2013 Lake Witten Fisheries Management Report

Lake Witten is a 51-acre impoundment owned by Tazewell County. The reservoir was constructed in 1988. The land surrounding the lake is a mix of grasslands and forest. The reservoir supports a diverse fish community including: largemouth bass, bluegill, redbreast sunfish, black crappie, channel catfish, rock bass and trout. Walleye and grass carp are also collected occasionally.

Lake Witten is part of the "Catchable Trout Stocking Program" of the Virginia Department of Game and Inland Fisheries. The Lake is stocked with rainbow and brown trout 8 times between October 1st and May 31st. Anglers are required to purchase a stocked trout license in addition to a statewide freshwater fishing license to fish Lake Witten.

Fisheries biologists sample the fish populations in Lake Witten using an electrofishing boat. This boat delivers a controlled field of electric current into the water. As the boat moves slowly along the shoreline, fish within the current field (approximately 12 feet wide by eight feet deep) are temporarily stunned and can be dipped with a long-handled net. After the fish are removed from the current field they quickly recover and can be released unharmed. Each year in May the general fish community is sampled. Biologists collect all species of fish and weigh and measure individuals. This sample provides a good annual "check up" for bass, sunfish, and crappie populations.

Fish population samples provide lots of information to the biologists, but the relative abundance of a fish species and the size structure of the population are two of the most important pieces of data. By looking at the relative abundance of a particular species through time, you can determine if a population is stable, increasing or decreasing in abundance. By looking at the size structure of a fish population, you can get a general picture of the sizes of fish present in the fishery.

There has been a downward trend in the catch of largemouth bass over the past decade (Figure 1). While the black bass population is doing well, the overall total numbers in the catch are down. Largemouth bass are the dominant bass species, and relative abundance (number of fish collected per hour of sampling) varies from year to year.

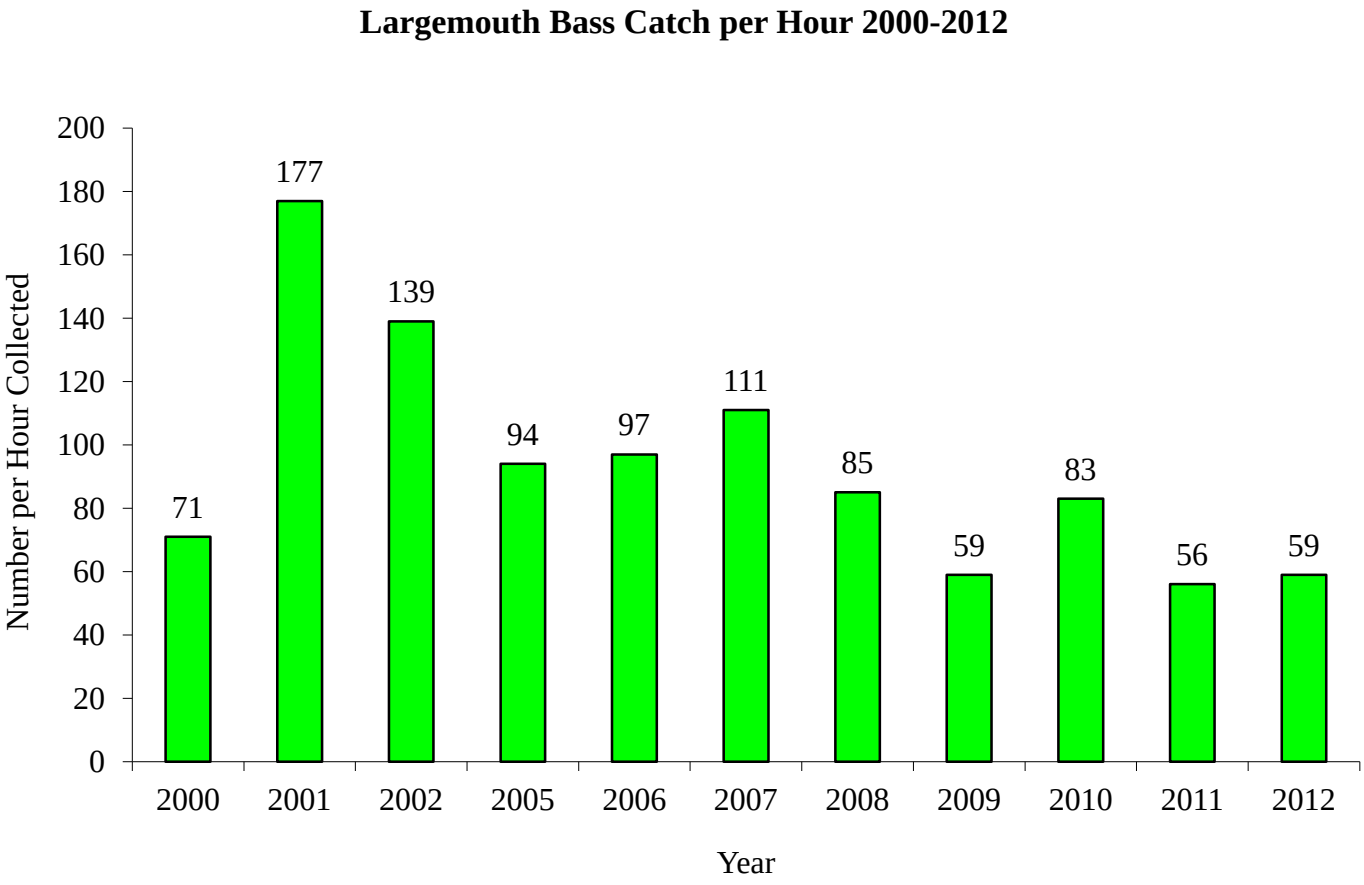

Figure 1. The number of bass collected per hour of electrofishing at Lake Witten 2000 – 2012.

There is a 14 to 24 inch protective slot limit (no bass between 14 and 24 inches may be harvested) in place designed to keep larger bass in the lake. In time, this regulation should let bass reach large sizes before being taken out. The size structure of the largemouth bass population is fair. Forty-two percent of the largemouth bass collected in 2012 measured 15 inches or larger. The following graph shows the size structure of the bass collected in 2012 (Figure 2). These numbers describe the overall population, and there are some larger fish present for the lucky or skillful angler to pursue.

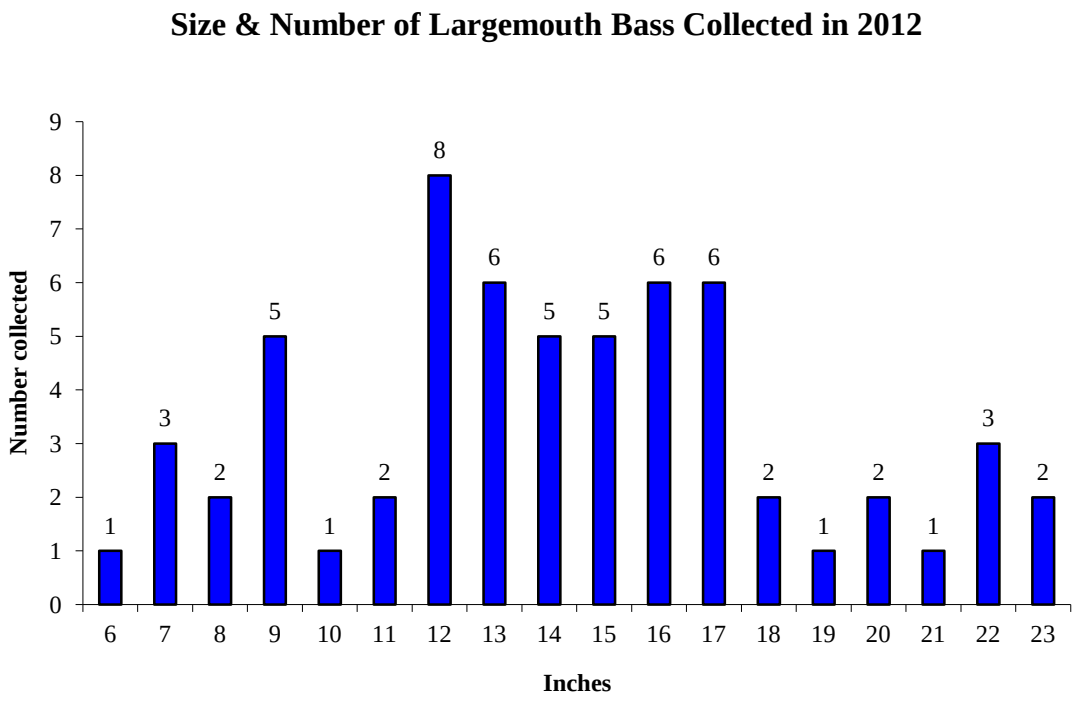

Figure 2. The size and number of largemouth bass collected in 2012 electrofishing samples.

The sunfish population at Lake Witten is dominated by bluegills. The bluegill population abundance varies from year to year, but each year the catch rate is generally well above average. The size structure is above average for small impoundments in Southwest Virginia. The following graph shows annual catch per hour of bluegill from 2000-2012 (Figure 3).

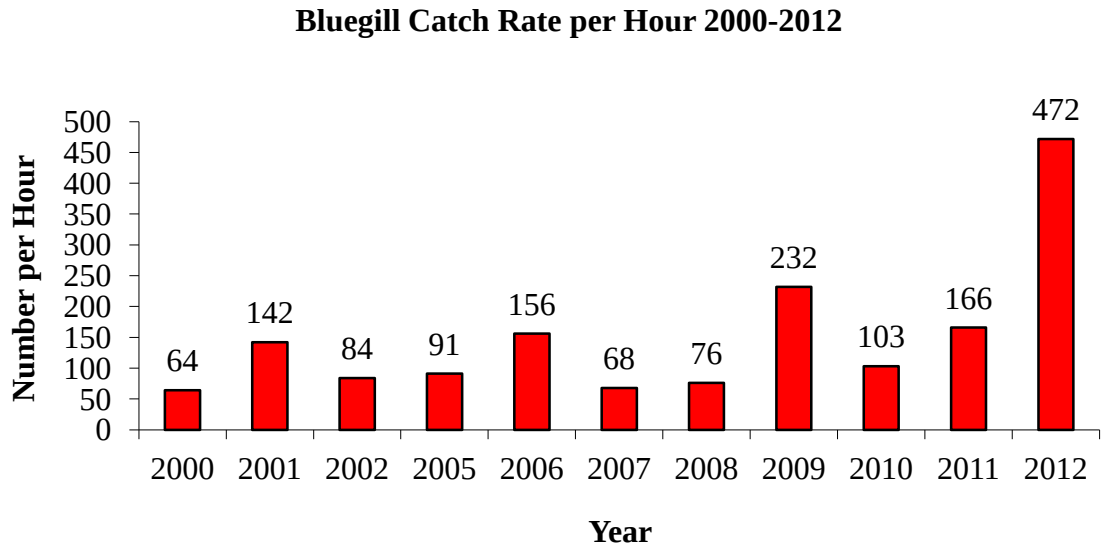

Figure 3. Catch per hour of bluegill in electrofishing samples from 2000-2012.

Several other species of fish including channel catfish and redbreast sunfish were collected. However, the low number of fish collected does not provide enough data to make meaningful comments about the status of these fish populations. The following chart (Figure 4), show the species and numbers caught in 2012 by electro-fishing.

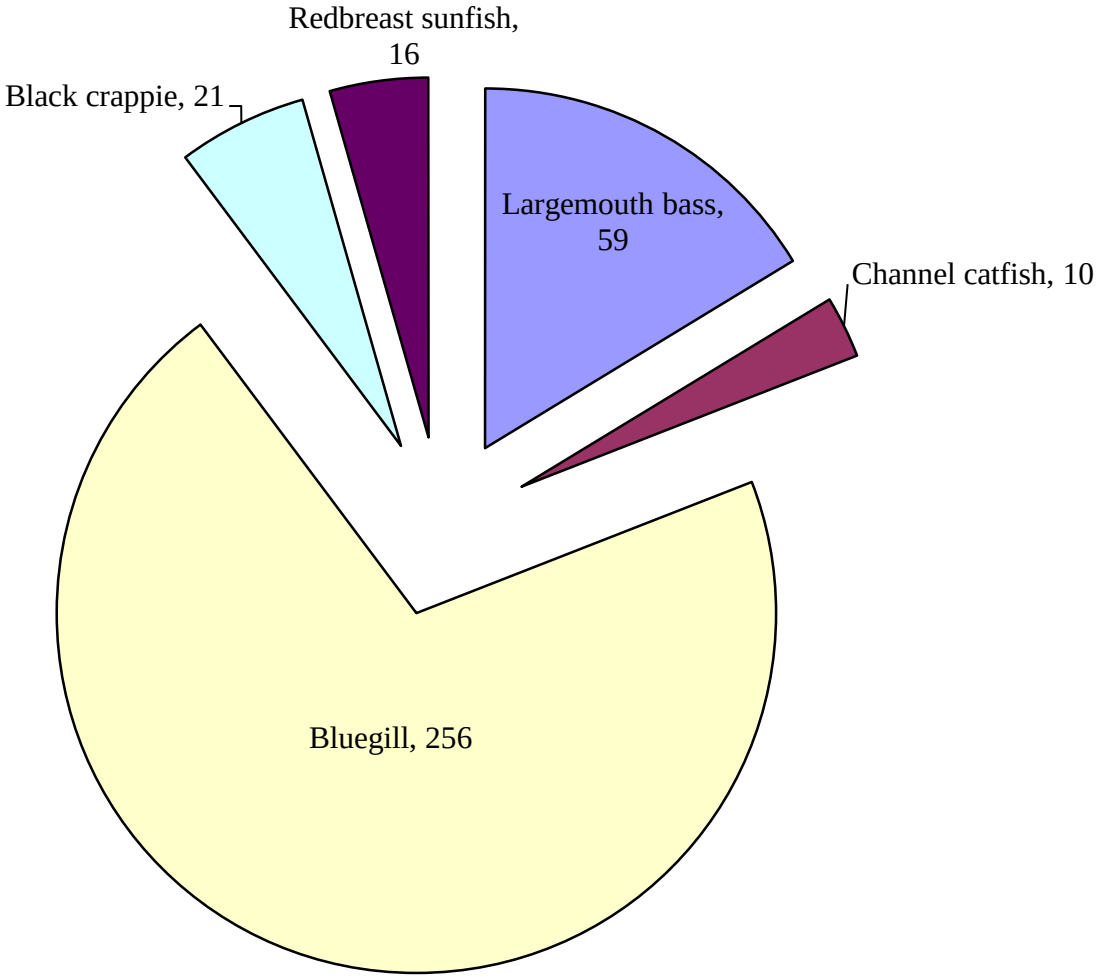

Figure 4. Fish species and number collected in electrofishing samples from 2012.

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