

## Electrofishing Assessment



**Lake Ramsey  
Covington, La.**

**December 16, 2010**

December 27, 2010

Lake Ramsey Homeowners Assn.  
Mr. Lewis Zerinque  
13157 River Lake Dr.  
Covington, La.

Dear Mr. Zerinque,

We conducted an electrofishing assessment of Lake Ramsey on the afternoon of Dec. 16, 2010. We sampled the fish population in all three arms of Lake Ramsey and obtained a representative sample of the bass-bluegill population. The crappie were in water deeper than we could effectively sample. We did talk to some crappie fishermen and observed their catch during the afternoon we sampled. Our sample of the fish population appeared to be consistent in all three arms of the lake.

The bass population of Lake Ramsey appears to be in excellent health, and the size distribution appears to be good. Details of the condition and distribution of the bass population are included in the attached report.

There are three things that are affecting your fish population and your catch rates; aquatic vegetation (primarily Hydrilla), a large population of adult channel catfish, and lack of deep-water structure to concentrate crappie and bass. We will discuss each in the report.

We will submit a separate management proposal for us to monitor the lake and the fish population.

Please review the attached report and call or email me with any questions.

Sincerely,

Barry W. Smith  
Certified Fisheries Scientist  
American Sport Fish

## **Site Description**

Lake Ramsey is a 250-acre multi-purpose recreation lake that is enjoyed by many of the homeowners in the development. The lake has an adequate watershed, but the water level is also supplemented by a large well. The lake is esthetically pleasing, but does currently have some issues with aquatic vegetation. Sterile grass carp (white amur) are currently proposed to assist with the control of the Hydrilla.

## **Management Goals**

The goal for this lake is to produce quality fishing for bass and bluegill, with the potential for some trophy fish production. This goal is to satisfy all anglers regardless of skill level. Another goal is to improve the size structure of the bass population, by increasing the numbers in the 4- to 6-pound range, without significantly decreasing catch rates.

## **Aquatic Vegetation**

There were several species of aquatic vegetation present in significant amounts at the time of our visit. Personnel from the La. Wildlife and Fisheries surveyed the vegetation just prior to our visit. It is common to experience a decline of vegetation during the winter, but the vegetation normally returns as soon as the water temperatures begin to increase in mid-February.



Mr. Lewis Zeringue assisted with the sampling.

### **Water Quality**

The visibility of the lake was approximately 30 inches in all three arms of the lake. Some recent environmental factors may have contributed to the stained color of the lake, as it had been clear, with a visibility of greater than 4 feet earlier in the fall. The total alkalinity of the lake water was 65 ppm, but the total hardness (measure of calcium) was zero. A lack of total hardness can sometimes result from significant amounts of well water that does not contain calcium, being added to the lake. Calcium is an important buffering compound that prevents wide fluctuation of pH. The only potential problem is that if the lake should develop a heavy plankton bloom (heavy green color) in the summer, the pH could become high enough (pH of 10 plus) to stress or even cause mortality in fish. It is not likely that will occur.

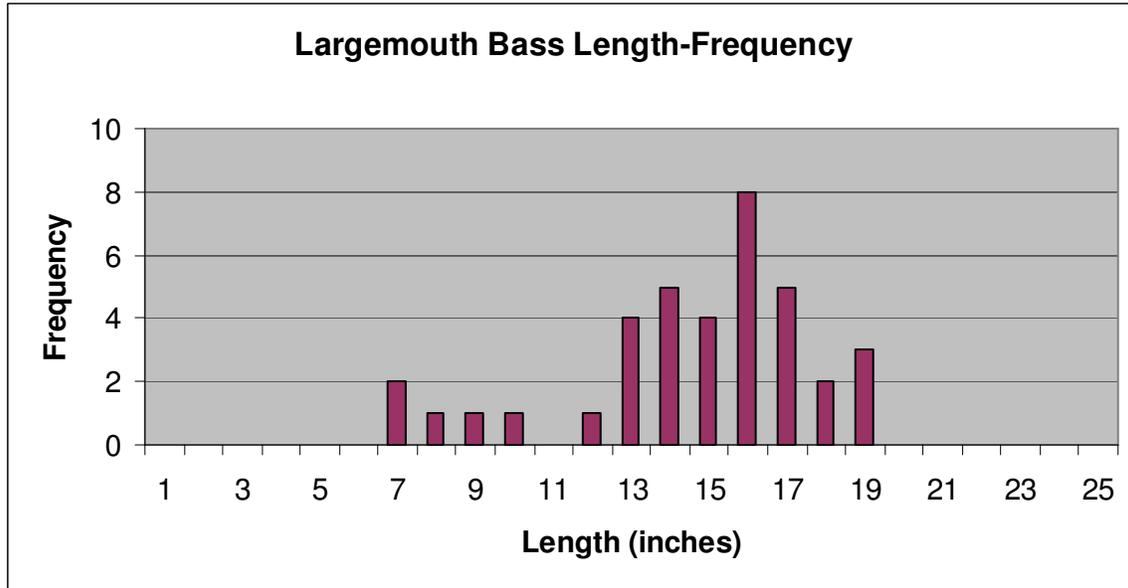
### **Supplemental Feeding**

Supplemental feeding is a method of adding some additional feed to the bluegill and catfish. Regular feeding programs often result in concentrating bluegill around a feeding area and increasing their growth rate and average size. Although I did not observe any automatic fish feeders during my visit, I am sure some individuals may feed by hand from their dock or back yard. In Lake Ramsey, feeding will also concentrate the catfish population. During the early spring through the fall, a floating catfish pellet will work well for both the bluegill and the catfish. If using an automatic fish feeder, we normally recommend feeding twice daily.

### **Fish Population**

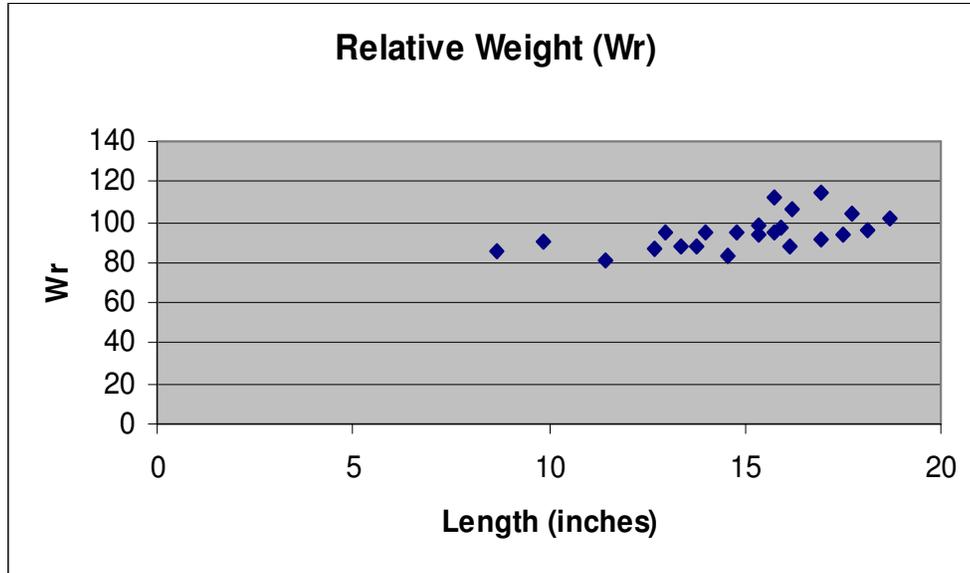
During our visit, we collected largemouth bass, bluegill, shellcracker, channel catfish, white crappie, gizzard shad, threadfin shad, and a couple of longnose gar. The forage base looked very strong; we saw numbers of bluegill in the size range most of your bass prefer to eat and several schools of threadfin shad.

The first graph, which is Bass Length Frequency, illustrates the distribution of the various sizes of bass that we collected. We captured bass ranging from 6 to 20 inches in length. The major peak in the distribution is at 16 inches, the average weight of these bass was 1.9 pounds. This average weight is higher than that of many of the lakes we sample. The Length-Frequency Graph shows adequate reproduction, but not crowding of small bass. I think your size distribution of bass less than 20 inches is excellent. You appear to be lacking in numbers of bass more than 20 inches in length.

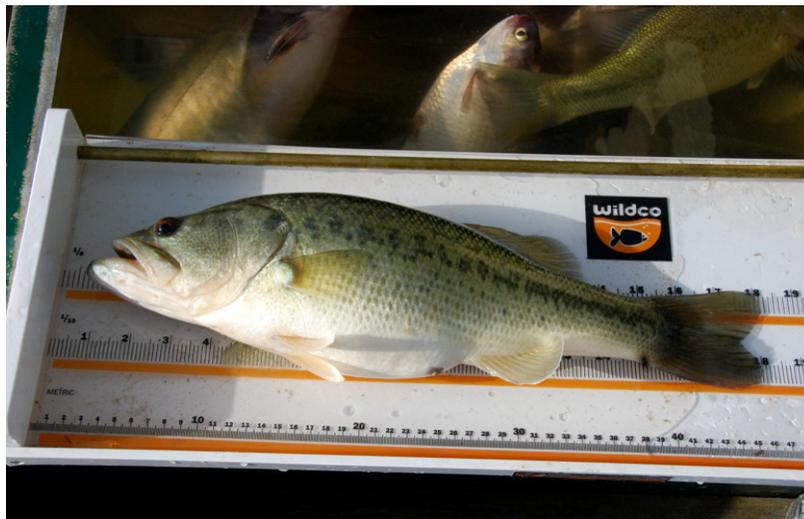


We did not collect many bass in the 6- to 10-inch size, which means there is not crowding in the recently spawned bass. Bass reproduction from this spring is more than adequate for this lake.

The second graph is the Relative Weight ( $W_r$ ) of each bass in our sample. This is an indication of how plump your bass are and how they compare to an ideal bass of the same length.  $W_r$  values of 90 to 100 are ideal and those of 80 or below indicate thin or poor condition. The overall condition of the bass population was good; the average Relative Weight of the bass in our sample was 96. This indicates your bass are healthy and have an ample food supply. It also indicates that you do not need to modify your present harvest strategy; whatever you are doing now is working well for you.



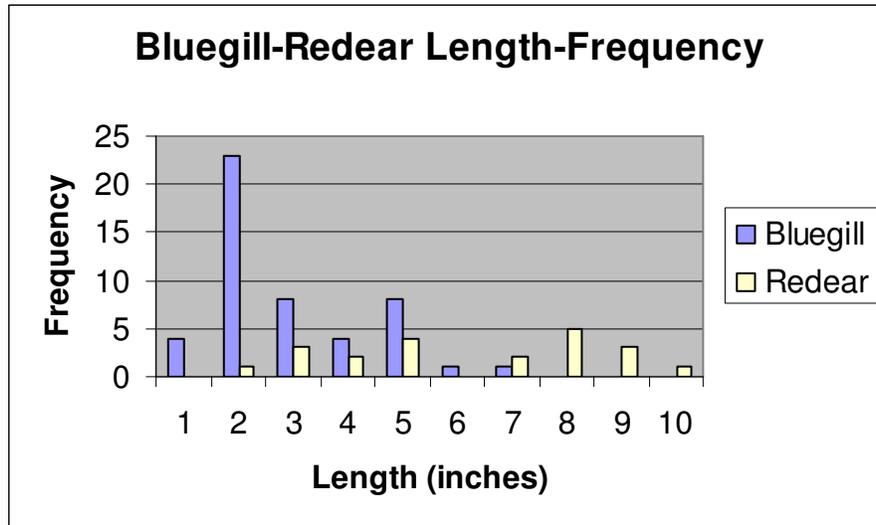
The forage, in particular the bluegill, appeared abundant and just as important, was of the proper size for the average size bass to eat. A bass can normally eat a bluegill about one-third its length, thus a 15-inch bass can eat a bluegill up to 5 inches. The larger a food item the bass eats, the better food conversion or weight gain it experiences. A bass will typically expend as much energy capturing a 3-inch bluegill as a 5-inch one, but gains much more protein from the larger fish. A 5-inch bluegill will typically weigh six times as much as a 3-inch bluegill.



This bass is typical of the ones we collected in our sample. It is about 17 inches long and in excellent condition.

The size distribution of the bluegill and shellcracker is shown in the Bluegill Length Frequency graph below. The relative abundance of bluegill in the 3- to 5-inch size is apparent from the graph. These bluegill provide an abundance of the proper size food items for good bass growth. In addition to the bluegill, threadfin shad and gizzard shad are also present and contribute to the excellent condition of the bass in Lake Ramsey.

The threadfin shad averaged about 3 inches and there were a high percentage of gizzard shad in the 5- to 8-inch size, perfect for bass in the 2 to 3 pound size and larger.



There are significant numbers of adult redear that are in the .5- to .75-pound range. Adult redear grow well in lakes that contain vegetation, such as hydrilla. The weeds provide habitat for larger aquatic insects and snails, which are primary food items for redear. I expect the size of the redear to increase until the grass carp significantly reduce the amount of vegetation.



This 2.5-inch threadfin represents reproduction from early spring. We sampled significant numbers of threadfin shad that should spawn during late March or April. Lakes that are clear do not have enough tiny food items to support large numbers of threadfin.

**White Crappie:**

Lake Ramsey has a population of white crappie. Most of these fish appeared to be in water deeper than our electrofishing unit could sample. We did collect one large specimen and encountered several fishermen who had caught crappie they stated were about average size. These fish were about 10 inches and would weigh approximately .5 pounds.



This is a mature female white crappie, notice the vertical barring that is typical of this species.

Crappie are cyclic spawners, often spawning heavily only every three to five years. A high percentage of the adults in a lake are usually from one spawn, or year class. These fish, such as the 10-inch crappie pictured below, will get larger each year, but decline in numbers until there is another large spawn. The cycle will then repeat itself. The threadfin shad are excellent food for adult crappie. The fish we observed appear to be in good condition.

We would suggest you continue to harvest the crappie without any creel limit or size limit. The population appears very healthy.



Typical white crappie caught by anglers during our sampling effort.

**Channel Catfish:**

There is a large population of adult channel catfish in Lake Ramsey. We sampled many catfish in the three to seven pound range. Catfish larger than one pound are fish eaters and will compete with both bass and crappie for food, usually diminishing the pounds of bass a lake can support. Although some anglers prefer large catfish, bass and crappie are usually more desirable for the majority of anglers; I feel that would be true for Lake Ramsey homeowners.

Our suggestion is to encourage the harvest of catfish by sponsoring a catfish derby or rodeo. There may be some limited spawning of catfish in Lake Ramsey, just enough to keep it populated. Removing as many catfish as possible could result in better growth and a higher bass and crappie population.



Numerous channel catfish of this size were observed during our sampling. Large catfish eat the same food items that bass eat, thus diminishing the numbers of bass a lake can support.

### **Recommendations**

Lake Ramsey has a surprisingly well-balanced fish population, with both largemouth and crappie in above average condition. The forage base is good and well structured, providing enough food to keep these fish plump and healthy. The redear population contains a number of harvestable fish and their average size is larger than that of the adult bluegill. There are several management recommendations that we feel will improve your fishing and fish populations. Those are listed below.

1. We are almost certain that the bass population is comprised of entirely native bass. The introduction of the F-1 Tiger Bass would improve the genetics of the bass population and result in faster growth and larger average size bass for your anglers. This is not an effort to manage for “trophy” bass, but to allow the average angler a better opportunity to catch larger bass and enhance the quality of their

fishing experience. This can be accomplished by introducing 25 Tiger Bass fingerlings (2-inch) per acre during two or more consecutive years. We have successfully utilized this technique during the past 20 years. The key is to introduce the bass fingerlings in the early spring so that they are the same size or larger than your native spawn. We will have 2-inch fingerlings available during early May. These fish will cost approximately \$1.00 each delivered. Although we recommend Tiger Bass because the originally stocked fingerlings will be easier to catch, Florida bass fingerlings are available for the same price.

2. Stock approximately five sterile grass carp per acre to control the hydrilla and other nuisance aquatic weeds.
3. Develop additional deep-water structure to concentrate game fish, such as bass and crappie. Several areas in the lake are 12 to 20 feet deep and should have large areas of woody structure, such as oak tops or large cedars, added to concentrate both crappie and bass. This would certainly increase the catch rate for the average angler during the summer, fall and winter. You could start with a few areas and expand the number each year. We have a large barge and have the equipment and expertise to create these the large structure areas.
4. We would suggest making a concerted effort to remove as many channel catfish as possible. There are a number of options, from having a special catfish rodeo to using trotlines and jug-fishing. Reducing the poundage of catfish would benefit the remaining game fish population.
5. Have the lake monitored by professional fisheries biologists to identify potential problems and to provide timely advice that will improve your fishing opportunities. We will submit a separate proposal for managing Lake Ramsey.

**Electrofishing Invoice**

**Account:** Lake Ramsey Homeowners Association

**Invoice Date:** December 16, 2010

<b>Quantity</b>	<b>Description of Service</b>	<b>Price</b>
1	Electrofishing Assessments with Report  Including travel expenses	\$1000.00

**Total:** \$1000.00

**Please make checks payable to:**

**Mr. Barry Smith  
P.O. Drawer 20050  
Montgomery, AL 36120**