



CONSERVE. CONNECT. PROTECT.



Woodstock Pond 2019 Fisheries Management Report

Virginia Department of Game and Inland Fisheries

Woodstock Pond is a 7.5-acre impoundment located within York River State Park. Known in its early history as Taskinas Plantation, the park was the site of a 17th and 18th century tobacco warehouse where local planters stored their crops to be shipped to England. Woodstock Pond was built in the 1950s and the park itself was opened in 1980. Because of its location and the quality of the fishing, this little fishery is ideal for a family outing.

The Virginia Department of Game and Inland Fisheries sampled Woodstock Pond on April 23, 2018. The pond was last sampled on August 4, 2014. A full community sample was conducted to observe the present fishery. The electrofishing effort of 1,960 seconds (0.54 hour) was used to attain a representative sample. Two sample runs were conducted to break up the amount of shoreline covered. Both the western and eastern shorelines were sampled to cover all of the boat accessible shoreline. The survey was able to catch the majority of the largemouth bass population in a late pre-spawn pattern due to the colder than normal weather for April. Electrofishing efforts consisted of shocking along the shoreline with the majority of the effort concentrated in the 2 to 3 foot depth range. Efforts were made to sample the shoreline brush as close as possible. This is essentially a bass and bluegill fishery with a few other species present in significant numbers. The survey revealed species diversity to consist of six species: largemouth bass, bluegill, redear sunfish, black crappie, American eel and golden shiner. Woodstock Pond is a productive system that receives an excessive amount of nutrients from the surrounding watershed.

Largemouth Bass

Woodstock Pond continues to provide a high quality bass fishery for a small resource. A total of 62 largemouth bass were collected. The CPUE (Catch Per Unit of Effort) for largemouth bass was 113.9 bass/hr. The catch rate showed a decline when compared to the 2014 survey (CPUE = 161.3 bass/hr) which was bolstered by the catch of some young of year (YOY). The catch rate ranks much higher than the mean Woodstock Pond CPUE of 98 bass/hr from survey years 1998 to 2014. The size distribution consisted of bass from 5 to 21 inches with two large concentrations observed. The size ranges of 9 to 11 inches and 16 to 19 inches were well represented. The high

proportion of bass in these size ranges show what the average fisherman will most likely be catching.

With largemouth bass being the most popular game fish in this country, it has been considered that a “preferred” bass is one that is over 15 inches in length. It is through this size classification that population dynamics are analyzed. 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 (quality-size). The sample provided a PSD value of 54, which is a direct reflection of the 31 quality-sized bass from the total of 57 stock-sized fish. A balanced bass/bluegill fishery has a bass PSD value within the 40–60 range. The RSD-P (Relative Stock Density of Preferred bass) is the proportion of bass in the population over 8 inches that are also at least 15 inches. The RSD-P value of 46 is a direct reflection of the 26 preferred-sized bass collected. The 2018 PSD value showed a major decline from 2014 (PSD = 86) to a value that represents a more balanced fishery. The RSD-P value showed a substantial increase from the 2014 survey (RSD-P = 21) due to large increase in the number of preferred-sized fish.

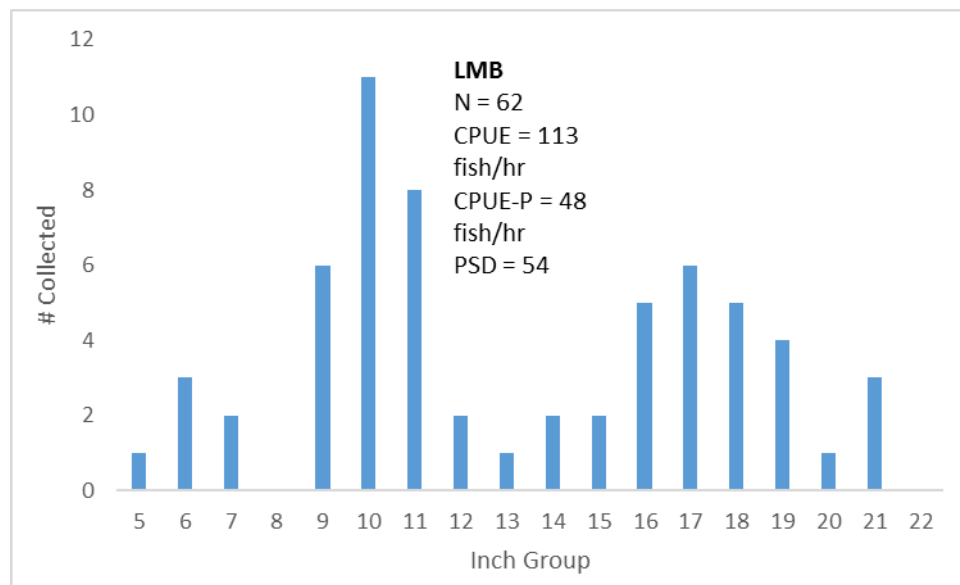


Figure 1. Length frequency of largemouth bass collected from Woodstock Pond on April 23, 2018

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 stock, quality and preferred bass ($\geq 8''$, $\geq 12''$, $\geq 15''$) were 97, 97, and 98 respectively. These values showed an increase from the 2014 survey (stock = 94, quality = 93, and preferred = 91). The 2018 relative weight values were within the desired range

and reveal the forage base is sufficient to provide adequate size forage for the bass population. The largest bass measured an impressive 21.97", almost a length citation, with a weight of 6.63 lbs.

Bluegill and Redear Sunfish

The electrofishing survey revealed a limited bluegill population exists within Woodstock Pond. The survey collected 355 bluegill for the CPUE of 652 bluegill/hr. The 2018 catch rate showed an improvement from the 2014 survey (CPUE = 501.6 fish/hr). The length frequency graph shows the population to be dominated by fish in the 2 to 6 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 2018 bluegill PSD value (22) was equal to the 2014 collection (PSD = 22). This value describes the collection of 63 quality-sized bluegill from the collection of 284 stock-sized bluegill. The largest bluegill measured 6.97 inches and the average size bluegill was 4.33 inches. Anglers should not expect to catch too many trophy-sized bluegill from Woodstock Pond. Anglers should remember to practice selective harvest during the spring months to ensure that enough of the larger brood stock of bluegill get released to allow for a productive spawning cycle. No age and growth samples were taken from the collected bluegill. The level of angler harvest of bluegill greater than 6 inches in length is not known at this time.

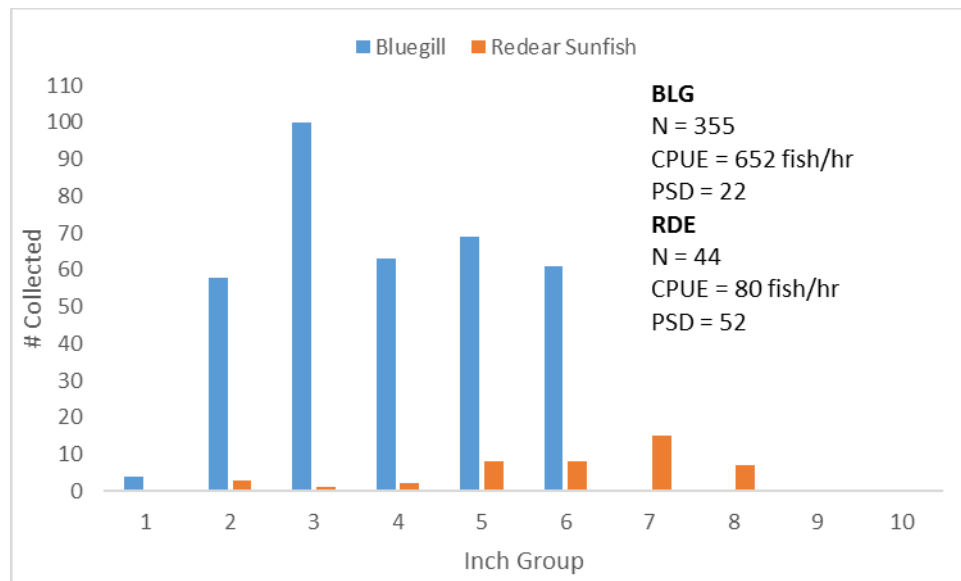


Figure 2. Length frequency of bluegill and redear sunfish collected from Woodstock Pond on April 23, 2018

The electrofishing survey revealed the redear sunfish population to be dominated by fish in the 6 to 8 inch range. The collection of 44 redear sunfish (CPUE = 80 fish/hr)

showed a favorable increase from 2014 (CPUE = 43.3 fish/hr). Past surveys have shown limited recruitment of juvenile redear sunfish less than 5 inches in length and this appears to be the case once again. Recruitment from the last few years has been extremely poor. DGIF stocking efforts of introducing redear sunfish fingerlings have aided the fishery to some extent, but have not created an abundance of fish by any means. The largest redear sunfish measured 8.38 inches in length. Past surveys have collected a few redear sunfish in the 10 inch range, but those fish are extremely rare and were not encountered in 2018. Woodstock Pond provides anglers with an opportunity to catch a few quality-sized redear sunfish. The average size redear sunfish was 6.48 inches in length.

Black Crappie

The survey revealed the presence of 132 black crappie (CPUE = 242 fish/hr), which showed a substantial increase when compared to 2014 (CPUE = 137.7 fish/hr). The size distribution showed a large proportion of fish in the 6 to 7 inch range with limited stock of juvenile fish encountered. The abundance of 8 to 10 inch crappie found in 2014 have either been harvested by anglers or have been lost to natural mortality. Anglers have caught some decent crappie in the past while fishing on Woodstock Pond. All black crappie were weighed to provide data for relative weight calculations. The stock-sized fish yielded a relative weight value of 92 which showed a large decline from 2014 (Wr = 102). The 15 quality-sized crappie provided a relative weight value of 88 which was below the desired range of 95–100 and show the crappie are not finding sufficient amounts of forage to support their current population level. Very few anglers are interested in catching 6 to 8 inch black crappie, but harvest of these fish should create better growth potential for any surviving fish.

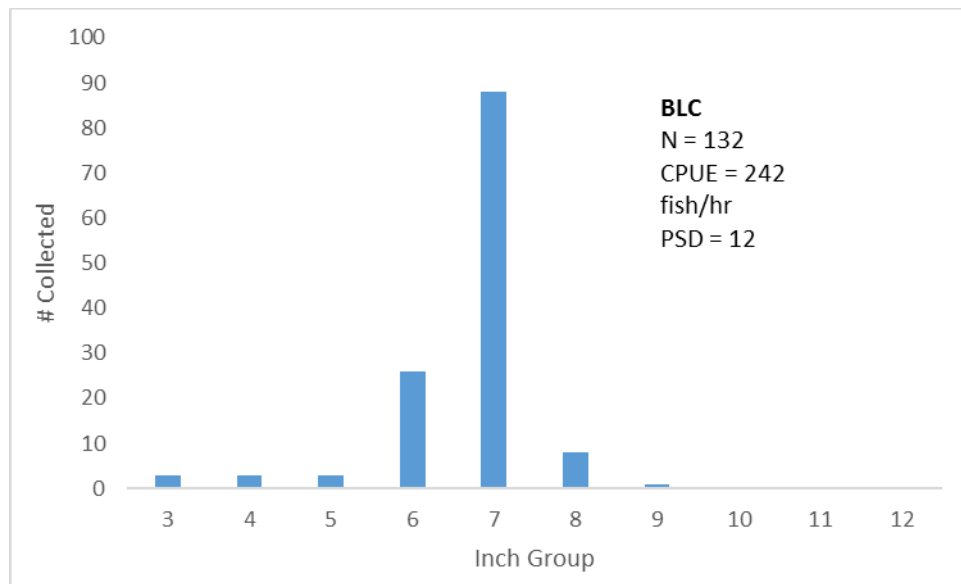


Figure 3. Length frequency of black crappie collected from Woodstock Pond on April 23, 2018

Additional Species

The pond has some additional diversity in the form of American eels and golden shiners. Each of these species was collected in limited abundance and may provide some excitement to an angler from time to time. The survey collected nine American eels that measured from 8.5 to 16.7 inches. No grass carp were encountered during the survey. Past surveys have revealed a few extremely large grass carp from past stocking efforts. Anglers should carefully release any grass carp if they happen to catch one while fishing Woodstock Pond. The survey collected 12 golden shiners that ranged in size from 5.2 to 9.1 inches. The golden shiner forage base, although somewhat limited in abundance, will provide extra nourishment to the largemouth bass and black crappie populations.

Summary

An electrofishing survey provides a snapshot picture of what the fishery looks like at any given time. A fair assessment of the present fish assemblage can be acquired during the typical shoreline survey in impoundments that are relatively shallow. A great number of variables interact on a fishery and can influence the population structure of a desired species such as the largemouth bass. The 2018 survey revealed a largemouth bass catch rate of 113 fish/hr. This catch rate was slightly less than the last two surveys of the pond, but the size structure was the best we have seen. The catch rate of preferred-sized bass (≥ 15 inches) was extremely impressive at 48 fish/hr. This catch rate was a combination of ideal timing to hit the survey right when the bass were in a pre-spawn pattern of setting up shop along the shoreline. Woodstock Pond had the highest CPUE-preferred of all the small impoundments sampled in Region 1 during 2018. The size distribution of all of the 16 to 19 inch bass was one of the sampling highlights from Region 1, District 1 in 2018. The largest bass of 21.97 inches and 6.63 pounds was also very impressive. The current bass regulation is set at a minimum of 15 inches in case any angler wants to harvest a bass.

The survey revealed an increase in bluegill abundance. The catch rate of 652 bluegill/hr showed an improvement from 2014 (CPUE = 501.6 bluegill/hr). The majority of the collected bluegill were in the 2 to 6 inch range with no bluegill cracking the 7 inch mark. The survey was similar to past years with some quality redear sunfish in the 6 to 8 inch range, but no larger redear sunfish in the 10 inch range were encountered. Limited recruitment of juvenile redear sunfish is an issue that will hopefully be addressed with the continued stocking of redear sunfish fingerlings. The black crappie population showed a tight distribution of collected fish stuck in the 6 to 7 inch range. These fish might be from a strong year class instead of being an assortment of stunted, old fish. The 2018 survey did not reveal any larger crappie as the best it could do was a 9.29 inch fish.

Anglers can fish from the bank or from rented row boats. Shoreline angling access is best off of the dam. Several fishing platforms and piers have also been constructed.

Boat rentals offer anglers a chance to try their fishing luck or skills in areas of the pond not accessible from the shore. Private boats are not permitted on Woodstock Pond.

York River State Park can be reached by taking Route 607 from I-64. Heading in the direction of Croaker, take Route 606 east to the park. For further information, please contact the park office at 757-566-3036. For any questions regarding the fishery within Woodstock Pond, please contact Scott Herrmann at DGIF (804) 829-6580 ext 126.