



Abel Reservoir Fisheries Management Report 2016

Abel Reservoir is a 185 acre impoundment that was built for water supply. The reservoir is long and riverine and only allows electric motors. It has one primitive boat ramp and associated parking area that is maintained by Stafford County Parks and Recreation Department. This access point is located off Route 651 on the upper end of the lake. Initial fish stockings (Largemouth Bass, Redear Sunfish and Bluegill) occurred in 1973, and Channel Catfish were stocked in 1974. Channel Catfish were then maintenance stocked (usually on alternate years) at 25-50 per acre, and Walleye were stocked annually (usually at 50/acre) from 1977-1992 and biannually from 1994-1996. Walleye stocking was discontinued after 1996 due to changes in statewide Walleye management. Stafford County received permits to stock sterile triploid Grass Carp during the 1990s after the aquatic weed Hydrilla became established in the reservoir and impeded shoreline angling and boat launching. Other fish species known to exist in this riverine impoundment include Black Crappie, Bluegill, Redear Sunfish, Chain Pickerel, Warmouth, Green Sunfish, White Sucker, White Perch, Golden Shiner, American Eel, Yellow Bullhead and Brown Bullhead.

DGIF biologists sample the fishery approximately every 4-5 years. Most recently, electrofishing samples were conducted in 2009 and 2014. Despite the long intervals between samples, comparisons are still useful, and the most recent sample can be compared with data from other district impoundments. Proportional Stock Density (PSD) and Relative Stock Density (RSD) are numerical descriptors of length-frequency data that are used when evaluating fish populations. Quality length is defined as the minimum size of fish most anglers like to catch. Stock length is the minimum length at which a fish provides recreational value.

PSD is calculated by the formula:

$$\text{PSD} = (\# \text{ of fish} \geq \text{min. quality length} / \# \text{ of fish} \geq \text{min. stock length}) \times 100$$

RSD is calculated by the formula:

$$\text{RSD} = (\# \text{ of fish} \geq \text{specified length} / \# \text{ of fish} \geq \text{min stock length}) \times 100$$

In 2014, the electrofishing catch rate (CPUE) of Largemouth Bass was 140/hour, which remained practically unchanged from 144/hour in 2009. The CPUE of “preferred” bass (those 15” and greater) decreased from 14/hour in 2009 to 10/hour in 2014. PSD values of 40-70 are indicative of balance for Largemouth Bass. The PSD value for Largemouth Bass was 28 in 2014, a decrease from 34 in 2009 which indicates that the population is slightly out of balance, likely a result of slowing growth rates due to increased competition and recent strong year classes. RSD-P values are for “preferred fish” or the proportion of bass in a population over eight inches that are also at least 15”. RSD-P values decreased from 20 (2009) to 14 (2014) as a result of a few less bass greater than 15” and consecutive strong year classes entering the population. Size structure was on the small end with numerous fish ≤ 12 ” in 2014, however anglers should expect to see those strong year classes as 14-16” fish now. Abel Reservoir currently ranks as the 15th best of 20 impoundments in the district for Largemouth Bass based on catch rates of “preferred” fish.

Bluegill size structure was consistent and within the desirable range. CPUE for “quality” fish (those 6” and greater) remained nearly unchanged from 74/hour in 2009 to 72/hour in 2014. The Redear Sunfish population was also healthy with several fish over 8” collected. In most cases, PSD values of 20-60 indicate balance in a Bluegill population. Bluegill and Redear Sunfish PSD values were 29 and 37 which are indicative of balanced populations. These sunfish populations are similar to those in other district small impoundments. Anglers can target sunfish late spring/summer when these fish move into shallow shoreline areas.

Black Crappie are usually considered an undesirable species in small impoundments due to their ability to overpopulate and stunt. A typical crappie population was observed with a catch rate of 47/hour and most fish in the 8-10" range. Anglers should focus on fishing structure with small jigs or minnows and are encouraged to harvest crappie of any size up to the 25 fish/day limit. Abel is also known as a good Channel Catfish lake and continues to get stocked annually. Though not vulnerable to standard electrofishing gear, channel catfish were observed again during both the 2009 and 2014 samples further suggesting that a good population was present.

Future plans for Abel Reservoir include monitoring the fishery with electrofishing gear, maintaining current fishing regulations, continuing annual stockings of channel catfish at a rate of 10 fish/acre, and anticipation of obtaining better access down lake.

Anglers can access Abel Reservoir from I-95 and taking Route 17 north from Fredericksburg. From Rt.17, turn right onto Route 616 and the right again onto Route 651. Additional information about the lake can be obtained by contacting the DGIF Regional Office in Fredericksburg (540-899-4169) or Stafford County Parks and Recreation Department (540-752-5632).