FISHERIES MANAGEMENT

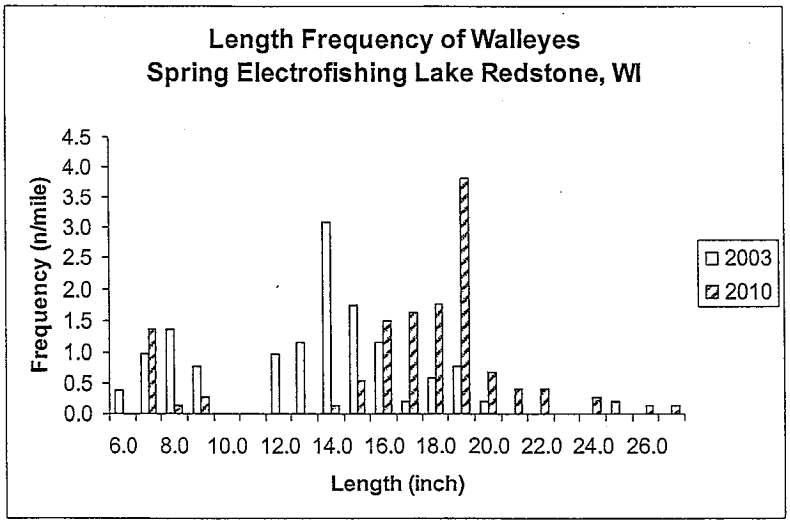
Executive Summary

Lake Redstone Fishery 2010

David Rowe – Fisheries Biologist/Supervisor
Michael Rennicke – Fisheries Technician

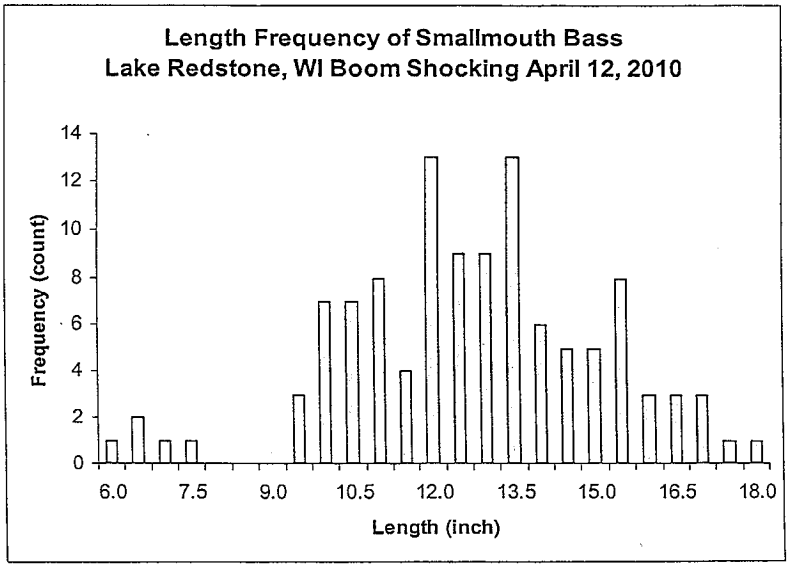
David.rowe@wisconsin.gov
Michael.rennicke@wisconsin.gov
(608) 635-8122

Walleye



The adult population was assessed in the spring of 2010 using fyke nets and electrofishing. The number of fish greater than 15 inches was estimated at 4.3/acre with a total of 2,627 in the lake. This is above the state average for both a stocked (~1.7/acre) and a naturally reproducing (~3.3/acre) population. All other indicators (length and age frequency, growth, and relative weight) do not present any problems and indicate a healthy population. The DNR plans to continue stocking walleyes in the future.

Largemouth & Smallmouth Bass



We attempted to get an adult largemouth and smallmouth bass population estimate in the spring of 2010, but were unable to mark and recapture enough fish.

Smallmouth bass are a success story. Since they were initially stocked in 1998-99, numbers, size, and quality of the fishery has been steadily improving. At this time, there are no foreseen problems, but the population should be tracked the next time a comprehensive survey is done on the lake.

There were some potential problems with largemouth bass. The catch rate was lower than expected. There is evidence of increased mortality at ages 7 and 8, and there is a gap in the length frequency from 15.5 – 19.5 inches. These signs indicate that there may be some harvest once fish become legal size. However, another cause might be variable year class strength, which means that there is good reproduction in some years, and poor in other years.

Muskellunge

The number of muskellunge greater than 30 inches was also assessed in the spring of 2010 and 2011 using fyke nets. A preliminary adult density was estimated using electrofishing at 0.32/acre in 2010. The final density was estimated using fyke netting at 0.33/acre in 2011. Lake Redstone is at the density of adults recommended for a potential trophy fishery. Muskellunge in Lake Redstone are growing faster than the state average and are fairly heavy for their length, further suggesting a potential trophy fishery. In 2012, the muskellunge size limit will change to a 50" size minimum. The intention is to increase the number of fish larger than 45". The DNR plans to continue stocking muskellunge in the future.

Panfish

Both black and white crappies are present in the lake with white crappies traditionally outnumbering black crappies. However, during the 2010 survey, the ratio switched to a 3.4 to 1 ratio in favor of black crappies. Since black crappies typically prefer less turbid water, a recent increase in transparency over the last 3 years could be a potential driver for this change. Both black and white crappies exhibit excellent growth after age two. It takes 3 years for both crappies to reach 9.5-10.0 inches. Slower growth in years 1 and 2 may again be attributed to competition with gizzard shad (see below). Condition and the size structure look good.

Most indicators for bluegills (i.e. growth, length and age frequency) do not present any potential problems. However, the catch rate was a little low at 10.5/mile. The average relative weight (85.4) is the lowest of all the species we took weights on. The main problem exists in fish below 4.5 inches. Nearly every fish weighed under that size is below average (<100). The problem may be competition with gizzard shad (see below).

Gizzard Shad

A new concern in Lake Redstone is the arrival of gizzard shad. Although they will not adversely affect adults, they do compete for the same food source (i.e. plankton and zooplankton) as young of the year fish such as walleye, bass, crappie, and bluegill. High gizzard shad abundance could have a negative impact on growth, survival, and recruitment of game fish. Management of this species could include; changing the size limit of game fish species to increase the number of predators, improving or creating vegetative shoreline habitat, stocking other predator fish species, and additional work in the watershed to improve water quality.