Lake Ramsey Electrofishing 2022 Report

April 24, 2022

Fish were collected in Lake Ramsey on April 24, 2022 using electrofishing methods. Forty seven largemouth bass were retrieved, measured for total length (TL) in millimeters (mm) and weighed in grams (g) which are more precise than inches and pounds. All but one fish were recovered in a holding tank and released in good shape. The one fish had a fish hook in it's throat and attempts to remove it were unsuccessful. All lengths and weights were later converted to inches and pounds for ease of review. Channel catfish and bream species were also recovered however for this report conclusions on forage are based on visual observations, bass relative weights and bass relative TL frequency.
This report will also draw comparisons in the Largemouth bass population to findings from previous electrofishing reports conducted in 2018 and 2020. The description of the site, aquatic vegetation, water quality found in the 2020 report are adequate for this report and can be found on the Lake Ramsey website.

The goal for Lake Ramsey should be to produce a sustainable balanced fishery capable of producing quality fishing experiences with the chance to grow and catch trophy bass.

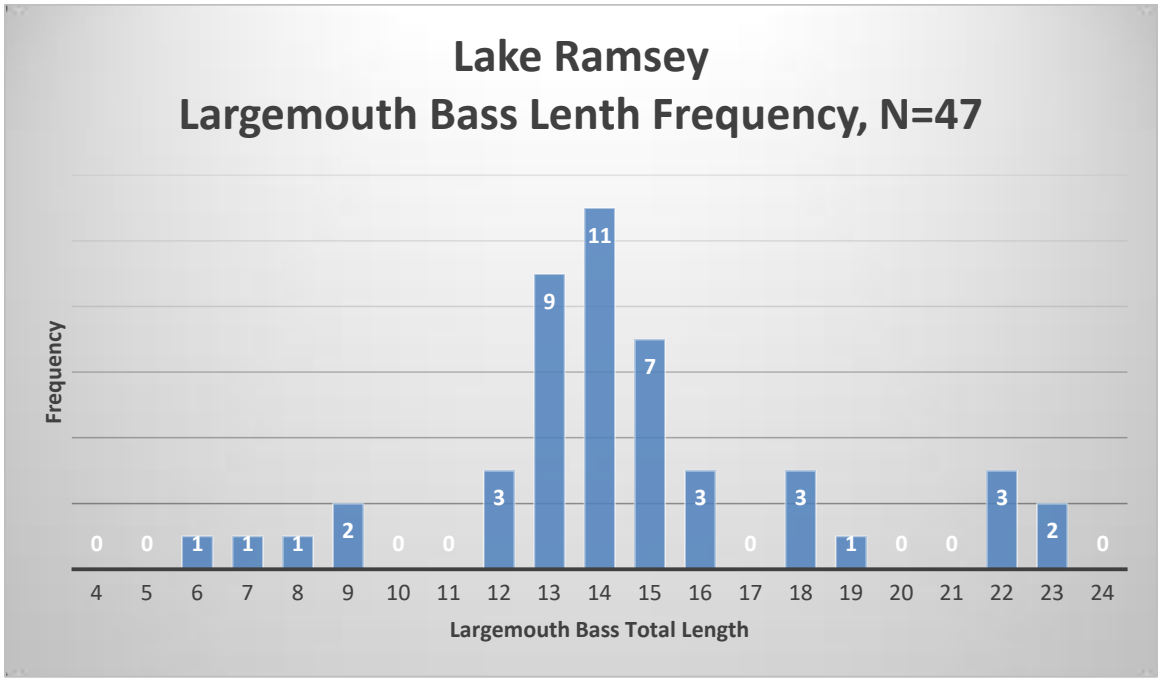
Electrofishing Results: Fish managers like to lump groups of fish by length groups and label them to describe or target a size grouping of fish for management purposes. For bass, these groupings are:

Stock is all bass greater than 8 inches
Quality is all bass greater than 12 inches
Preferred is all bass greater than 15 inches
Memorable is all bass greater than 20 inches
Trophy is all bass greater than 25 inches

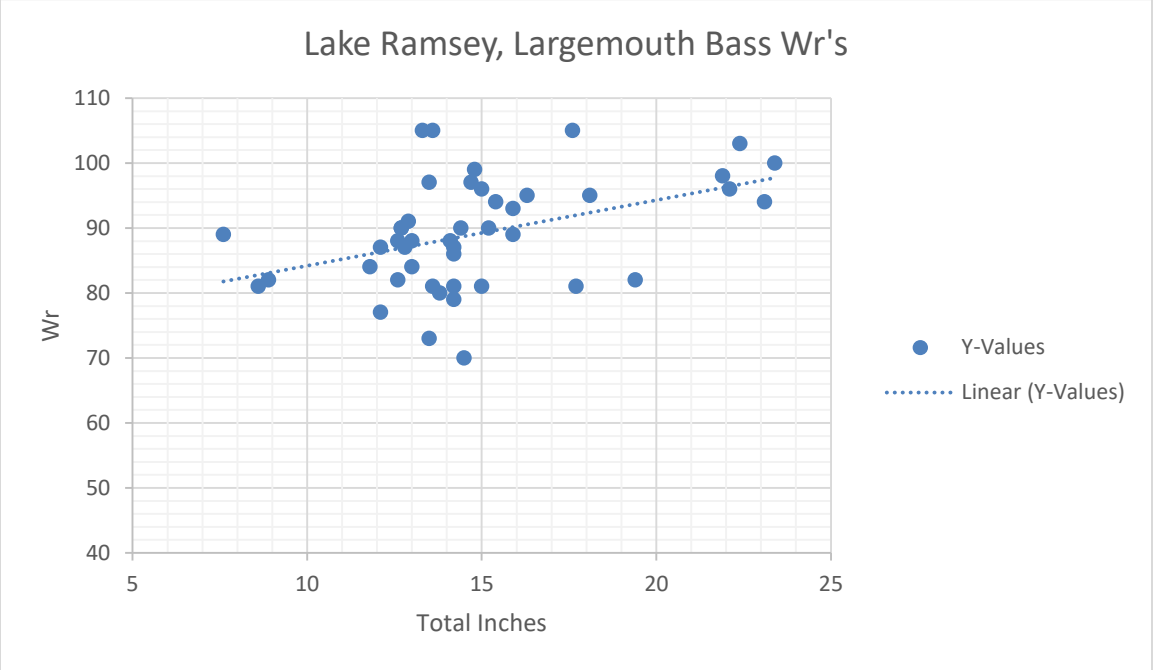
So, using these grouping and largemouth bass TL data we can conclude from our sampling observations for example, 11% were "memorable" and 96% were considered "stock". Largemouth bass less than 8 inches (2 fish in this sample) are not considered fully recruited into the population and while very important do not represent a part of the population likely to be targeted by anglers. No bass in the trophy category were recovered.

Determining the age of fish at length is very important information that managers like to have when making management recommendations. The definitive acceptable scientific method to age is a bass is to section and analyze otoliths, or the ear bone. This requires sacrificing the fish and conducting an expensive time-consuming analysis. However, the length frequency data can be helpful in determining age at length, roughly. Looking at the data it would appear that Age I bass mean TL is 7.6 inches; Age II fish are 13.9 inches TL, Age III fish are 18.2 inches TL and age IV fish are 22.6 inches TL. However, it is my opinion that there are actually 2 year classes bunched together in the 11.6 to 16.5 TL. Increasing the sample size would tend to sort out this discrepancy. This is why it's important to make sure that the

data analysis is perfected prior to making management decisions. For this reason, I am hesitant to make a management decision based on age at length alone. The length frequency distribution graph appears below.



Relative Weight: Relative weight (Wr) is an index of plumpness and more aptly described as a ratio of the actual weight of one of your bass compared to the wight of a healthy bass of the same length. A Wr near 100% or greater is considered ideal. A Wr around 90% is considered average and 80% or below is considered poor. A poor Wr, or skinny fish is an indicator for underlying circumstances as to why they are not sufficiently feeding. A graph of Wr's for all largemouth bass greater than 8 inches appears below.



The Wr graph reveals that 45% of all bass greater than 8 inches had a Wr of 90% or greater and of those 11% were greater than 100%, or plump. Eleven percent of all bass had Wr's less than 80% or were considered poor. A regression line (dotted line on the Wr graph) clearly reveals Wr's increasing with increasing TL's. The Wr of fish less than 10 inchs TL was 84%, greater than 10 inches but less than 20 inches the Wr was 93% and bass greater than 20 inches the average Wr was 98%. The average Wr's for fish greater than 17.6 inches TL and less than 19.5 inches TL was noticeably lower (91%) than the average Wr for fish greater than 20 inches TL.

Conclusions: The length frequency distribution data revealed a wider spectrum of lengths than found in the 2020 data with 5 fish greater than 20 inches. There were no bass sampled in 2020 greater than 19 inches. Unlike the 2020 report where bass "bunched around 12 inches TL, the 2022 sampling revealed bass numbers were high around 14 inches, TL. The length frequency distribution clearly shows a shift of bass to greater TL's.

The 2022 Wr data also improved from the 2020 data. The linear regression suggests that food availability in size or abundance is more limited for bass less than 8 inches TL and perhaps for fish greater than 17.6 inches TL and less than 19.5 inches TL. However, over all the regression line suggests that there is a positive correlation for suitable available food and TL as TL increases. Simply put, the condition of bass increase as their TL increases. There is no doubt that both crappie and channel catfish are negatively impacting food availability for bass. The lack of cover for small forage species is also limiting food availability. Bluegill, redear, longear, and threadfin shad were all observed.

Recommendations: I am of the opinion that no further stocking of fish is warranted. I believe it is now incumbent on the property owners to make substantial management improvements with the fish they

have. It makes no sense to chum the catfish, crappie and yes even the bass with additional fish. It does make sense to target certain species and size classes to improve the bass population. I disagree with the 2020 recommendation to "Reduce the harvest of bluegill and shellcracker….". The goal should be how do we enhance their growth and survival. And, I'm torn by the recommendation to feed fish because this will ultimately enhance the channel catfish population.

1. Allow for the intensive harvest of channel catfish. Commercial netting should be encouraged. Literally, several thousand pounds of catfish should be removed. Channel catfish are mopping up on forage species and will consume bass. This should be considered as priority one. Feeding forage species would make more sense should the catfish numbers are curtailed significantly.
2. Remove all crappie. Any crappie caught while fishing should either be taken to the house to eat or thrown on the bank. This is a top line predator and they will consume desirable forage and bass fingerlings.
3. Install as much fish structure as possible. This should be an ongoing project. The lake committee should set goals and work to achieve them----annually. This should be considered priority No. 2. Forage species have few places to hide, feed, grow and reproduce. This is a limiting factor for bass survival, recruitment, growth and condition (Wr).
4. Bass harvest should be limited to fish less than 14 inches TL. Because there are so many potential anglers it is suggested that a monitoring protocol should be developed with a quota. Maybe something like allowing for the take of fish during a holiday weekend with a check-in required. How many? That's a huge guess. Perhaps the best way to look at it is to allow for 500 bass less than 14 to be removed per year. The length limit and quota can be adjusted after improvements are made to the fishery, fish habitat and confirmed with annual sampling.
5. Encourage individual residents to install their own structure and diffused aeration systems. The benefit will of course be limited to their individual areas but this can be beneficial to all fisheries. The lake committee should lead on this effort. I like reefs several yards away from the docks in deeper water constructed of aggregate or bricks, or…… Look for incentives to encourage participation. Maybe forego a resident's HOA dues for a year should they make a couple thousand dollar (or more) investment and installment of a diffused aeration system.
6. Trophy bass: Bass greater than 25 inches TL is considered trophy size. The harvest rules of the committee should allow for the take of one trophy bass by an angler per year. Think about it like this. Taking a trophy bass is an endorsement for all the work that a few are doing to enhance the fishery in Lake Ramsey. If you want more buy-in to do bigger and better things for the fishery then what better way than to show off what can be achieved. The lake committee needs to show results for what little money they have to spend. Want more money? Advertise your successes. I don't think it's inconceivable to profess that property values will increase if Lake Ramsey ever becomes known as a place to live and catch big fish.
7. Lastly, based on the size of this lake and whether the residents follow through with some or all of these recommendations I would suggest getting an annual fish status report to document improvements to the fishery. How else can anyone know how the fisheries are benefitting, or not. Think of it as a report card.

Comment: The lake committee needs to lead. Create both short-term (one year) and long term management plans. Be focused on what is achievable in the short-term plan. Develop budget needs to fulfill the plans. Become more visible with the residents and be more innovative to create buy-in. Achievements should be publicized in a big way. If you can get a commercial fisherman to take out several thousand catfish, take some pictures and put it on your website with an explanation as to why this is important. If someone catches a trophy bass, take a picture and post it. The point is that the committee needs to be very active. Give the residents a reason to vote more money for lake fisheries enhancement projects.

Your comments and questions are welcome.

Best wishes,
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