

Management Plan
For
Lunker Lake

July 1, 2008





Pond Assessment

[Lunker Lake](#) is a 15-acre watershed impoundment located in Shelby County, Alabama. The pond was originally impounded in 1996. An emergency spillway as well as a smooth steel stand pipe with a functional trash rack, are present. In addition, we noted a moderate amount of cover for bass and bluegill in the form of brush piles and fallen trees.

The surrounding topography is characterized by rolling hills of mostly pine and some hardwood tree growth. [Lunker Lake](#) is located in a region of the state where soils are often relatively infertile, and highly acidic (low pH). Ponds constructed on such soils usually require the application of agricultural lime to ensure a successful fertilization program. At the time of our visit, total water alkalinity was measured at **35.7** parts per million (ppm). This level of alkalinity is well above the minimum recommended threshold of **20** ppm, and represents conditions suitable for effective fertilization.

[Lunker Lake](#) has been adequately fertilized in the recent past.

[Lunker Lake](#) appeared to have an excellent plankton bloom at the time of our visit, the result of consistent fertilization. However, recent history includes periods of extreme turbidity, resulting from excessive soil erosion in the watershed. The effect of soil turbidity, in particular how it impacts fish populations, will be discussed in more detail in the Siltation and Turbidity Control section of this report.

[Lunker Lake](#) contains areas along the margins and in the upper end that are less than 3 feet deep and highly susceptible to aquatic weed growth. During the evaluation, we observed a light infestation of filamentous algae growing along the margins. A description of this plant may be found in the Aquatic Weed Identification section of this report.

[Lunker Lake](#) was originally stocked with coppernose bluegill, redear sunfish, threadfin shad, and F-1 largemouth bass in 1997 by Southeastern Pond Management. Fish harvest has been moderate in the recent past. Harvest, and its importance in structuring fish communities will be discussed later in this report.



[Lunker Lake](#), July 2008.



Fishery Assessment

The fishery in [Lunker Lake](#) was sampled with standard boat-mounted electrofishing equipment. The sample contained largemouth bass, copperside bluegill, threadfin shad, golden shiners, and redear sunfish (shellcracker). Currently, largemouth bass are functioning as the primary predators in [Lunker Lake](#). The bluegill, threadfin shad, golden shiners, and shellcracker are the prey.

Threadfin shad have become an important component of the forage base in [Lunker Lake](#). We observed several different size groups, indicating a healthy population. Maintaining a healthy shad population will be important for [Lunker Lake](#) to continue producing quality and trophy size bass.

Largemouth bass ranging in size from 12 to 24 inches in total length were collected in moderate abundance. The length distribution of largemouth bass (Figure 2) reveals the presence of bass over a wide range of size classes. This represents significant improvement from the previous year, most likely the result of improved bass harvest.

The average relative weight of adult bass in our most recent sample additionally reflects notable

improvement over last year. This year's average relative weight was 96, as compared to last year, 82 (Figure 4).

Largemouth bass 14 inches and smaller represent the primary targets for harvest over the coming months. We harvested 34 pounds of bass during the evaluation.

The larger bass collected from [Lunker Lake](#) were individually tagged with an identification number so their growth can be monitored (refer to the Tagged Fish Data section of the report).

Bluegill and shellcracker were collected ranging in size from 2 to 10 inches in total length. Figure 3 depicts the length distribution of the bluegill population. Of note, an abundance of intermediate (3-5") bluegill and other forage was collected.

Overall, we characterize the fish community in [Lunker Lake](#) as balanced. A more detailed explanation of balanced ponds in general, and [Lunker Lake](#) in particular is located in the Current State of Balance section of this report.

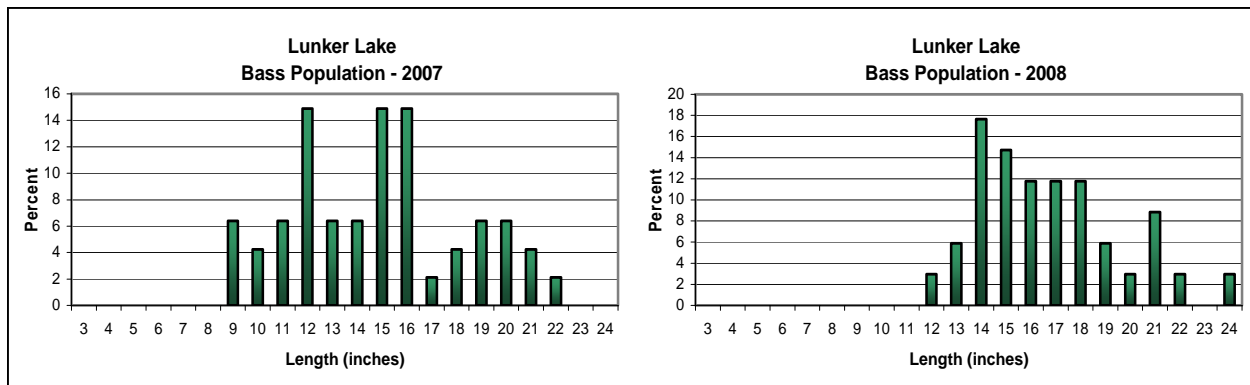


Figure 2. Comparison of the length distribution of bass collected in [Lunker Lake](#) in June 2007 and July 2008.

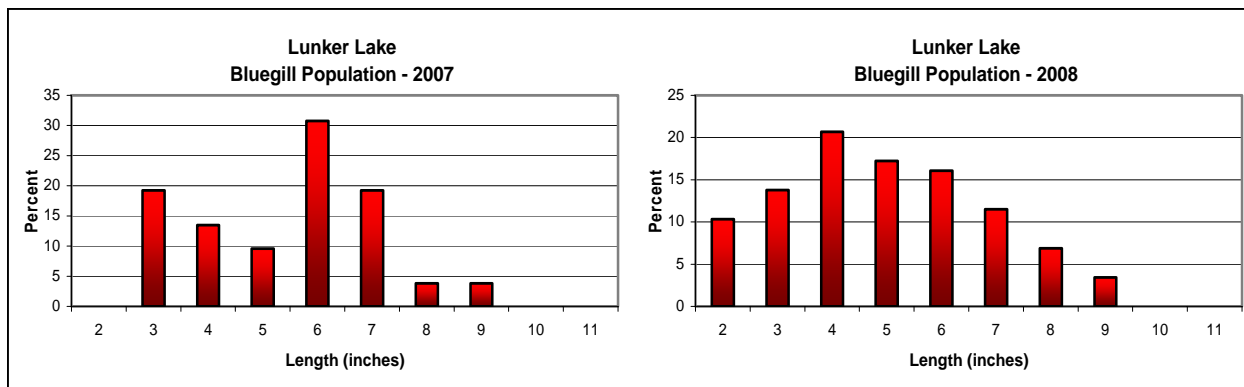


Figure 3. Comparison of the length distribution of bluegill collected from Lunker Lake in June 2007 and July 2008.

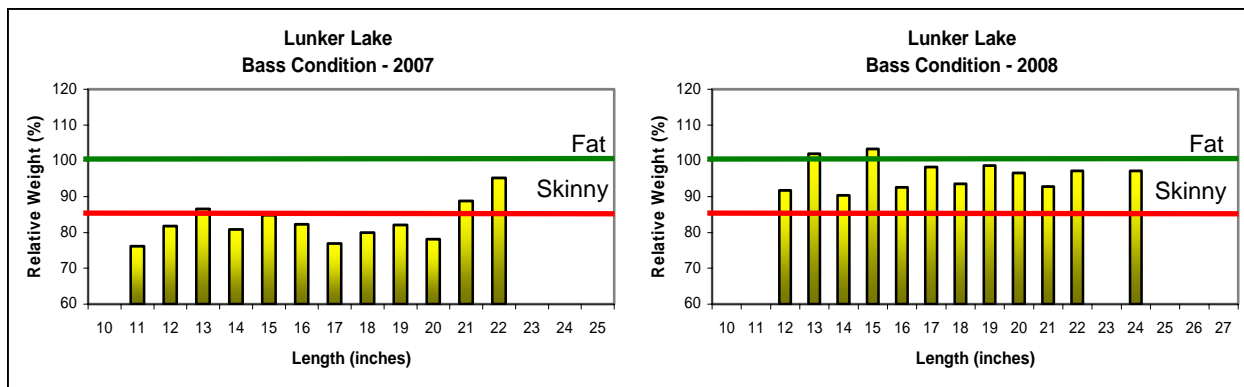


Figure 4. Relative weight distribution of adult largemouth bass collected from Lunker Lake in June 2007 and July 2008.



Length, Weight, and Condition of Tagged Bass in Luncker Lake July 1, 2008

Tag #	Length (in)	Weight (lbs)	W _r
7007	19.5	4.2	100
7008	21.2	5.1	93
7009	19.8	4.3	97
7010	21.1	5.0	93
*6538	23.8(21.9)	7.4(5.8)	95((95))
7011	21.9	6.0	97
*6492	19.8(18.0)	3.8(2.8)	87(85)
7012	18.0	3.1	94
*6587	15.9(14.8)	2.1(1.0)	97(92)

Tag #'s marked with an asterisk represent "re-captures". The numbers in parentheses represent the respective data collected the last time these individuals were captured.

