



## **Virginia Department of Game and Inland Fisheries 2015 Sandy Bottom Pond Management Report**

Sandy Bottom Nature Park consists of 465 acres of land that provides a sanctuary from the development of the Hampton area. The park was established in the early 1990s. It provides various activities for the outdoor enthusiast. There are trails for biking, hiking, and horse riding. Facilities include boat rental, a fishing pier, picnic areas, nature center, wildlife center, primitive camping areas, and tent cabins. The park is home for the 12-acre Sandy Bottom Pond. The pond was formed from an old borrow pit that was originally excavated for construction of Interstate 64. Sandy Bottom Pond provides fishing opportunities for park visitors.

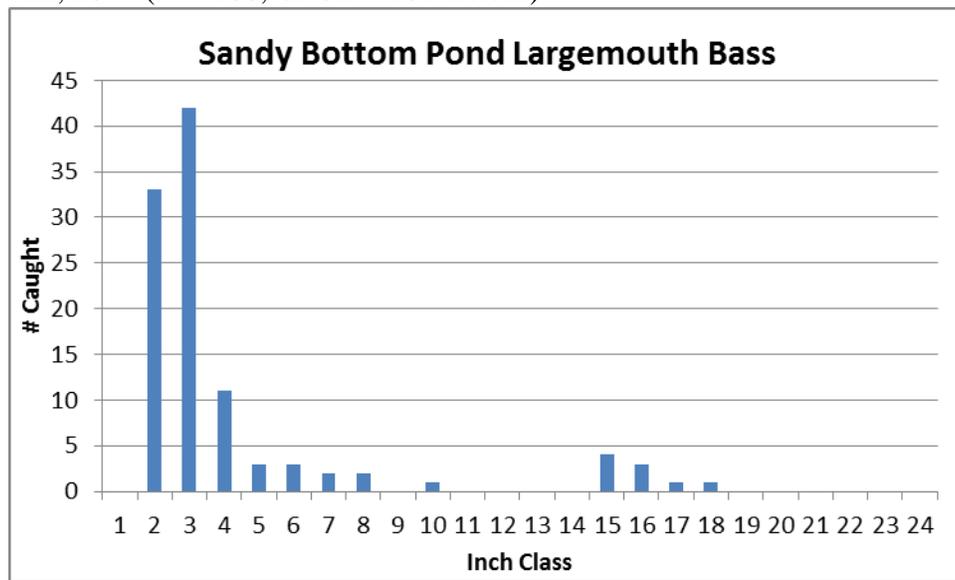
The Virginia Department of Game and Inland Fisheries sampled Sandy Bottom Pond on October 22, 2014 with the assistance of Park Rangers. A full community sample was conducted to observe the present fishery. Sandy Bottom Pond was last sampled on May 3, 2011. The electrofishing effort of 1,510 seconds (0.419 hour) was used to attain a representative sample of the present fishery. A complete circuit of the shoreline was conducted with the water temperature being 19.8°C (67.6°F), which was cooler than the 2011 survey (23.3°C, 73.9°F). Electrofishing efforts consisted of shocking along the shoreline habitat as close as possible, with the majority of the effort concentrated in the 2 to 5 foot depth range. Being that the pond was constructed from an old borrow pit, the shoreline drops off pretty quickly. Efforts were made to stick to the bank and shoreline brush as close as possible. A total of 8 fish species were collected with the majority of the sample consisting of bluegill and largemouth bass. The remaining fish assemblage was channel catfish, American eel, pumpkinseed sunfish, golden shiner, redear sunfish and warmouth sunfish.

### **Largemouth Bass**

Sandy Bottom Pond provides a limited bass fishery. A total of 106 largemouth bass were collected to provide an expanded CPUE (Catch Per Unit of Effort) of 252 bass/hr. The catch rate showed a large increase from the 2011 sample (CPUE = 80 bass/hr). The mean CPUE from past surveys is 117 bass/hr. The fall sample allows for the collection of juvenile bass from the 2014 year class which in turn helps to elevate the overall catch rate. These juvenile fish accounted for the majority of the bass collection (CPUE = 222 fish/hr). The past spring surveys show a much lower abundance of juvenile bass (Mean CPUE = 26/hr). Year class strength can vary from year to year, but the juvenile bass appear to have a hard time surviving their first winter. For reference and comparison sake, the October 5, 1998 survey also had a high catch rate of juvenile bass at 377 fish/hr. The April 23, 1999 survey only revealed a CPUE of 22 juvenile bass/hr. The size distribution of the collected bass can be seen on the enclosed length frequency graph.

The 2014 year class was off to a good start with the abundance of 2 to 4 inch fish collected. This year class will hopefully survive long enough to reach mature size and provide action for anglers that fish the pond. The survey showed weak recruitment from several year classes with only one bass in the 9 to 14 inch range. The large assortment of juvenile bass brought the average bass length down to 4.7 inches in length. Only 9 bass were greater than 12 inches in size. These bass were all greater than 15 inches in size. Our sampling efforts are just a representative picture of the fish community collected along the shoreline on October 22, 2014. The bass collected during the survey were holding tight to the cover of the shoreline brush. Additional bass may have been holding in deeper water not covered by the boat's electric field.

Figure 1. Length frequency of largemouth bass collected from Sandy Bottom Pond on October 22, 2014 (N = 106, CPUE = 252 fish/hr)



With largemouth bass being the most popular game fish in this country, it has been considered that a “quality” bass is one that is 12 inches or larger. A “preferred” bass is one that is 15 inches or larger in length. These size classifications help to describe the present dynamics of the population. The PSD (Proportional Stock Density) is the proportion of bass in the population over 8 inches (stock size) that are also at least 12 inches. One must consider the relatively small sample size of bass collected when assessing the PSD and RSD-P values. The survey collected a total of 13 stocked-size bass ( $\geq 8''$ ) in which 9 of those bass were of quality size ( $\geq 12''$ ). These values yield a PSD value of 69 which is above the desired range of 40-60. The RSD-P value of 69 is based upon the collection of 9 preferred-sized bass. A balanced fishery has a population that is composed of various year classes that are represented by distribution peaks. Your typical length frequency graph from Sandy Bottom Pond has some major gaps in the distribution where very few bass in the 8 to 14 inch range are found.

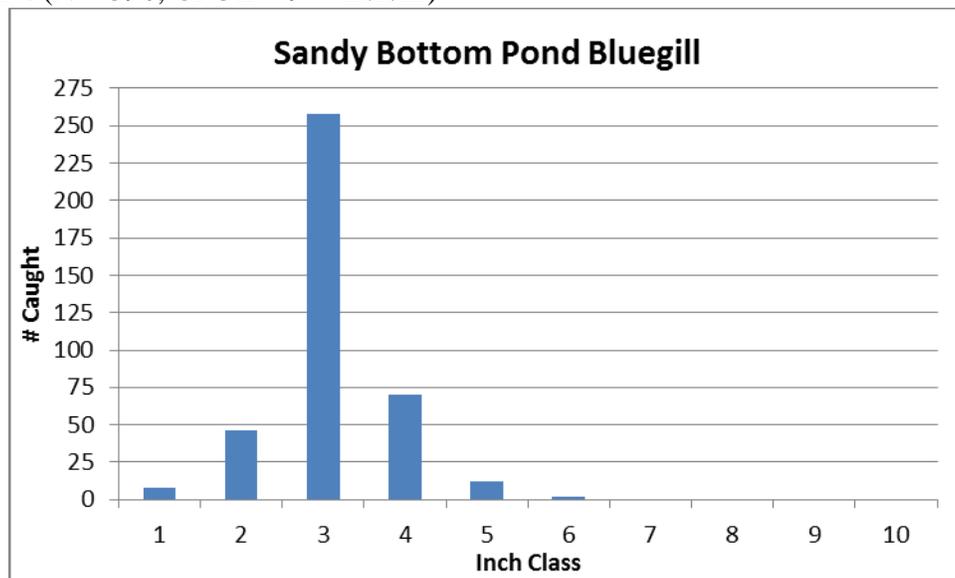
Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative

weight values for the 13 stock-sized bass ( $\geq 8''$ ) was 93 and the 9 preferred-sized bass ( $\geq 15''$ ) was 93. These relative weight values show some similarities to the 2011 survey: stock (94), quality (94) and preferred (90). The largest bass measured 18.8 inches and weighed 3.66 pounds.

### Bluegill

The 2014 survey was similar to past surveys as it showed the bluegill fishery in Sandy Bottom Pond to be dominated by fish less than 5 inches in length. The survey collected 396 bluegill for an expanded CPUE of 944 fish/hr. The catch rate showed a major increase from 2011 (CPUE = 229 bluegill/hr). The majority of the bluegill were within the 2 to 4 inch range. The PSD for bluegill is the proportion of bluegill over 8 cm (stock size) that are also at least 15 cm (quality size). The bluegill PSD of 1 is a reflection of the 2 quality-sized bluegill that were collected. The PSD value was well below the 2011 survey (PSD = 7). The survey produced a total of 292 stock-sized bluegill. The average size bluegill measured in at 3.5 inches. The two largest bluegill measured 6.22 and 6.3 inches in length. Anglers that fish Sandy Bottom Pond should not expect to catch too many large bluegills.

Figure 2. Length frequency of bluegills collected from Sandy Bottom Pond on October 22, 2014. (N = 396, CPUE = 944 fish/hr)



### Other Species

The fishery has additional species diversity in the form of channel catfish, American eel, pumpkinseed sunfish, golden shiner, redear sunfish and warmouth sunfish. A total of 5 American eels were collected. The eels ranged in size from 12 to 29 inches. Additional eels were observed along the shoreline as they avoided the edge of the electric field. All collected eels were removed from the pond. The survey collected 5 channel catfish that ranged in size from 16.9 to 20.7 inches. These fish were most likely catfish that were stocked by DGIF back in the summer of 2014. The average size channel catfish measured 19.2 inches. One 7.17-inch pumpkinseed sunfish was collected. Six golden shiners were collected and they ranged in size from 3.2 to 5.6 inches. One 4.76-inch

redeer sunfish was collected. Six juvenile warmouth sunfish in the 2 to 4 inch range were collected. These fish species collected in limited abundance will provide some level of excitement to anglers that are lucky enough to find them.

### **Sample Summary**

The electrofishing sample of Sandy Bottom Pond collected 8 fish species. The fishery, for the most part, is the classic largemouth bass and bluegill water with a few other species present in a limited capacity. The largemouth bass population continues to be out of balance with very few bass in the 8 to 14 inch range. The survey revealed a fair abundance of bass greater than 15 inches in length. The overall catch rate showed a marked improvement from the 2011 survey, but the increase was due to the fall survey that reflected the abundance of juvenile bass in the 2 to 4 inch range. The 2014 year class showed a better than average survival rate for their first growing season. This is a good sign and successful spawns will hopefully continue to strengthen the bass population. It is recommended that anglers continue to release all largemouth bass to protect the current population.

The bluegill population appears to be in fair shape with very few bluegills greater than 5 inches in size. The bluegill size distribution showed an abundance of 2 to 4 inch bluegills. The 2 inch bluegills will be the most valuable in providing forage for the largemouth bass population. The collection of 5 channel catfish was a good sign that some of the stocked fish have survived to reach a respectable size. The continued stocking of channel catfish into Sandy Bottom Pond will hopefully assist the fishery and excite a few fishermen along the way. The fishery provides some species diversity in the way of American eel, pumpkinseed sunfish, golden shiner, redear sunfish and warmouth sunfish.

The park is open from sunrise to sunset every day except for Christmas; however the fishing pier is open to pedestrians for fishing 24 hours a day. The park is located at 1255 Big Bethel Road, a few minutes from I-64 by way of the Hampton Roads Center Parkway West exit. Please call the park office at (757) 825-4657 or try their website at [www.hampton.va.us/sandybottom](http://www.hampton.va.us/sandybottom) for additional information.

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