



June 30, 2013

Silver Run Lake
Perkinston, MS

Mr. Taylor:

Please find enclosed the 2013 Silver Run Lake Fishery Management Report conducted by Aqua Services, Inc. on June 11, 2013 which I am submitting for your consideration.

This report summarizes the findings from our survey. Silver Run Lake is not currently reaching its management goal of general balance as indicated by the condition and size structure of the largemouth bass and bream populations. Several recommendations have been outlined to help you maintain and manage your lake for general balance.

All of us at Aqua Services, Inc. sincerely appreciate and thank you for your business. Should you have any questions or concerns regarding the report, we may be reached at the telephone number above. Please leave a voice message and phone number if we are unavailable and we will promptly return your call.

Sincerely,

Troy Goldsby

Enclosure



Silver Run Lake Fishery Management Report June 2013

Management Strategy

A generally balanced largemouth bass and bream fishery is the management focus for Silver Run Lake. The goal is that the lake yield numerous, healthy bass in the range of 2-4 lb. and bream in the range of 7-10 inches, with the occasional memorable or trophy sized fish.

Through this report, it is important to realize that electrofishing is bias towards small to medium size fish. Larger largemouth bass can easily escape the electrofishing boat and are rare to sample. With this fact in mind, when assessing a fishery, many of the management decisions must be made on fish body condition and length distributions.

Methods

Fish populations were sampled by conducting one, approximately 54 minute, electrofishing transect. Fish were collected for length frequency distributions and relative weight (W_r). Length frequency distributions allow insight regarding the population structure of the bass and bream. The calculation W_r is a measure of the body condition of each particular fish, which serves as an indication of the balance of fish and their food supply. In generally balanced populations the majority of both largemouth bass and bream W_r should be near 90. These assessments may allow for indication of problem(s) with overcrowding, aquatic weeds, food supply, competing species, and/or water quality.

Aquatic Weeds

No aquatic weeds of issue were present during our visit. Maintaining young grass carp (less than 5 years old) at a minimum rate of five per acre and proper water clarity through fertilization or lake dyes are good techniques to reduce aquatic weed problems.



Fish Assessment

During electrofishing 76 bass, 21 bluegill, 11 redear sunfish were collected. The range of length and weight for the bass and bream collected was as follows: bass 2-17 inches and 0.1-3.2 lb., bream from 1-11 inches. In a balanced lake, we would expect to see numerous 3-6 inch bream (the preferred size for largemouth bass predation). 3-6 inch bream accounted for only 28% of the bream collected during electrofishing, a low amount of available forage for largemouth bass.

Largemouth bass between 15-19 inches are at preferred length. Figure 1 shows that 3 individual, or 4%, were at or above preferred length. In a balanced lake, we expect to see 40-60% of the bass at or above preferred size. Bream are considered to be of quality length from 6-7 inches. In Figure 2, 17, or 53% of the bream were at or above quality length. In a balanced lake, we would expect to see 20-40% of the bream at or above quality length.

The desired W_r for both bass and bream ranges from 85-105% for a well managed/balanced system; a W_r below 85% indicates fish in poor condition while a W_r below 80% indicates severely thin fish. The average W_r for bass was 87 with 57% of the fish sampled having W_r greater than 85 (Fig. 3).

Management Recommendations

The information gathered during our visit indicates that your lake is not meeting your management goal of a generally balanced fishery. The largemouth bass length distribution (Fig. 1) and W_r plot (Fig. 2) suggests that the bass population is not able to forage to their maximum potential as their body condition and length distributions point towards bass crowding. Overall, the lake has two primary issues to address: bass crowding and lack of prey.

The average W_r of 87 indicates a struggling bass population due to overcrowding and lack of harvest. Harvesting largemouth bass is a critical management technique for producing and maintaining balance. An fertilized lake that is managed for quality bass should have 20-25 lb. of bass/acre/year removed. For the 70-acre Silver Run Lake this equates to a total of **1,400-1,750 lbs.** of bass harvested annually. Although practicing

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catch and release of larger individuals is important to maintain a good number of quality sized fish in a lake, it is suggested that when managing for general balance that you remove all bass under 14 inches that are angled until the annual harvest quota is met.

Removing these smaller predators will help in reaching your harvest quota and reduce the forage pressure on the smaller bluegills, in turn allowing for more available forage for the remaining bass to grow larger and healthier.

Bream harvest rates need not be restricted. In most cases, harvest through angling will rarely affect the bream population. The number of bream within a system is far greater than what could be affected by angling so largemouth bass should be considered the major management tool for controlling bream populations. A consistent supplemental feeding program can help to maintain and improve bream and bass populations. Pellet feeding can increase the body condition of bream which translates to improved spawning efforts and output which can also increase forage for largemouth bass.

Aqua Services, Inc. also suggests that threadfin shad be stocked the spring of 2014 in order to increase the available forage for the existing largemouth bass population. Threadfin shad will provide yet another forage base for the bass, reduce the foraging pressure on the bluegill population, and can also support the bass population in years of low/poor bluegill reproduction. Additionally, the shad will inhabit the open water areas of the lake that are not being used by any other fish species. This allows for greater overall lake production and can create exciting 'schooling' bass activity. The consistent presence of a threadfin shad population will help to increase the overall health and size structure of the bass population.

For the 2013-2014 season maintain harvest records of largemouth bass and actively harvest all bass less than 14" until the minimum harvest requirement of **1,400-1,750 lbs.** largemouth bass has been met. If this harvest quota cannot be met by angling bass harvest through electrofishing should be conducted throughout the year so that balance may be regained. Maintaining a threadfin shad population would provide an additional forage base for the largemouth bass population and also help to regain balance.

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With proper and consistent management, your lake can once again serve as a resource for balanced fishing.

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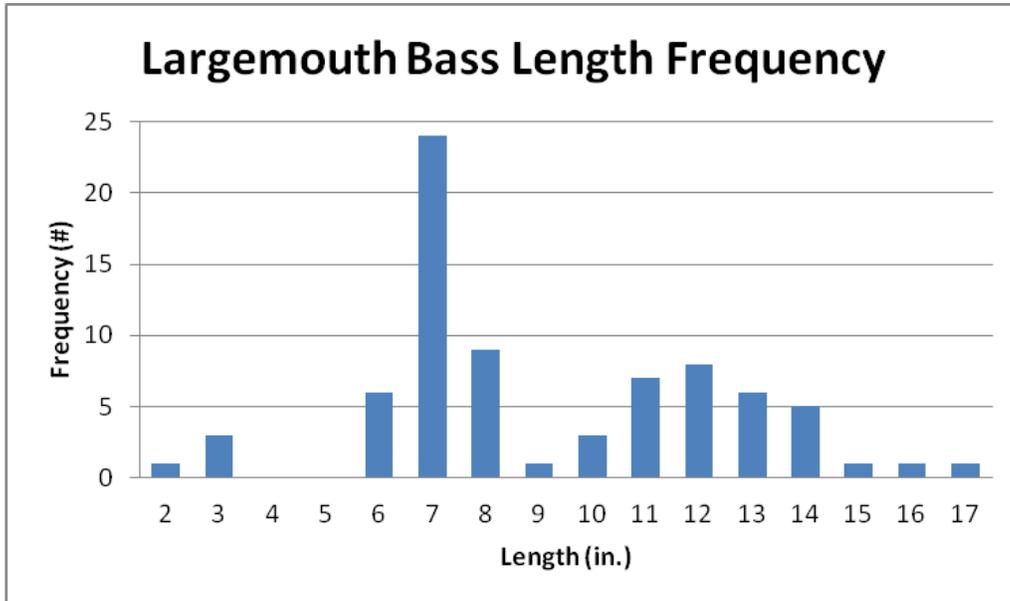


Figure 1. The length frequency by inch class for largemouth bass, June 2013. The bar height indicates the number of largemouth bass within that inch group.

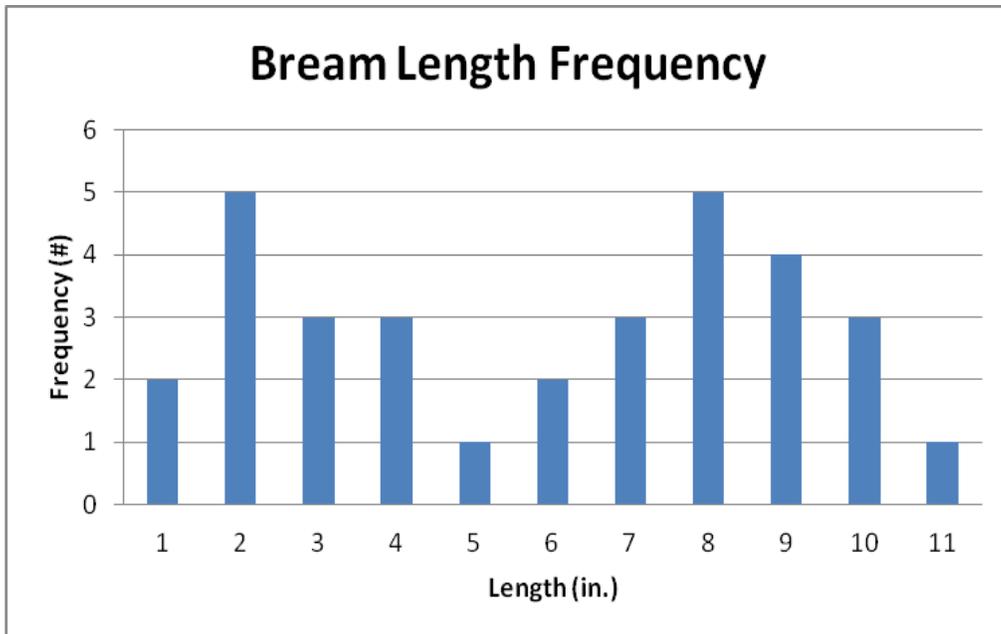


Figure 2. The length frequency by inch class for bream, June 2013. The bar height indicates the number of largemouth bass within that inch group.

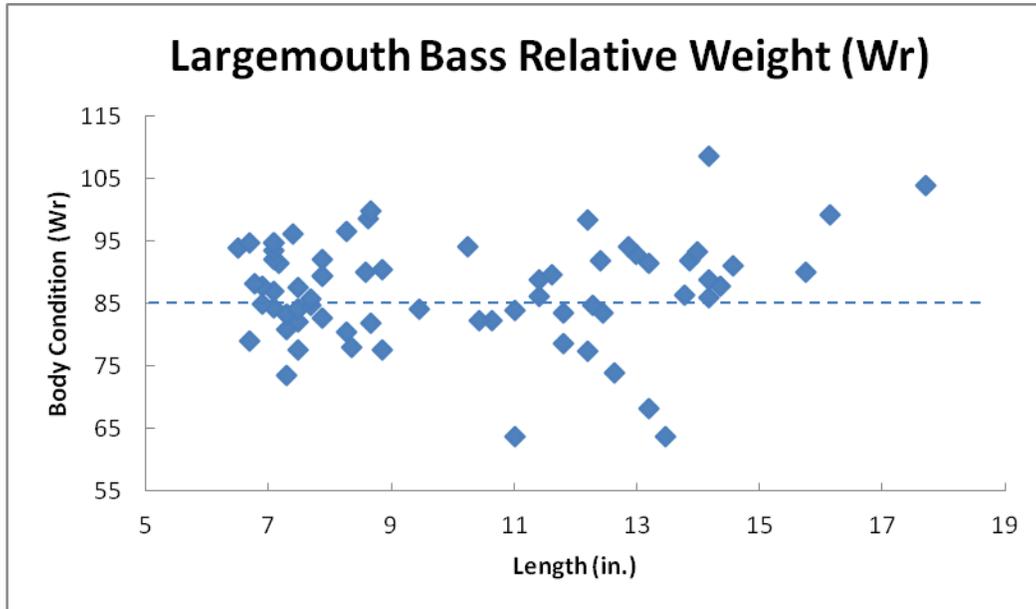


Figure 3. The relative weight (Wr) of largemouth bass for June 2013. Each point is representative of an individual fish. Points below the dashed line indicate severely thin fish with those above the line indicating fish in good condition.