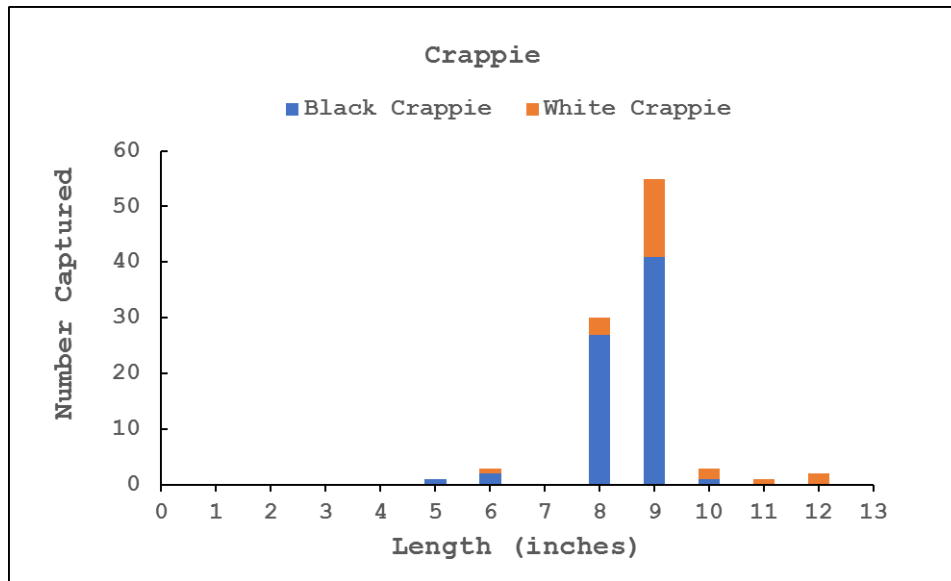


Figure 3. Length frequency distribution for Crappie captured during the April 2019 trap net survey at Lake Perez, Huntingdon County.

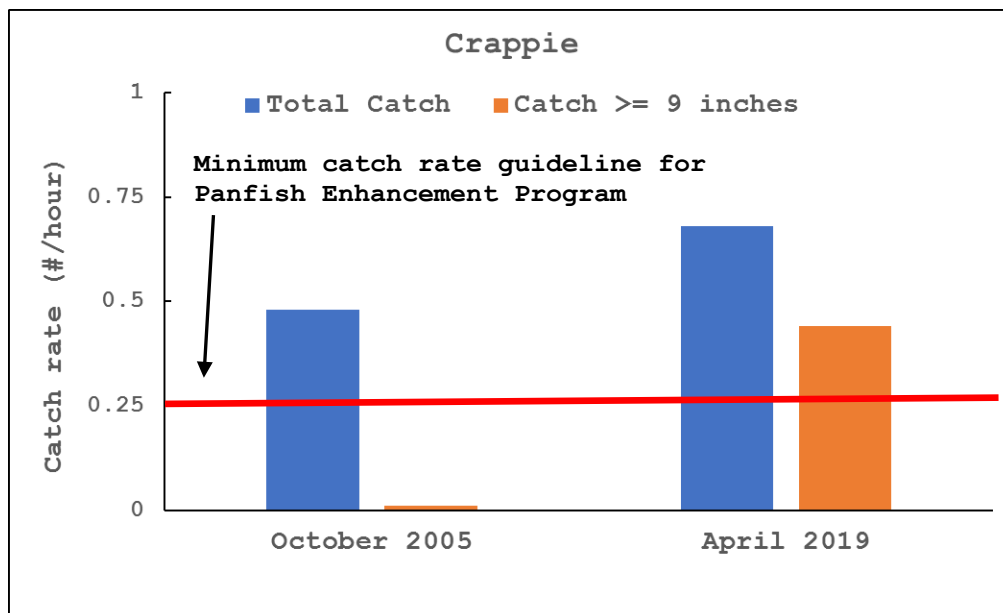


Figure 4. Comparison of trap net catch rates for Crappie surveyed at Lake Perez, Huntingdon County, prior (October 2005) and after (April 2019) restoration.

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As such, the Commission has removed the temporary miscellaneous special regulations at its January 2021 meeting so Lake Perez can be moved into the [Panfish Enhancement Program](#) following publication in the Pennsylvania Bulletin, scheduled for April 3, 2021. Panfish angling regulations for crappie under this special regulation permit the harvest of 20 crappie per day at a minimum length of 9 inches while the total creel per angler is not to exceed 50 panfish species. No further Black Crappie or White Crappie stockings are planned since the population will remain self-sustaining under these harvest rules. To assess the fishery's performance while in the Panfish Enhancement Program future monitoring of the population will occur on a periodic schedule.

### Sunfish (Bluegill and Pumpkinseed)

Fingerling stocking of Bluegill combined with expansion of remnant populations of both produced a catch of 111 sunfish ranging from 5 to 8 inches where 91% of the catch was  $\geq$  7 inches in length (Figure 5).

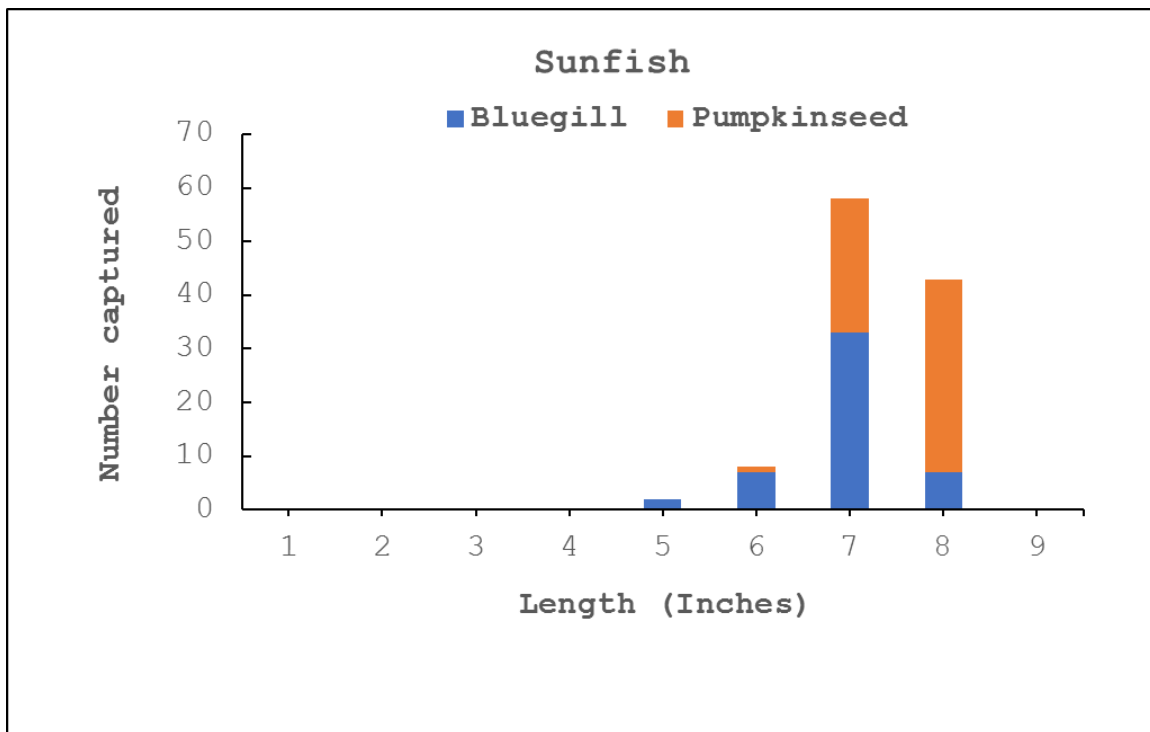


Figure 5. Length frequency distribution for Sunfish (Bluegill and Pumpkinseed combined) captured during the April 2019 trap net survey at Lake Perez, Huntingdon County.

Bluegill comprised 44% (n=49) of the sunfish catch while Pumpkinseed made up the remaining 56% (n=62) of the total trap net catch. The slightly greater abundance and larger size of Pumpkinseed was credited to the earlier development of this species during the lake's refilling based on the presence of 5-year-old individuals originating from the 2014 year class. The trap net catch rate of 0.72 fish  $\geq$  7 inches per hour showed the quality of the sunfish populations in exceeding the minimum Panfish Enhancement objective of 0.51 fish/hour greater than or equal to seven inches (Figure 6). Proportional and relative stock densities of 98 and 39 for sunfish  $\geq$  6 and 7 inches quantified a promising size structure available to anglers, which is likely to improve as catch-and-release regulations provided another year of protection to these desirable size fish through 2020. Growth rates for

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Bluegill and Pumpkinseed were above statewide averages with most individuals reaching 7 inches by the end of their fourth growing season. Management through use of the temporary miscellaneous special regulations have benefitted development of the sunfish fishery such that a previous measure of its status via trap netting in 2005 was greatly exceeded by our sample catch in 2019 (Figure 6).

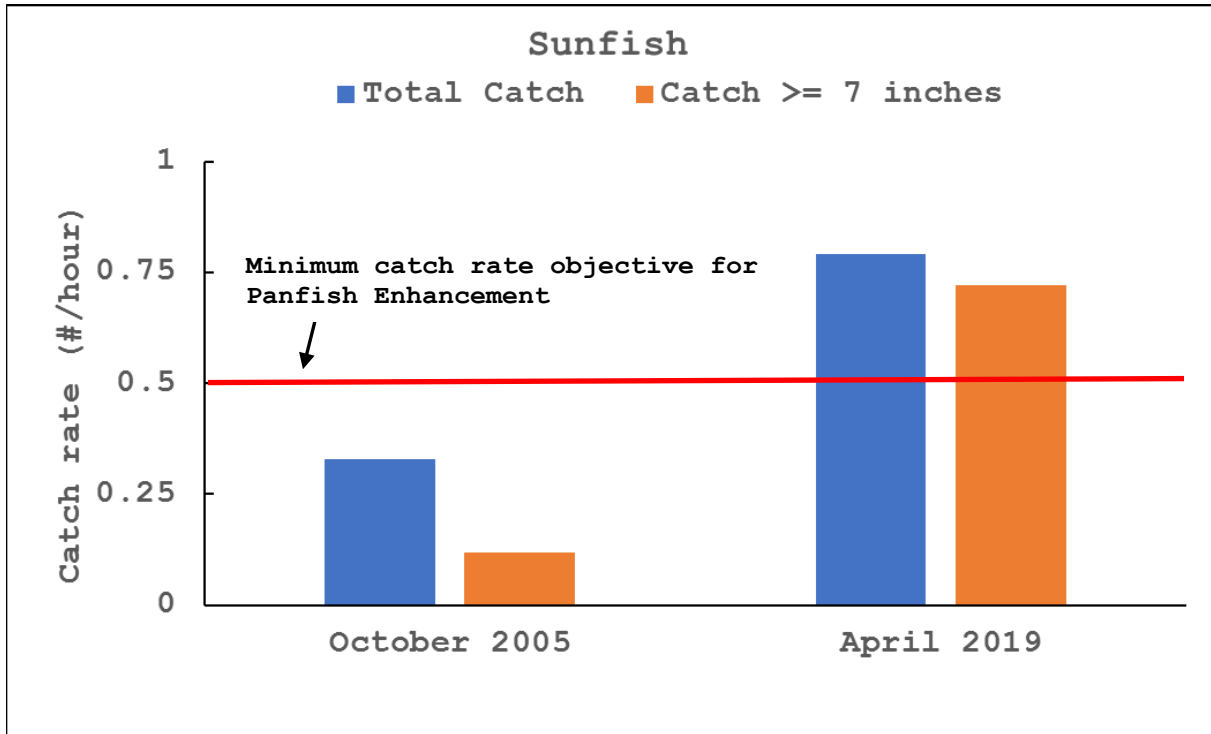


Figure 6. Comparison of trap net catch rates for Sunfish (Bluegill and Pumpkinseed) surveyed at Lake Perez, Huntingdon County, during October 2005 and April 2019.

To manage the quality of the sunfish fishery, while offering additional angling benefits a regulation change to allow some harvest was passed by the Commission at the January 2021 meeting. This change removed the temporary miscellaneous special regulations from Lake Perez and moved it into the [Panfish Enhancement Program](#) following publication in the Pennsylvania Bulletin, scheduled for April 3, 2021. This special regulation permits angler harvest of sunfish species through a 7-inch minimum size limit and 20 fish daily creel limit, while the total creel per angler is not to exceed 50 panfish species. No further Bluegill stocking is anticipated since fingerling plants have established a self-sustaining population. Periodic monitoring of the sunfish population will be pursued in the coming years to assess the fishery's performance while in the Panfish Enhancement Program.

### Yellow Perch

Fingerling stocking of Yellow Perch in 2016 and 2017 and relocation of some adults from nearby Whipple Lake were slow to develop this component of the panfish fishery. The catch of only two 10-inch Yellow Perch suggest that this species will need more time for the population to expand to levels capable of offer a targeted fishery. Prior to the lake's restoration the relative abundance of Yellow Perch was enumerated by a total trap net catch



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and catch  $\geq$  9-inches of 0.34 and 0.17 fish/hour, respectively, during an October 2005 survey (Figure 7).

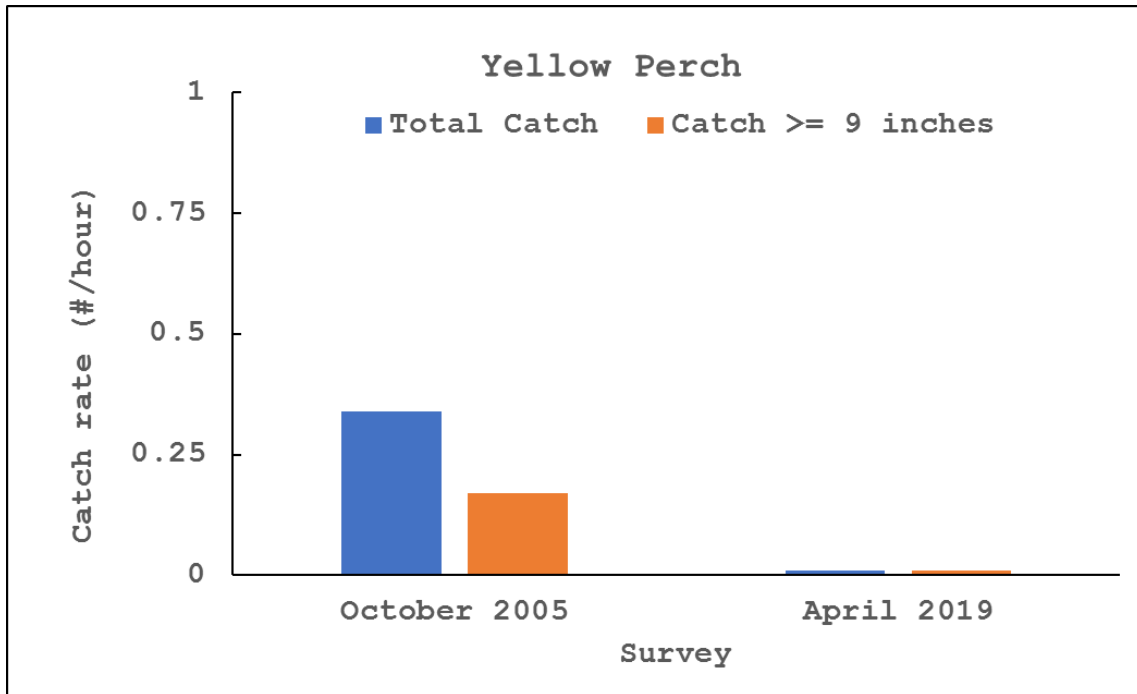


Figure 7. Comparison of trap net catch rates for Yellow Perch surveyed at Lake Perez, Huntingdon County, during October 2005 (before draining) and April 2019 (after refilling).

With removal of the temporary miscellaneous special regulation from Lake Perez Yellow Perch will be managed under Commonwealth Inland Waters Regulations, following this rule change publication in the Pennsylvania Bulletin (scheduled for April 3, 2021). These regulations permit anglers to harvest any size Yellow Perch with a maximum daily creel not to exceed 50 panfish species per anglers. Yellow Perch will comprise a much smaller component of angler catch following restoration, with other panfish species dominating angler catch in the near term.

### Chain Pickerel

The fingerling plant of Chain Pickerel in 2018 and relocation of some adults from nearby Whipple Lake accommodate re-capture in the 2019 trap net survey. Two fish measuring 7 and 15 inches in length were caught (Table 2). Further development of the Chain Pickerel population is anticipated as recruitment of stocked and naturally produced fish enter the fishery in the coming years. Chain Pickerel will be managed under Commonwealth Inland Waters Regulations, which includes an 18-inch minimum size limit and four fish daily creel, following this rule change publication in the Pennsylvania Bulletin (scheduled for April 3, 2021).

For anglers interested in harvesting fish please be reminded of the [PFBC](#) and [DEP](#) public health advisories in place to provide people with information on how to limit their exposure to contaminants in recreationally caught sportfish.

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