

Lake Ramsey

Waterbody and Fisheries Assessment and Recommendations

2024

A site visit to Lake Ramsey was conducted on April 16, 2024, to conduct fisheries assessment. Electrofishing was conducted using a 16 ft boat outfitted with Midwest Lake Electrofishing Systems (MLES). All largemouth bass were collected, measured for total length (TL) in millimeters and weighed in grams.

A total of 35 largemouth bass were collected. For the purpose of this report any conclusions regarding forage will be drawn from “on the water” observations, observance of fishermen’s catch during the year and bass relative weights.

Fish managers like to lump groups of fish by length groups and label them to describe or target size groupings for management strategies. Total lengths measured in millimeters (more precise) were converted to inches (less precise) and rounded to the nearest tenth of an inch for ease of understanding and viewing in this report. For largemouth 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

Not included in the category groupings above are those fish less than 8 inches (TL) because anglers rarely target this group. None the less, this is an important group of fish which reveals reproductive success to date and are not considered recruited into the population until they reach 8 inches (TL). By all accounts, most of the bass hatched in the spring of 2023 should appear as fish in the 8 to 12 inch (TL) size classes. We collected no bass that measured less than 8 inches and therefore all sampled fish were considered recruited. The sample included one fish greater than 20 inches (TL) and therefore that individual going by the categories described above is considered “Memorable”. There were no “Trophy” bass sampled.

Proportional stock density (PSD) and relative stock density (RSD) are indices used to numerically describe length frequency data. Proportional stock density compares the number of fish of

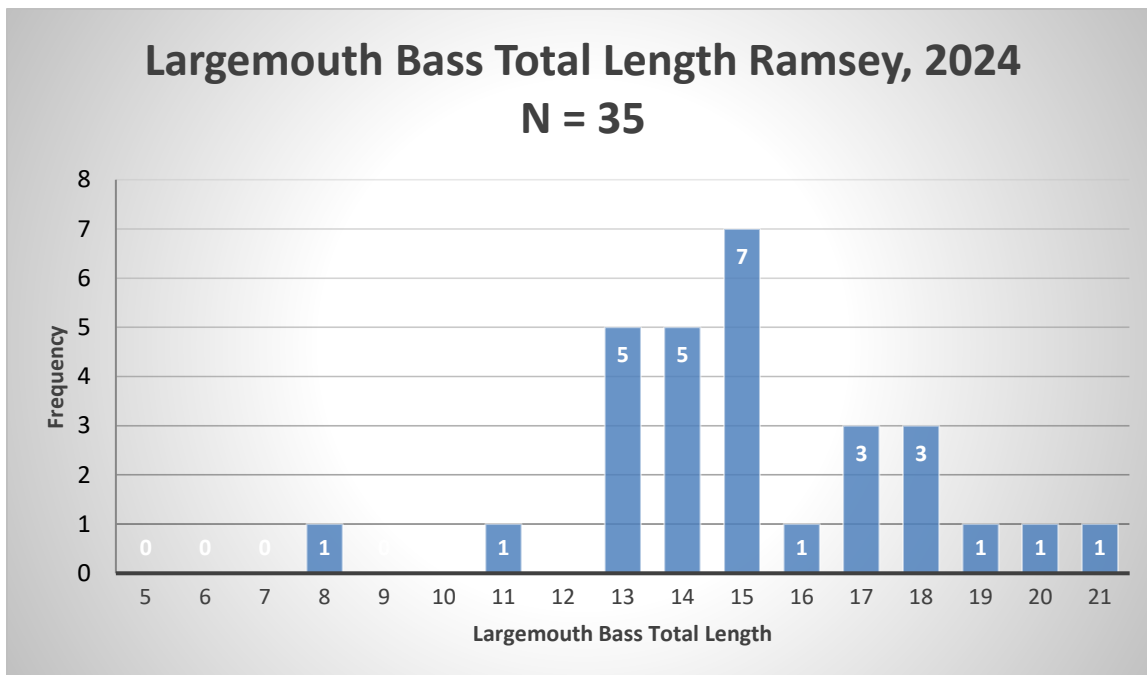
quality size (> 12 inches) to the number of bass of stock size (> 8 inches) and is calculated by the formula:

$$\text{PSD} = \frac{\text{number of bass } > 12 \text{ inches (30 fish)}}{\text{number of bass } > 8 \text{ inches (35 fish)}} \times 100$$

The PSD is 86%. A fish population with a high PSD consists mainly of larger individuals whereas a population with a low PSD consists of a population of smaller fish. A value between 40 and 70 generally indicates a balanced population. The relative stock density of preferred is the percentage of bass in a stock (> 8 inches) that are also 15 inches or longer and is calculated by the formula:

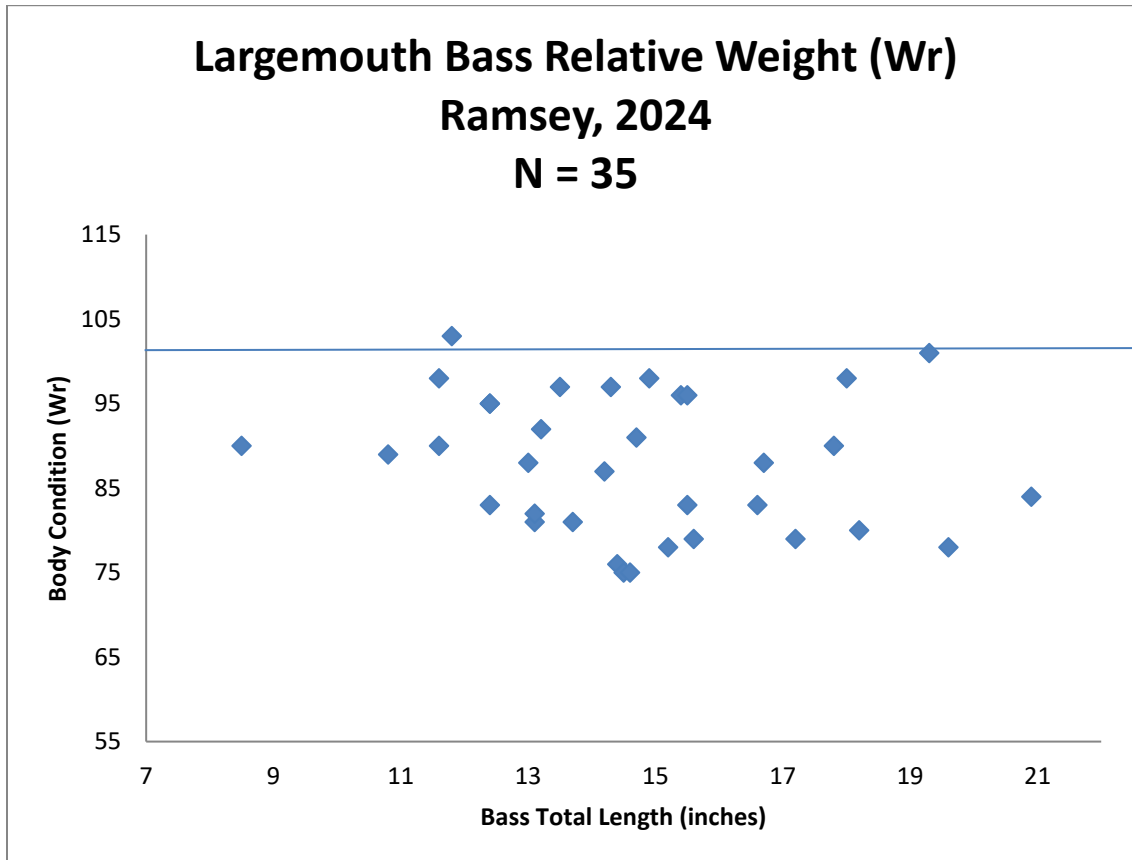
$$\text{RSD (preferred)} = \frac{\text{number of fish } > 15 \text{ inches (14)}}{\text{number of fish } > 8 \text{ inches (35)}} \times 100$$

The RSD (preferred) is 40%. An RSD (preferred) value between 10 and 40 indicates a balanced bass population while values between 30 and 60 indicates a higher abundance of larger fish. A RSD value less than 10 indicates a bass population skewed to predominately smaller fish.



Relative weight (Wr) is an index of plumpness and more aptly described as a ratio of the actual weight of one your bass compared to the weight of a healthy, well-fed bass of the same length. Relative weights near 100% or greater are considered healthy or fat. Most fish populations fall into the 80-99 percentile

and are considered average. Fish with relative weights below 80% are considered thin or poor. For Lake Ramsey the average Wr for all bass greater than 8 inches TL is 87.8%, or 8% higher than observed in 2023.



Bass Wr's and growth rates are dependent on a sufficient forage base in both quantity and quality. The data depicted in the Wr figure above suggest that available forage, both quantity and quality are sufficient to sustain good growth rates. The graph also suggests a sufficient forage base exists for all size classes. Two bass in the sample were considered "fat".

Fisheries Conclusions:

Fisheries samples can be highly variable from year to year. Water temperatures, time of year, weather conditions, etc can affect sampling. Sampling the same locations at the same time of year over a period of years usually provides trends in the populations. Conclusions in this year's report are based on this year's data and comparisons to last year's data.

Improved relative weights in this year's sampling is a major improvement for the bass fishery over last year's sample. Bass across the spectrum were generally fatter suggesting available forage size classes are abundant. This is important to improve bass growth at every size class and therefore maximize production. Strategies to manage a fishery are made more difficult if certain size classes don't have enough forage to feed upon. Luckily, that doesn't seem the case for this year.

Fisheries Management Considerations and Suggestions:

Comments and recommendations in the 2022 and 2023 reports are still appropriate, except for one thing. The data suggests that we should consider going up on the length limit from 14 inches TL to 15 inches TL. based on good growth rates, improved relative weights, sufficient forage, and stacking of fish in the 13-15 inch TL categories. Further stacking of bass in the 13-15 inch categories will lead to reduced growth rates and lower relative weights for those categories.

I have no doubt that the grass in the lake has provided excellent habitat for the life histories of the forage species. The actions being taken to reduce the submerged aquatic species will almost certainly negatively impact the forage species directly. This will in turn have an impact on the bass.

I know that some fishermen want more emphasis on crappie reporting. Here are some facts to consider. Crappie, typically are reproductively more prolific than bass. Crappie populations in a lake are more difficult to manage. Crappie are predators and therefore compete with other predators which to be clear includes catfish. Crappie populations are more apt to stunt. Fishermen think (wrongly) that returning small crappie is beneficial. Just the opposite.

Bottom line. Crappie in this lake aren't going anywhere. The suggestion I heard that there are no more crappie in the lake is a foolish comment and meant to be alarming. If fishermen want to continue catching big crappie then the management strategy should be to remove all size classes while fishing. The notion that you can take all the crappie along for the long haul (2-4 years) and expect them to all get big and fat is foolish. It's simple. There's your crappie management plan.

I previously suggested a second stocking of grass carp for 2024. I always prefer to understock carp in the initial stocking and adjust during the 2nd year. Based on site visits and data compiled for SAV's over the last 2 years there is compelling evidence that that the SAV coverage has been reduced. However, it is my estimation that the initial stocking was insufficient to reach a target of 20-25% SAV coverage. Just to be clear, we don't want to completely eliminate SAV's, rather we want to manage their establishment and coverage.

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