Cannongate HOA, Report

Electroshocking Analysis Report Date Performed: March 13, 2024

Overview

On Marh 13, 2024 a fish population analysis was conducted using standard electrofishing procedures. Data collected during this study was analyzed to describe the current conditions of the fishery. Based on the data collected, management recommendations have been made to improve the fishery in order to reach your goals.

Water Quality

Water quality was below the required 20ppm that we would like to see. High numbers in this category allow for a more efficient fertilization, however, the lake can still have a good phytoplankton bloom to support the fishery just may not last as long. When these numbers are higher it helps balance the pH swing throughout the day so that the fish experience less stress. We still plan on trying to put out limestone, however, we are running into logistic issues getting truckers to deliver.

Parameter	Recorded	Recommended
Alkalinity	10	>20

Electroshocking Data

The following figures provide information on the total number of fish sampled during the analysis, proportions of each size class in the sample, and the health of the fish in those size classes. Table 2. provides data showing how many bluegill, redear, and bass were captured in each size class. We were able to get a good snapshot of what the current condition of the lake and the dynamics currently going on.

Table 1: Data collected from the sampling event

Species	Size Class (in.)	Quantity
Bluegill	Reproduction (<3)	7
Bluegill	3-5	30
Bluegill	5-7	25
Bluegill	7-9	14
Bluegill	>9	12
Shellcraker	Reproduction (<3)	3
Shellcraker	3-5	0
Shellcraker	5-7	2
Shellcraker	7-9	6
Shellcraker	>9	4
Largemouth Bass	<4	10
Largemouth Bass	4-8	32
Largemouth Bass	8-10	28
Largemouth Bass	10-12	3
Largemouth Bass	12-14	1
Largemouth Bass	14-16	2
Largemouth Bass	16-18	2
Largemouth Bass	>18	3

Bluegill and Redear Overview

Overall, the bluegill population consisted of primarily smaller bluegill of 5” or less which is a great improvement since our last evaluation. We like to see bluegill populations that have more 3-5 and 5-7” fish these are the backbone of the forage community for all fish present in the lake.



Few crappie were collected this time around, which doesn't mean that there are more in there just that they may not have been in shallow enough water to collect. We did see some shad but more should be stocked along with other forage to insure that the fish have plenty to eat and continue on the positive trend we are currently seeing. I'm very pleased to see the improvement so far.

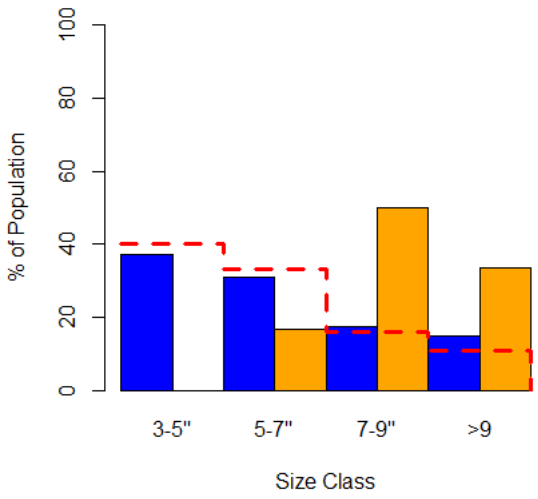


Figure 1: The blue bars represent bluegill and the redline shows a balanced population trend.

Largemouth Bass Overview

Again, we are seeing a positive trend in lake with the bass making a big stride forward with all the stocking that you have done. While most of the fish collected were less than 12" these numbers tell me that there has been great recruitment over the past couple of years and the larger fish have been able to put on some weight to become heavier. We do see that the middle class of fish are not doing as well, this is because they were already congested in those sizes, so harvest is very important to help free them up for growth but more importantly allow the new recruits we are seeing come in and grow at an exponential rate. The higher number of bass seen is also a possible reason for less crappie being sampled. They are voracious eaters and have probably been eating a lot of them that are coming into the season. However, this does mean that the crappie that survive will be quite large.

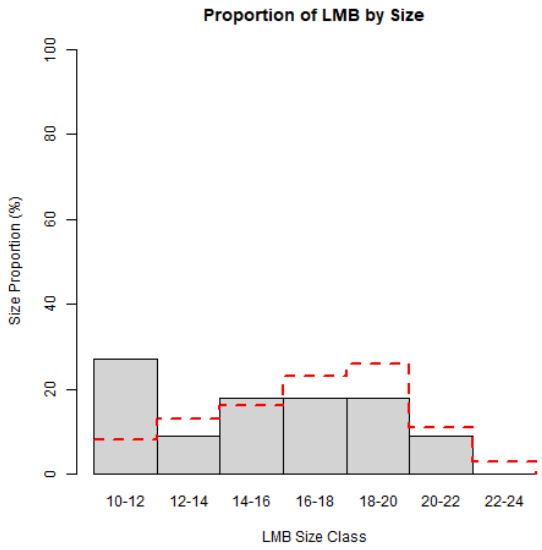


Figure 2: Above you can see what size class the majority of the fish that were weighed and measured during sampling fall in..

Relative weight was calculated for each individual fish as well as across size classes (Figure 3) on the next page.

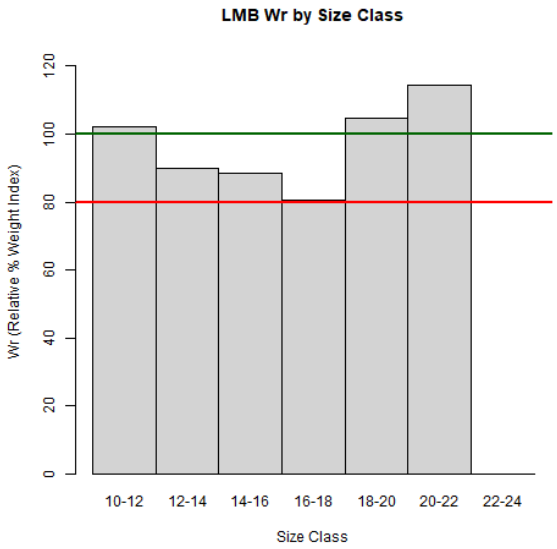


Figure 3: Relative weights is an accurate description of how your bass are doing not only in a size class format, but on an individual basis as well. The green line represents a healthy relative weight of 100% while the red line represents a skinny population of 80%.

We weighed and measured bass of 10" and longer and found:

- Average Length: 16"
- Average Weight: 2.5 lbs
- Average relative weight: 96%

These averages are well improved from what they were when we shocked in 2022. Let's continue to work towards further improvement over the next few years.

Recommendations

The following recommendations are based off the data collected during the analysis. These recommendations are provided to help guide you to make choices that help you improve the fishery.

Harvest Strategy:

While residents may or may not be harvesting bass it should be pushed at the meeting so that the fishery can benefit from it. Pulling bass has become taboo due to the catch and release mentality and being told you have to let it go to let it go, unfortunately it's the opposite. Removal of crappie isn't necessary if residents enjoy catching them, however, it will make management harder to keep things in balance and healthy. I suggest getting a feel for what the community wants before setting fishing regulations which will allow for better management goals and achievement.

Forage Strategy:

We should continue to add shad in over the next few years to continue to protect the forage in the lake. The better the bluegill population is the better the bass and crappie will be. The shad will also help add weight to both species.

Water Quality:

Improvements on the water are needed but need to be performed during the winter time. We are still seeing a phytoplankton bloom become established, but we are still trying to iron out the logistics.

Population Monitoring:

Adding a survey in every year will help keep track of the population and what is needed in the future. If the community doesn't want to remove the bass themselves, we can discuss a strategy that would allow us to harvest the bass for you.

The next page includes a recommendation table.

Recommendation	Quantity	Price
Lime Application	60-80 Tons	$130/ton
Continue Fertilization Program	1-1 ½ gal/acr	Included in Management Plan
Bluegill (3-5”)	15,000	$875/1000 fish
Threadfin Shad	3-4 loads	$1350/load
Harvest Bass	25-30 lbs/acr	Can be included in yearly cost
Population Survey	1 every year	Can be included it yearly cost