



## **North Fork of Pound Lake 2009**

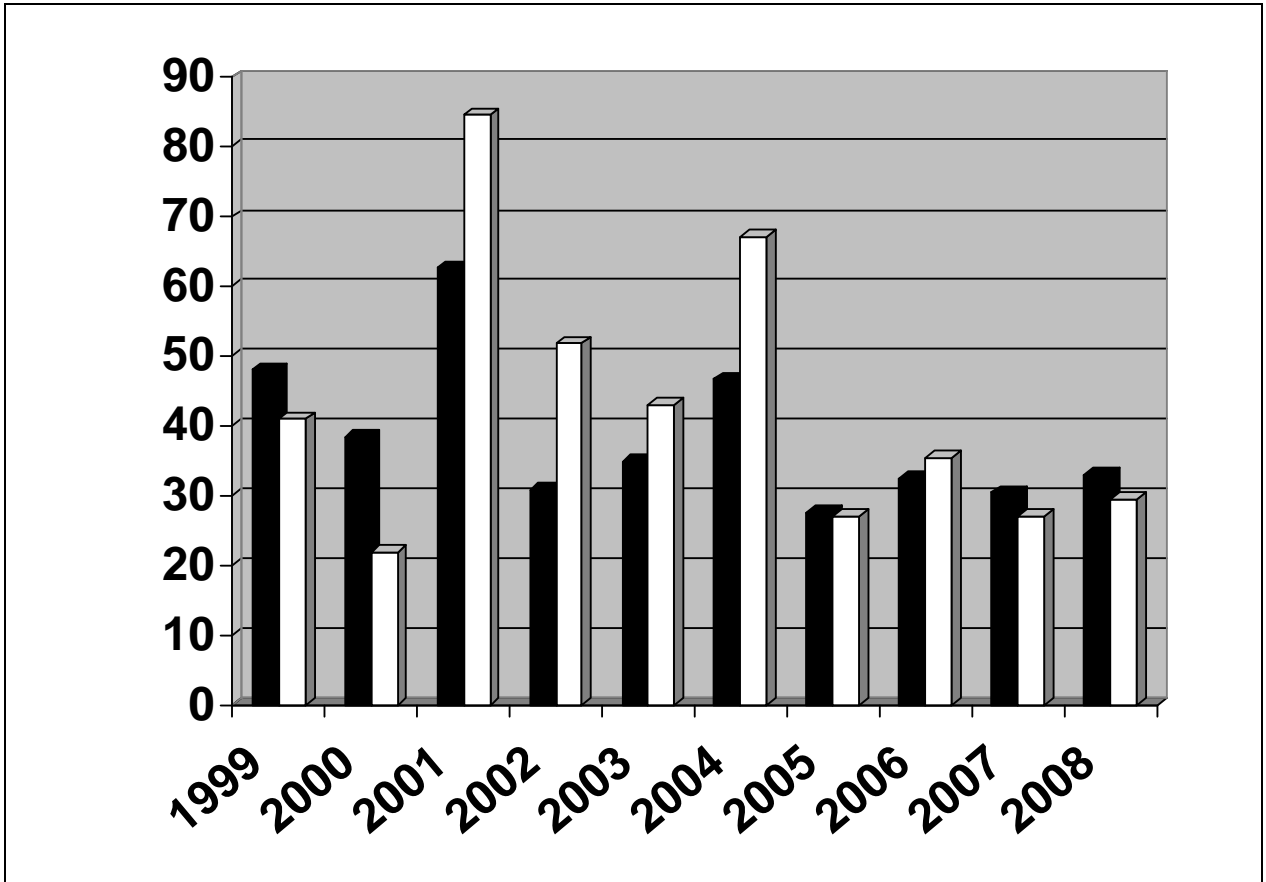
North Fork of Pound Lake is a 154-acre reservoir located in Wise County. The lake was formed in 1966. North Fork has a shoreline length of 13.5 miles, a maximum depth of 55 feet and an average depth of 19 feet. The area surrounding the lake is almost completely forested. Some mature oak and hemlock stands are visible, and poplar trees now stand where mountain families once raised corn on steep hillsides. The U.S. Forest Service now owns most of the land surrounding the lake. The dam is owned and operated by the U.S. Army Corps of Engineers.

The lake supports a diverse assemblage of fish species. Largemouth, smallmouth and spotted bass are available. Bluegill, black and white crappie, rock bass, walleye, musky, channel catfish, flathead catfish, bullheads and carp are also present. The primary forage fishes are alewives and gizzard shad, which were stocked in the late 1990's. The Department stocked alewives in 1997, and the gizzard shad originated from an anonymous source.

In order to provide quality fishing opportunities, fish populations need to offer both abundance and good size structure. Fish abundance is measured in terms of how many fish are collected per hour of electrofishing or per net night of sampling. Size structure is measured by looking at the proportion of adult fish in the sample that are larger than a given size. For example, we consider the proportion of adult largemouths larger than 15 inches, or the proportion of adult black crappie that are over 10 inches. Catch rates and size structure data provide a standardized means of comparing this year's fish sample to previous years' catch, as well as to the samples collected at other lakes. Catch rates do not represent the number of fish you might catch while fishing, because you may be more or less effective than the sampling gear. Size structure measures give information about the sizes of fish available in the population. Again, this may not match what you see while fishing, since you might be using gear or techniques that target a particular size range, while sampling gear tends to collect small and average-sized fish. It is likely that you will catch fish larger than those collected by sampling. The data we collect are best used to track overall trends in fish populations through time.

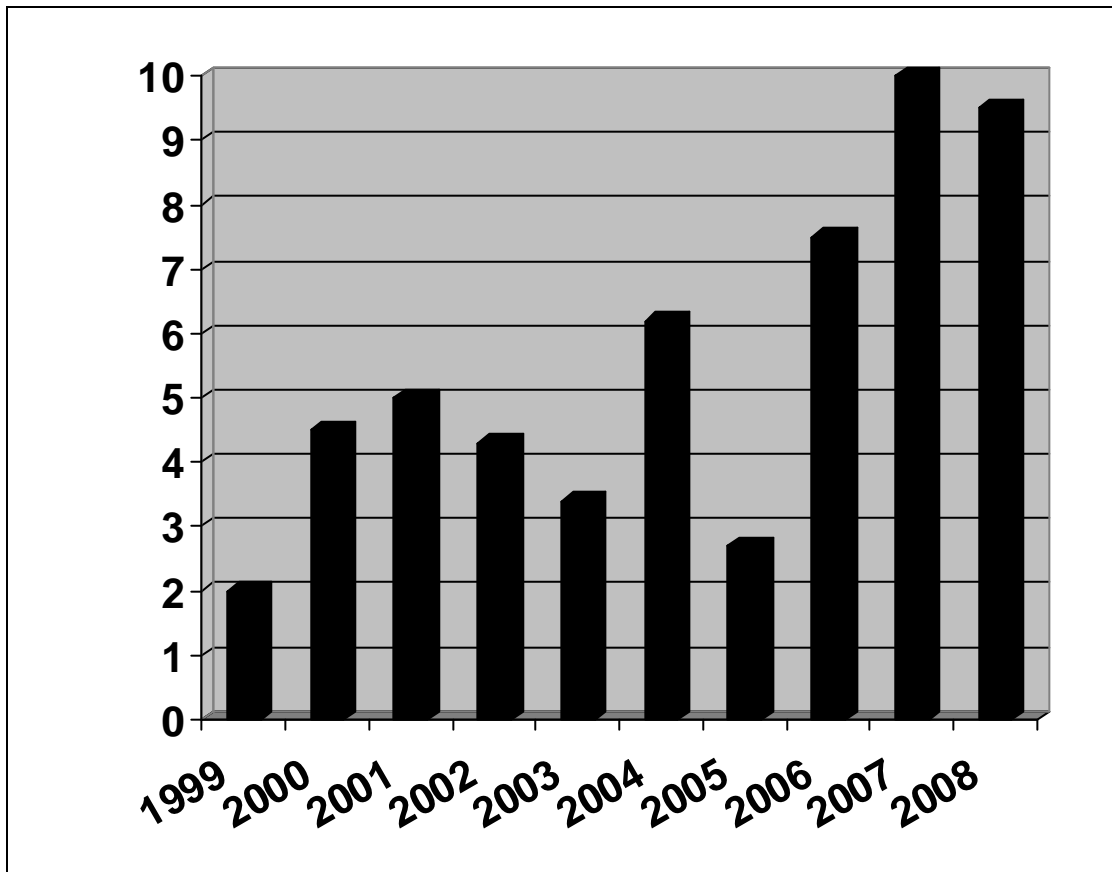
## Black Bass

Relative abundance, the number of fish collected per hour of sampling, varies from year to year (Figure 1). The 2008 sample produced 66 largemouths and 59 spotted bass. Catch rates were 33 largemouths and 29 spotted bass per hour of sampling. Black bass catch rates have been lower at Pound Lake since 2005. The trend suggests that relative abundance is stable at this lower level. The reduction in overall abundance appears to be the result of fewer young fish in the population. Smallmouth have always been less abundant than largemouth and spotted bass in Pound Lake. Smallmouth catch rates typically run in the range of one to five fish per hour of sampling.



**Figure 1.** Electrofishing catch rates, fish per hour, for largemouth bass (dark columns) and spotted bass (light columns) in North Fork of Pound Lake 1999-2008.

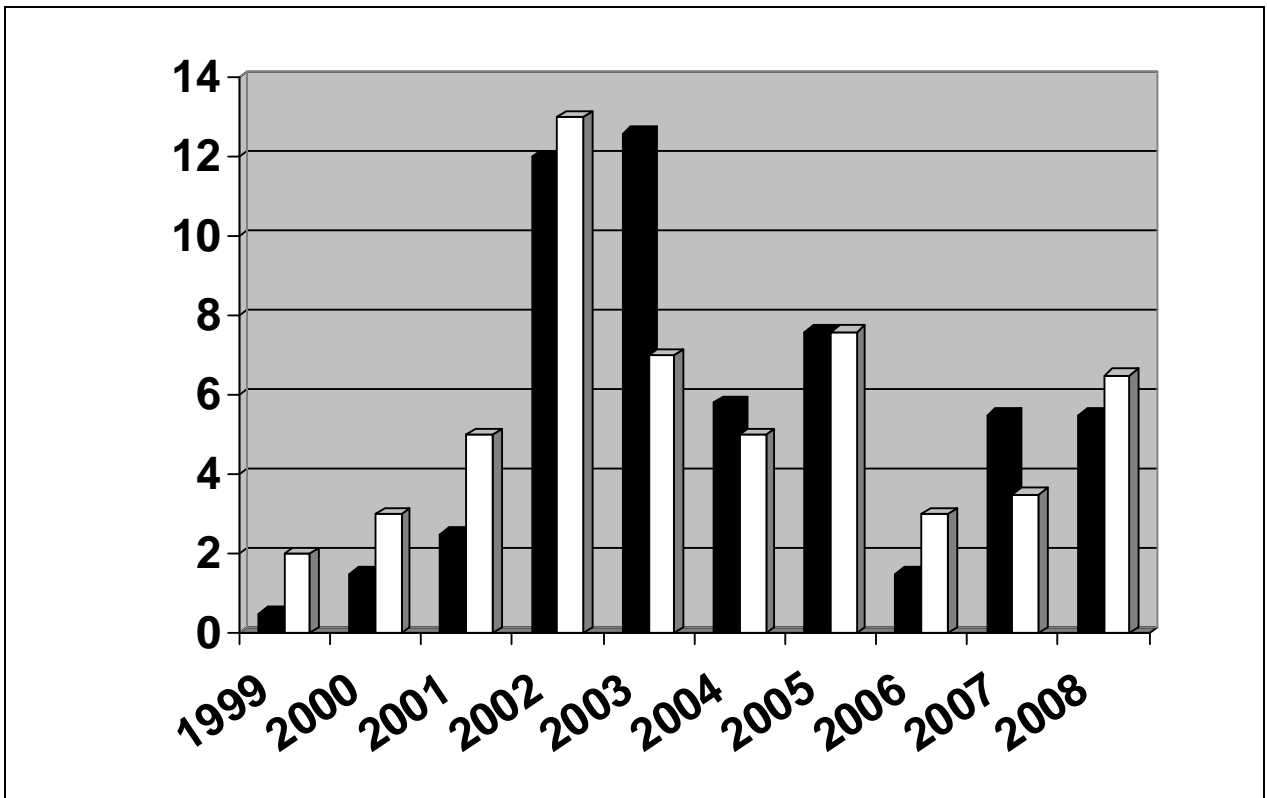
The size structure of the bass populations in North Fork Pound Lake has improved steadily since the 14 to 18-inch protective slot limit was established in 1999. The catch rate for preferred size largemouths (15 inches or greater) was much higher in recent samples compared to previous samples (Figure 2). This is probably the result of the protective slot limit and the improved forage opportunities created by the presence of gizzard shad and alewives.



**Figure 2.** Number of preferred size largemouth bass collected per hour of electrofishing at North Fork of Pound Lake 1999-2008. Preferred size is 15 inches for largemouths.

### **Crappie**

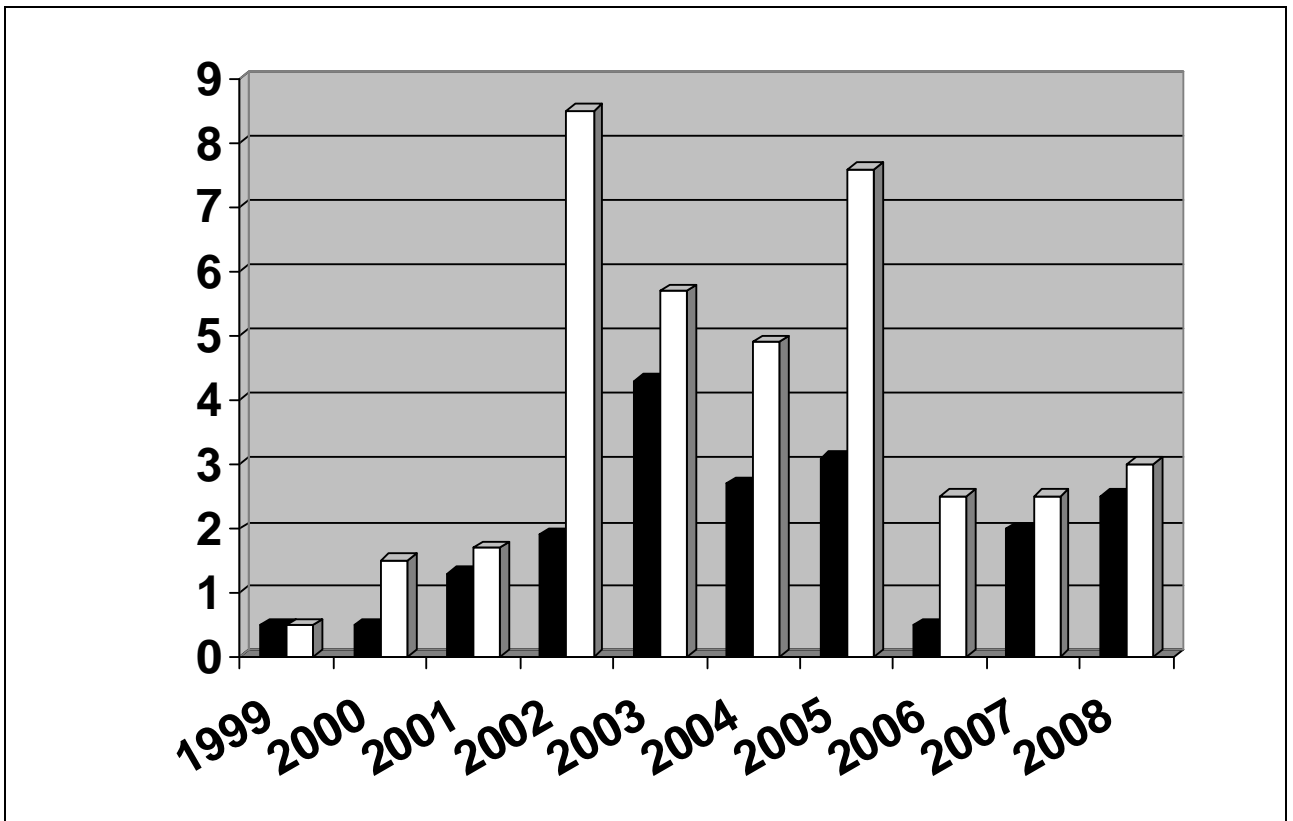
The relative abundance of crappie populations varies considerably from year to year. Crappie populations are characterized by “boom and bust” trends in abundance. Some refer to this as population cycles. It is generally the result of inconsistent spawning success. When the crappie population has a really good spawn, that year class of fish will increase the population abundance and provide good fishing for several years. Poor spawning success creates missing year classes that have the opposite effect. This “boom and bust” pattern is evident in the sampling catch rates for crappie at Pound Lake (Figure 3). The 10-inch minimize size limit should help stabilize the population fluctuations somewhat by keeping the good year classes of fish in the population a little longer. Recent habitat improvements may increase spawning success as well, but crappie are known for inconsistent recruitment.



**Figure 3.** Number of crappie collected per hour of electrofishing at North Fork of Pound Lake 1999-2008. Dark columns represent black crappie and light columns represent white crappie.

The crappie population in Pound Lake has good size structure. The number of preferred size crappie (10 inches or greater) follows the same general trends as population abundance (Figure 4). In recent years (2006-2008) from 33 to 45 percent of the black crappie populations has been larger than 10 inches, and from 45 to 83 percent of the white crappie population has been larger than 10 inches.

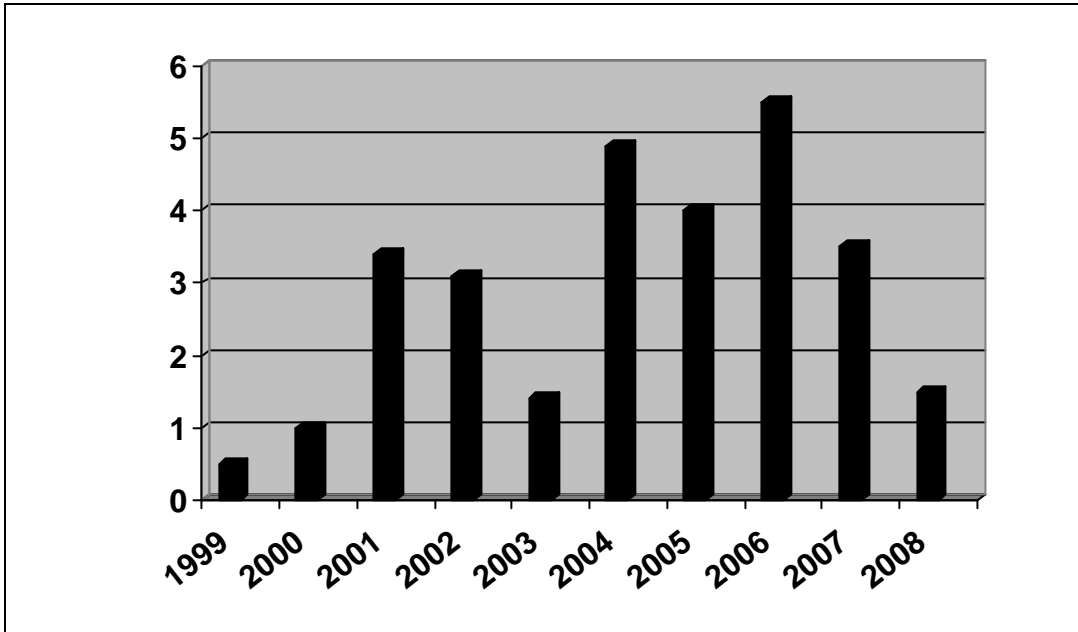
The abundance and sizes of crappie available should provide good fishing opportunities. Hopefully these fish will find suitable spawning conditions and the “boom” trends in population abundance will outnumber the “bust” years in the future.



**Figure 4.** Number of preferred size crappie collected per hour of electrofishing in Pound Lake 1999-2008. Preferred size is 10 inches for black crappie (represented by dark columns) and white crappie (represented by light columns).

### Walleye

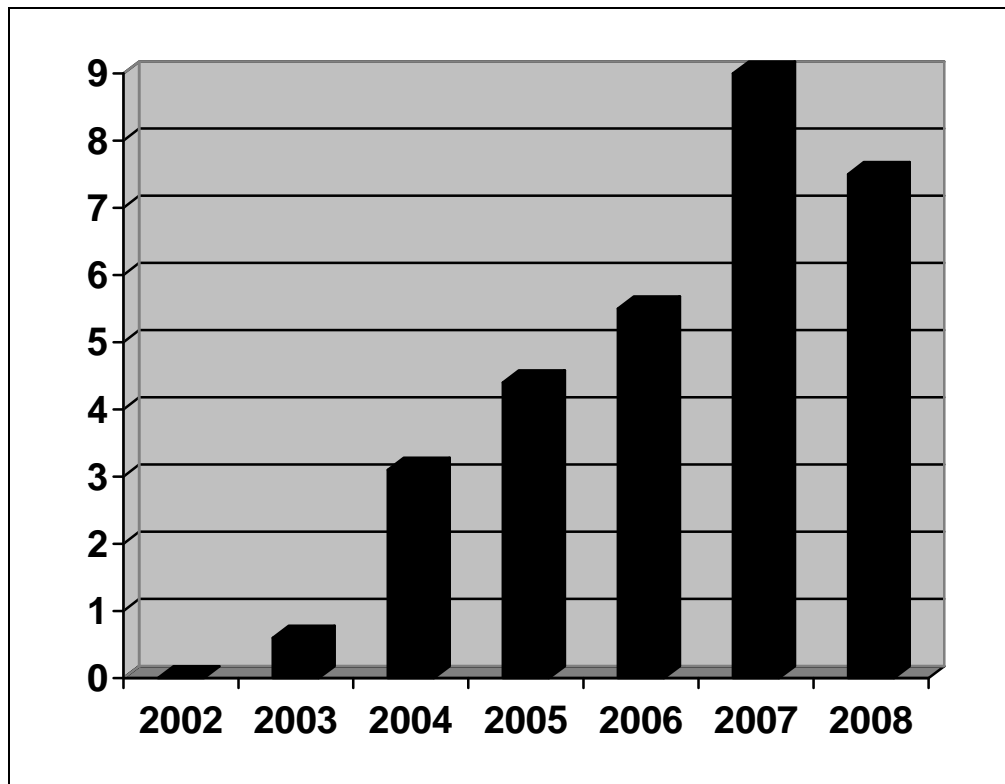
The walleye population in Pound Lake is largely the result of fingerlings stocked from 1999 to 2004. Like other species, the electrofishing catch rates vary considerably from year to year (Figure 5). Compared to bass, walleyes are less likely to be associated with shoreline habitat. Daytime electrofishing may not always accurately represent the true population, because walleyes are very light sensitive. Bright sunlight combined with Pound Lake's clear water makes daytime sampling less successful. Biologists evaluated the performance of stocked walleyes from 2000 to 2004 in lakes across the state. Although the walleyes survived and grew well at Pound Lake, they did not produce the relative abundance of walleyes noted in some other impoundments, like Flannagan Reservoir. Because the Department only has a limited number of walleye to stock each year, the decision was made to stop stocking walleyes at Pound Lake in order to concentrate fish in lakes where they were most likely to produce the best populations. However, sampling from 2005 to 2007 indicated higher abundances than earlier samples. Pound Lake was added to the walleye stocking list again in 2007, and fingerlings were stocked in 2008. Pound Lake may not receive walleye fingerlings every year, but fingerlings will be stocked when available. These stockings should provide fishing opportunities for anglers interested in this challenging and tasty sport fish.



**Figure 5.** Sampling catch rates for walleye in Pound Lake 1999-2008.

### Channel Catfish

In the fall of 2002, the Department increased the average size of catfish stocked into small lakes. The catfish stocked since that time have averaged 10 inches in length at the time of stocking. This program change has tremendously improved the channel catfish population at Pound Lake. The relative abundance of channel catfish, measured as fish collected per hour of spring electrofishing, has increased steadily since 2003 (Figure 6).



**Figure 6.** Number of channel catfish collected per hour of electrofishing at North Fork of Pound Lake 2002-2008.

The increased abundance of channel catfish has created a nice fishery. The average size of channel catfish collected is improving somewhat as older age classes from the initial years of stocking reach their growth potential.

### **Other Species**

Bluegill abundance and size structure has declined in recent years. This could be the result of increased competition for food between bluegills and shad. There is still some good bluegill fishing to be had though, and redear sunfish are scheduled to be stocked. The redears may increase the potential for anglers to catch bigger sunfish in Pound Lake.

### **Fish condition**

Biologists calculate the relative weight of fish to determine if they are in good condition. Relative weight is basically a standardized weight for a fish of a certain length. A relative weight between 90 and 100 is very good. Any score over 100 is considered outstanding. A relative weight in the 70's or low 80's might indicate a lack of food or suitable thermal habitat.

Overall, the fish in Pound Lake are in decent to good condition. The average relative weight of largemouth bass in the 2008 sample was 85. Spotted bass relative weight averaged 94. Black crappie and white crappie were only in fair condition, with average relative weights of 78 and 77 respectively. Walleye relative weight averaged 97.

In summary, black bass should offer decent catch rates, and size structure is good. The number of quality-sized bass has increased steadily in the last few samples. The black crappie population has decent abundance and good size structure. The white crappie population is the best one in Southwest Virginia. The walleye population has decent abundance, and future stockings should improve abundance over the next few years.

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