



Phelps Pond 2006



Phelps Pond is a 3-acre Department owned lake in Fauquier County that lies within the borders of the C.F. Phelps Wildlife Management Area. This pond was associated with an old plantation that had been in existence since the Civil War and it is unknown when the pond was built. Currently, populations of largemouth bass, redear sunfish, and bluegill are maintained by natural reproduction. Channel catfish are stocked annually (60 fish/year) due to limited natural reproduction within this lake

Department fisheries biologists routinely sample the fishery with electrofishing gear to evaluate the composition and size distributions of the fishery. The most recent electrofishing sample was conducted in 2005. Proportional Stock Density (PSD) and Relative Stock Density (RSD) are numerical descriptors of length-frequency data that is used to describe the population dynamics of a fishery. PSD is calculated by the formula:

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

Sampling conducted in May 2005 indicated that largemouth bass size structure declined compared to a previous sample in 2001. Catch per unit effort (CPUE) during our last sample was an impressive 229 bass/hour, which was an exponential increase over the 20 bass/hour collected in 2001. PSD values were the same in 2005 as in 2001 (PSD 9). Largemouth bass PSD values were indicative of an unbalanced population (balance PSD 40-70) and the fishery is classified as "bass crowded". Bluegill and redear sunfish had PSD values of 28 and 53, respectively, during 2005. In most cases, balanced bluegill and redear sunfish populations fall between 20 and 60, which means at this time the panfish populations at Phelps Pond are in balance.

Relative Stock Density is the percentage of a specified size category or length in a sample. RSD is calculated by the formula:

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

RSD-P was used to further evaluate the fish populations in Phelps Pond. RSD-P is the "relative stock density of preferred fish", which is the proportion of bass in a population over eight inches that are also at least 15". The Phelps bass fishery had an RSD-P of 2, which falls outside of the range of 10-40, which is generally indicative of a balanced quality fishery. RSD-P was also calculated for the bluegill and redear sunfish fisheries. The bluegill RSD-P for Phelps Pond was zero, which is below the desired range of 5-20, but the RSD-P for redear sunfish was an impressive 12. What this means for anglers is that though the bluegill population is considered in balance, very few 8" fish are available for harvest. Redear sunfish on the other hand offer anglers the opportunity to readily catch larger more desirable sized fish and possibly land a citation-size redear (1 lb or 11 inches).

Future fisheries management activities will include the installation and maintenance of a solar fish feeder to encourage development of larger panfish. Phelps Pond will continue to be managed as a quality panfish fishery by supplemental feeding and the maintenance of a bass “crowded” population to ensure high catch rates in a family oriented setting.

Phelps Pond has a parking lot situated about 200 yards away next to the WMA work station. No boat ramp exists, but anglers can carry canoes or small boats down to the pond if desired. Anglers can reach Phelps Pond from I-95 and Fredericksburg by taking Rt. 17 north to Rt. 651. Take a left and follow Rt. 651 through Summerduck to the main WMA entrance on the left (gravel road bordered by two columns marked by a large DGIF sign). The pond is about 1 mile down this road on the left behind the old plantation residence. Additional information about the lake can be obtained by contacting the DGIF Regional Office in Fredericksburg (540-899-4169).