



Population Survey Report

Client: Lake Mohawk Community

Survey Date: 5/5/26 & 5/6/26

Thank you for choosing Jones Lake Management for your lake needs. The following is a review of what was collected from your lake during our electrofishing survey conducted on 5/5/26 & 5/6/26, as well as recommendations to improve and maintain your fishery moving forward.

Initial Observations

- Lake Size: 300 acres
- Secchi Disk Reading: 5'
- Aquatic Vegetation Species Present: Eurasian Watermilfoil, Slender Pondweed, Brittle Naiad, Canadian Waterweed, Filamentous Algae
- Structure Types Present: Cobble riprap, docks, and some submerged woody debris

Overview

When managing for a quality bass fishery, it is vitally important to have a robust sunfish population. Supplemental forage species such as golden shiners, threadfin shad, or goldfish will also aide in largemouth bass growth, but sunfish such as bluegill are the most important forage fish in the lake. As you will see from the data below, we collected a total of 96 bass and 20 sunfish. Ideally the sunfish to bass (prey to predator) ratio is at least 5 to 1. In your lake, this ratio is below the ideal threshold and supplemental forage stocking is recommended.

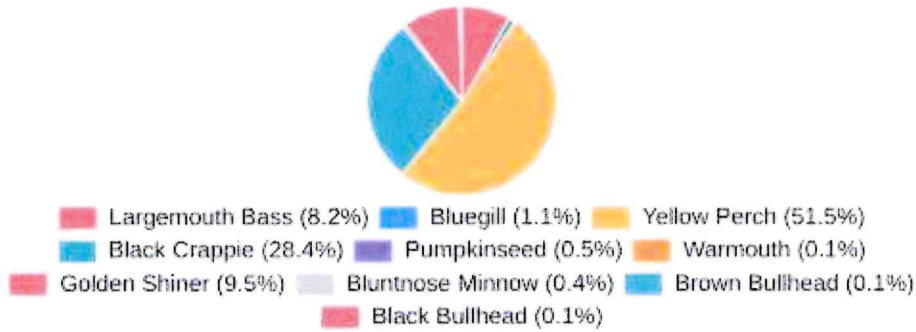
Summary of Sample

Species	Quantity
Largemouth Bass	96
Bluegill	13
Yellow Perch	600
Black Crappie	330
Pumpkinseed	6
Warmouth	1
Golden Shiner	111

Bluntnose Minnow	5
Brown Bullhead	1
Black Bullhead	1
Yellow Bullhead	4
Common Carp	26
Grass Carp	10

Total Population Distribution

Total Population: 5/5/26 & 5/6/26



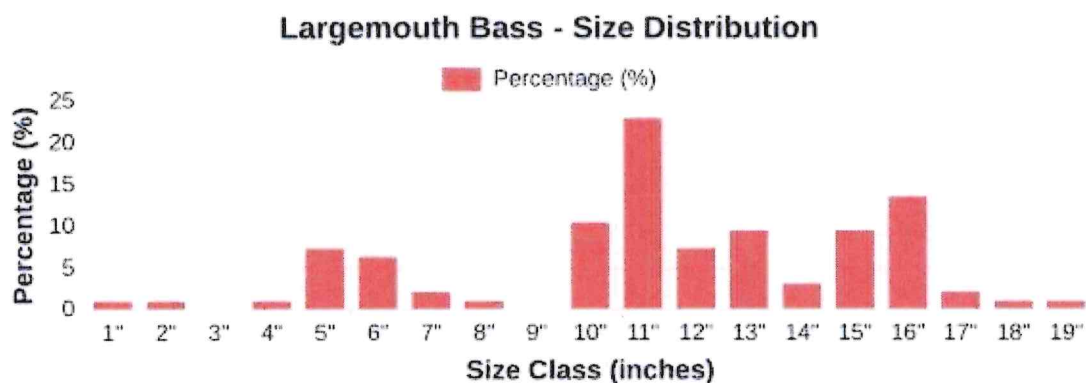
Species Analysis

Largemouth Bass



During the survey, we sampled 96 Largemouth Bass with measured specimens ranging from 1" up to 19.5".

Largemouth Bass are one of the most important and sought-after species in freshwater fisheries, valued both for their role as top predators and their popularity among anglers. As apex predators, they help maintain ecological balance by controlling populations of forage species such as Bluegill, shad, and minnows. This natural regulation prevents overpopulation and supports healthier, more diverse fish communities. In addition to their ecological role, Largemouth Bass are a cornerstone of recreational fishing, driving interest and investment in lake and pond management. Their presence not only enhances the quality of a fishery but also supports conservation efforts and local economies tied to outdoor recreation.

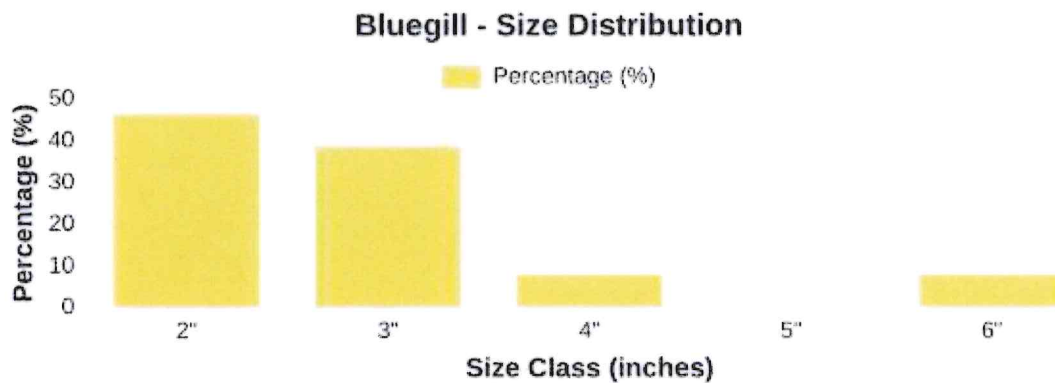


Bluegill



During the survey, we sampled 13 Bluegill with measured specimens ranging from 2" up to 6".

Bluegill sunfish are a cornerstone species in many freshwater fisheries, playing a critical role in both the food web and overall ecosystem balance. As a prolific forage fish, Bluegill provide a primary food source for popular predator species like Largemouth Bass, making them essential for supporting healthy predator populations. Their high reproductive rates ensure a steady supply of prey, which helps sustain growth and survival rates in stocked or naturally occurring game fish. Additionally, Bluegill are a popular catch for anglers of all ages and skill levels, adding recreational value to the fishery. Their presence contributes to both ecological stability and angling enjoyment, making them a key component of successful lake and pond management.

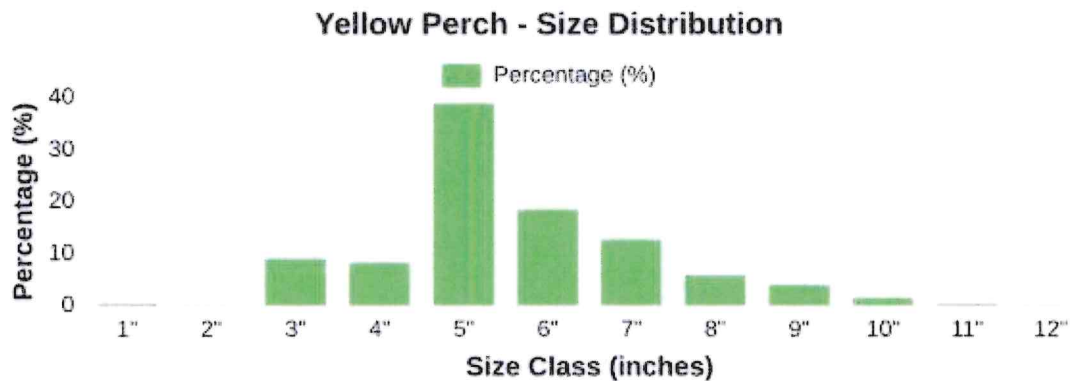


Yellow Perch



During the survey, we sampled 600 Yellow Perch with measured specimens ranging from 1" up to 12". Upon observation while sampling, there were hundreds of more Yellow Perch that we did not collect

Yellow Perch are an excellent species to help add variety to the pond. This popular sport fish can also make great table fare. Yellow Perch will eat bait fish species, insects, and snails, but can also readily take floating fish food pellets. Supplementing their diet with fish food will help increase their growth rates, as well as making more forage species available for the bass to consume.

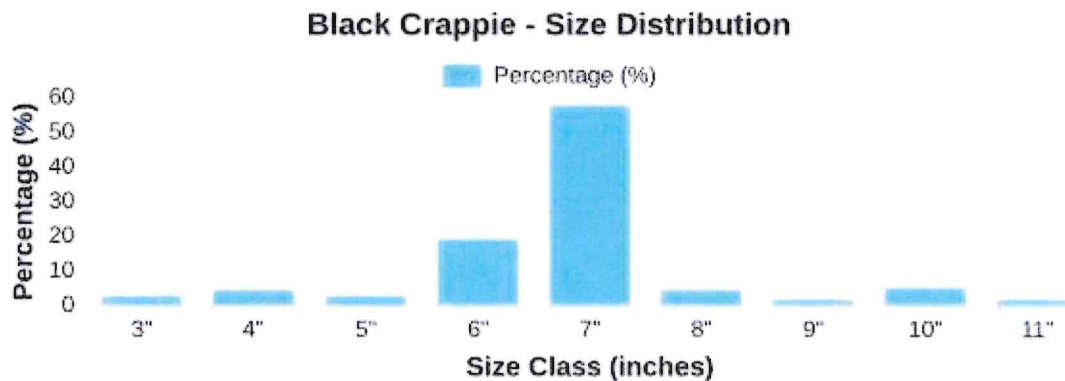


Black Crappie



During the survey, we sampled 330 Black Crappie with measured specimens ranging from 3" up to 11".

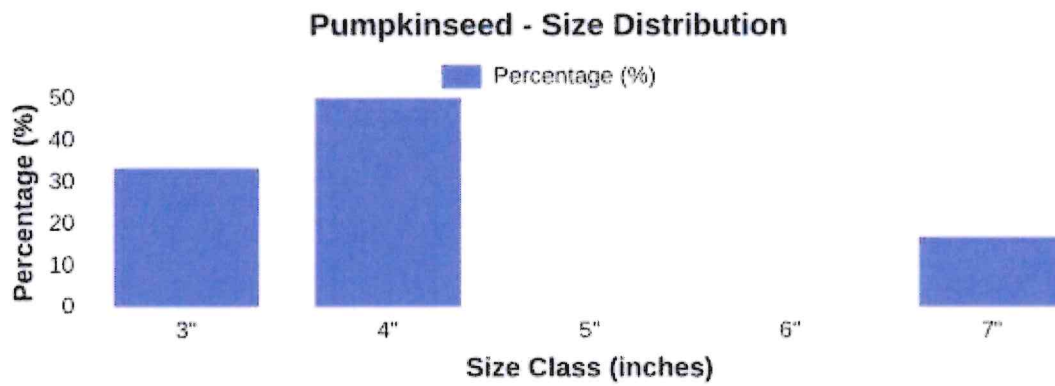
Black crappie are a valuable species in many freshwater fisheries, prized for both their ecological role and recreational appeal. As mid-level predators, they help control populations of smaller forage fish and aquatic insects, contributing to the overall balance of the ecosystem. Their schooling behavior and seasonal spawning patterns make them accessible and exciting targets for anglers, particularly in spring, when they gather in shallow waters to reproduce. Black crappie are also known for their excellent table quality, adding to their popularity in managed fisheries. However, their fast growth and reproductive potential require careful management to prevent stunting and overpopulation. When properly balanced, black crappie can enhance the diversity, sustainability, and enjoyment of a well-managed fishery.



Pumpkinseed



During the survey, we sampled 6 Pumpkinseed with measured specimens ranging from 3.25" up to 7".

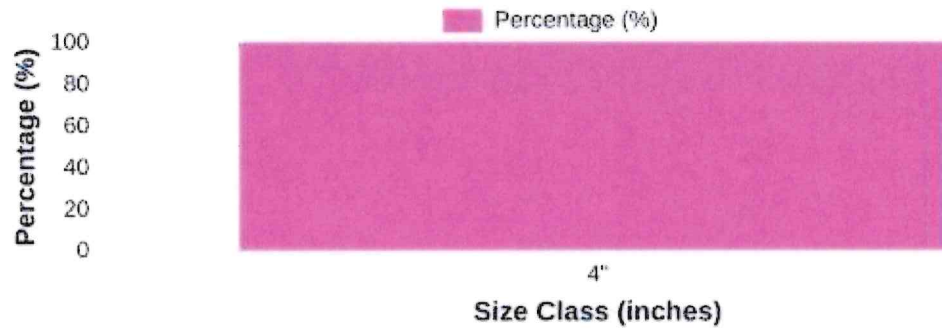


Warmouth



During the survey, we sampled 1 Warmouth which measured 4".

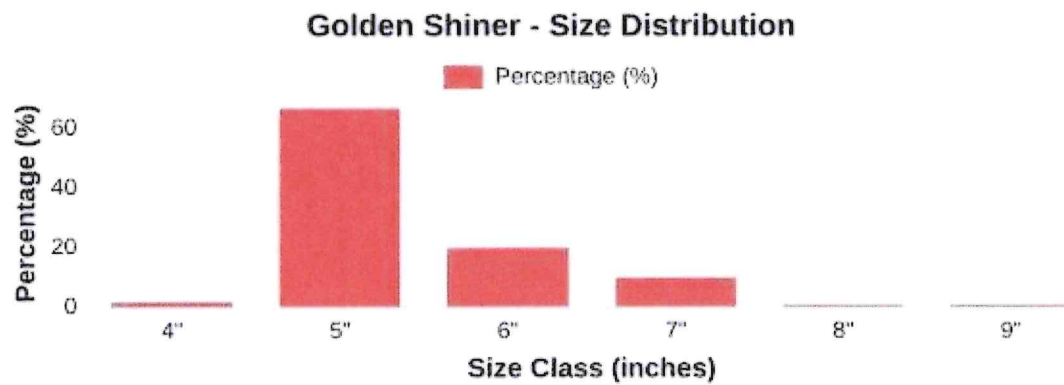
Warmouth - Size Distribution



Golden Shiner



During the survey, we sampled 111 Golden Shiner with measured specimens ranging from 4" up to 9". Upon observation while sampling, there were hundreds of more Golden Shiners that we did not collect



Bluntnose Minnow



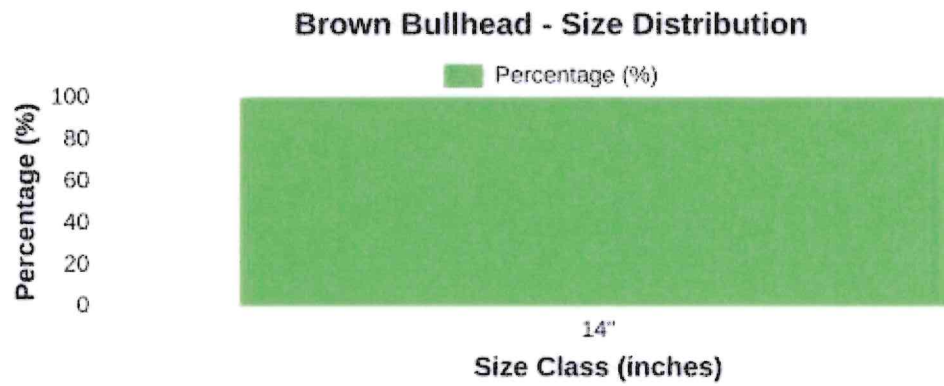
During the survey, we sampled 5 Bluntnose Minnow with measured specimens ranging from 2" up to 2.5".



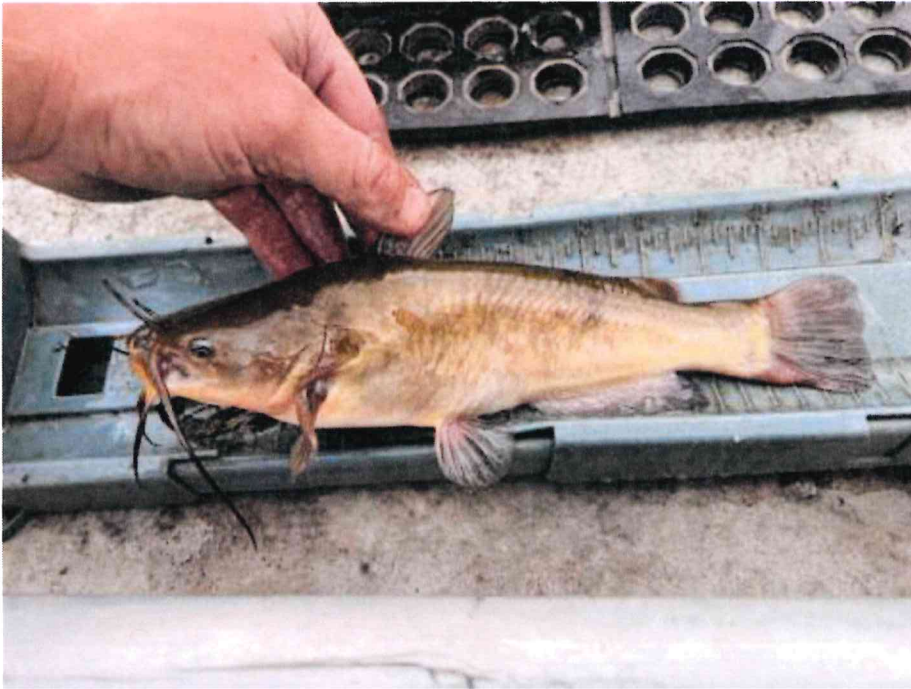
Brown Bullhead



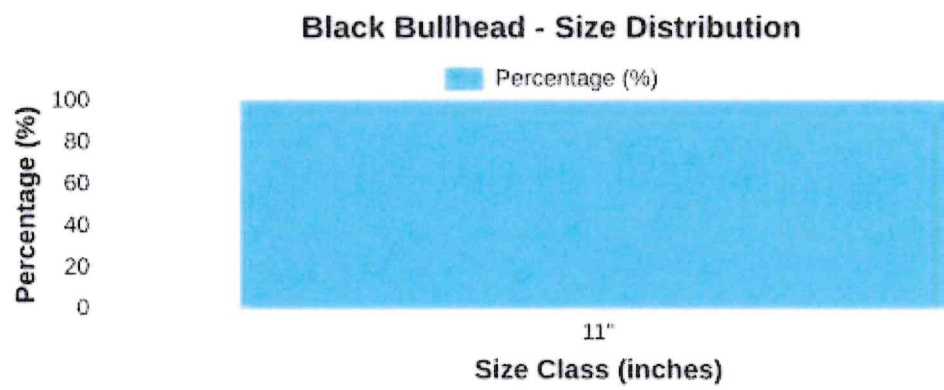
During the survey, we sampled 1 Brown Bullhead that measured 14".



Black Bullhead



During the survey, we sampled 1 Black Bullhead that measured 11".

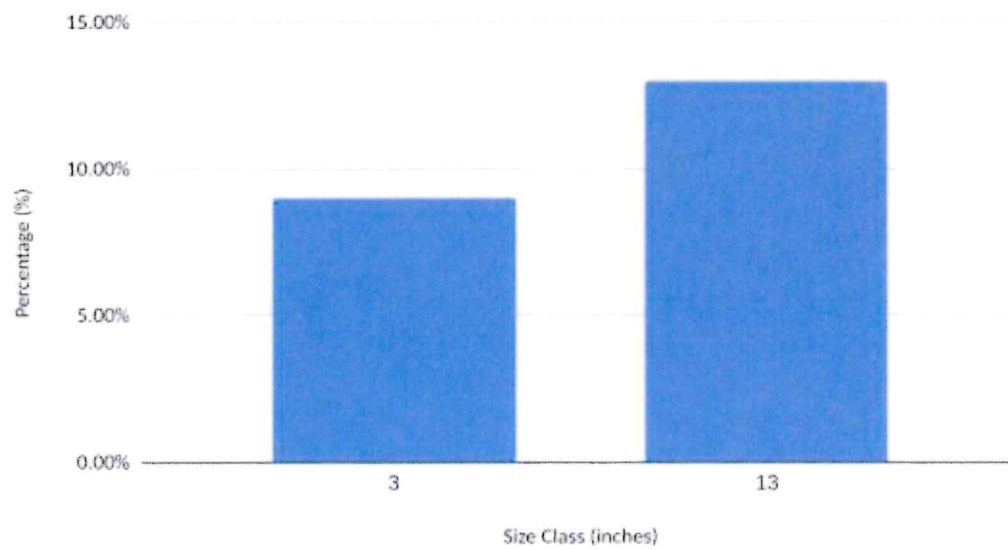


Yellow Bullhead



During the survey, we sampled 4 Yellow Bullheads with measured specimens ranging from 3" up to 13".

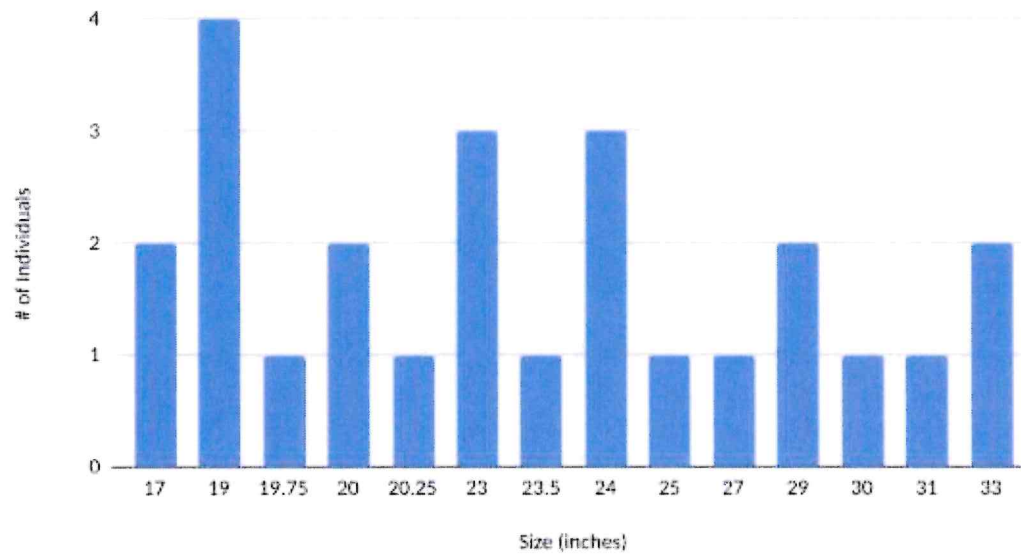
Yellow Bullhead - Size Distribution



Common Carp

During the survey, we sampled and removed 26 Common Carp with measured specimens ranging from 17" up to 33".

Common Carp - Size Distribution

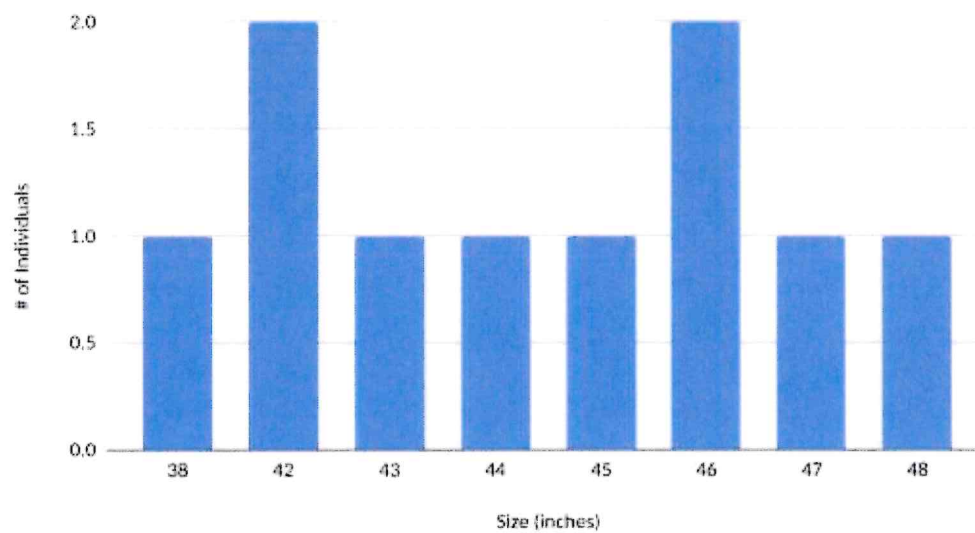


Grass Carp

During the survey, we sampled and removed 10 Grass Carp with measured specimens ranging from 42" up to 48".



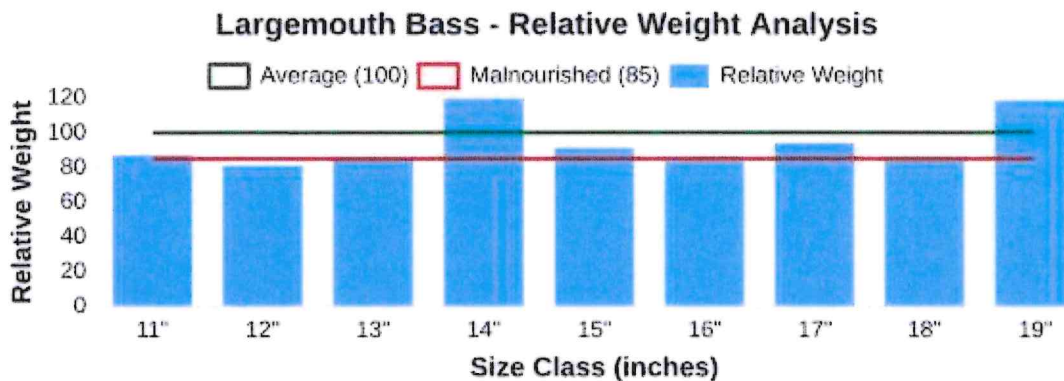
Grass Carp - Size Distribution



Relative Weight Analysis

The "condition" of a fish can be quantified using a measure called Relative Weight (Wr). This is a length to weight ratio that calculates how proportionate the weight of a fish is to its body length. Relative weight values over 100 are indicative of fish that are in excellent condition. Relative weight values below 85 indicate malnourished fish.

Based on the 29 largemouth bass measured for relative weight, 79.3% are below average condition (below 100), with 51.7% considered malnourished (below 85), and 20.7% are above average condition (above 100).



Assessment

Based on the current survey data, the lake shows an imbalanced predator to prey ratio that requires management attention. This imbalance can be traced to a lack of large-bodied predators, and the recent loss of several populations. The following are recommendations to be utilized for long-term improvement of the lake and fish community.

Recommendations

Population Management

1. Species Harvest

Harvesting crappie is one of the most important management strategies needed when managing an overall fishery, especially one with low predator counts. Without adequate harvest, there are too many individuals in the lake which results in heavy competition for resources (food). Increased competition for food results in slower growth rates and less potential for bass, or other target species, to reach quality or trophy size. It also leads to a decimated forage base. Generally speaking, you want to harvest the medium- and large-sized crappie.

A general rule of thumb is to harvest around 25-30 crappie per surface acre each year in a balanced fishery. This would equate to roughly 8250 fish per year in your lake.

2. Supplemental Bluegill & Forage Stocking

Establishing and maintaining a robust forage base should be looked at as an ongoing process when you have a lake full of bass. There is always going to be a heavy demand on the forage fish. We also need to decipher between supplement forage and bluegill. Again, bluegill are the primary forage for largemouth bass and intended to be a sustainable forage source. Supplemental forage species such as golden shiners, threadfin shad or goldfish are stocked to provide additional forage for bass, and to keep feeding pressure off the bluegill.

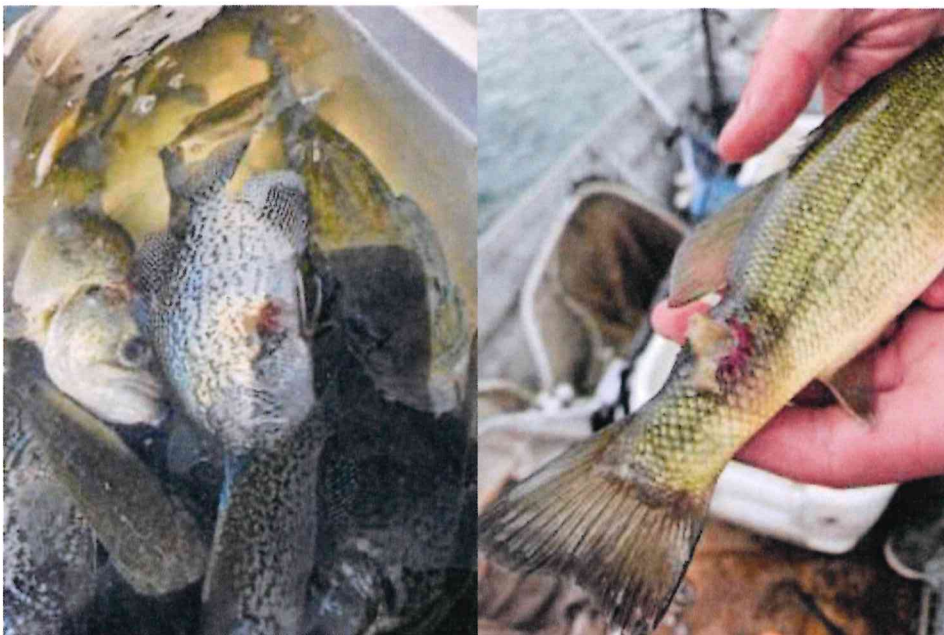
Based on your lake's current conditions, we recommend stocking Quantity Supplemental Forage Species. 120,000 Bluegill Sunfish of various size classes, over time, would help to re-establish the lake's population and create a strong forage base. These forage stockings can be integrated into a long-term (3-5 years) plan, rather than being done at once, that would help to establish the population, and provide further supplementation for population support. See the pricing table below for details.

Species	Size	Quantity	Base Price	Bulk Price	Total Price (before tax)
Bluegill Sunfish	2-3"	80,000	\$1.19 ea	\$0.44 ea	\$35,200
Bluegill Sunfish	3.5-5"	40,000	\$2.89 ea	\$1.35 ea	\$54,000
TOTAL					\$89,200

Monitoring

Regular electrofishing surveys could be conducted biennially to track population trends and adjust management strategies accordingly. Another management tool to utilize is citizen science through fishing, where anglers catch and record data (length and/or weight) of target species. With that data, Jones Lake biologists can analyze it and provide any necessary recommendations or adjustments to the current strategy.

Two main issues that our survey teams were seeing on the majority (>50%) of Largemouth Bass and Black Crappie had sores and wounds (see images below). These could be bacterial infections that occur in colder waters, and eventually start to decrease in observations as water temps warm up. Something that the community can do to help monitor the situation is bi-weekly, or monthly, water quality checks around the lake. One of the most important factors to keep an eye on is the amount of ammonia in the water, as higher than normal levels can cause weakened slime coats which can lead to higher rates of infection. Pathology testing can be completed through The Ohio State University if further information is required.



Management Strategy

A comprehensive management approach should include regular monitoring, selective harvesting, and strategic stocking to maintain a balanced and productive fishery. The recommendations outlined in this report should be implemented as part of a long-term management plan to achieve optimal fish population dynamics. Rather than putting everything into the lake at the same time, we should consider implementing a 3 to 5 year stocking plan. This strategy would be beneficial to help build a stronger forage base and predator population, while not overloading the system at once.

Thank you for choosing Jones Lake Management for your lake needs. We look forward to continued partner efforts on this project with you.

Sincerely,

Your Jones Lake Management Team

Patrick Wagner
Branch Manager



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