# Woodstock Pond
# 2012 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 October 11, 2011. The pond was last sampled on May 7, 2008. A full community sample was conducted to observe the present fishery. The electrofishing effort of 2,330 seconds (0.647 hours) 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. The water temperature was 19.3°C. 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 be limited to only six species: largemouth bass, bluegill, redear sunfish, black crappie, American eel and white catfish.

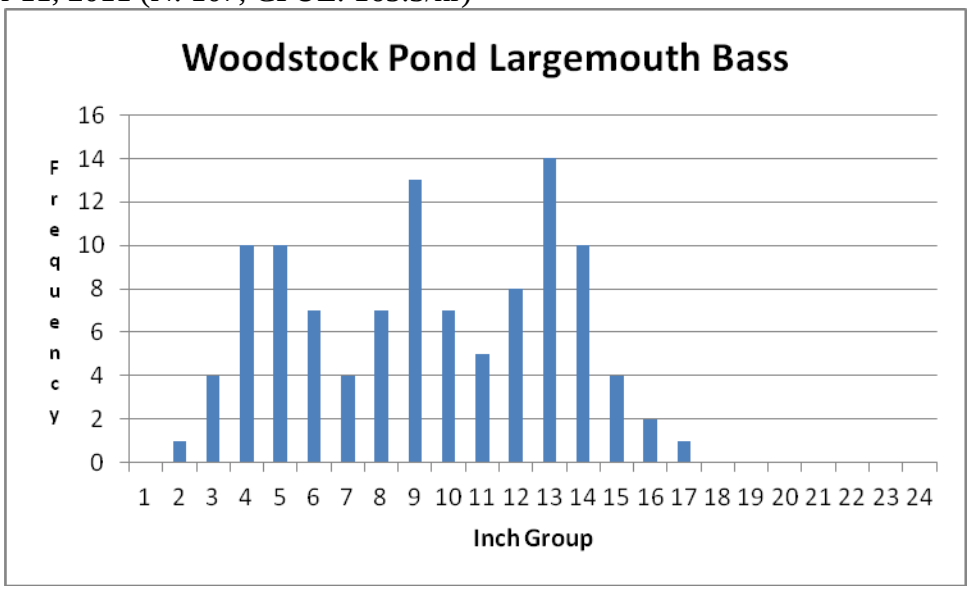
**Largemouth Bass**

Woodstock Pond provides a decent bass fishery for a small resource. A total of 107 largemouth bass were collected. The expanded CPUE (Catch Per Unit of Effort) for largemouth bass was 165.3 bass/hr. The catch rate showed a major increase from the 2008 survey (CPUE: 64.5 bass/hr). The size distribution of the collected bass can be seen on the enclosed length frequency graph. The majority of the bass sample consisted of fish in the 9 to 14 inch range. The high proportion of bass in this size range shows what the average fisherman will most likely be catching. A good number of bass in the 3 to 5 inch range most likely represents fish from the 2011 year class.

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 56, which is a direct reflection of the 40 quality-sized bass. The sample had a total of 71 bass that were of stock-size or larger. A balanced bass/bluegill fishery has a bass PSD value within the 40–70 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 10 is a direct reflection of the 7 preferred bass collected. The

2011 PSD value was slightly lower than the 2008 value (PSD: 74) and the RSD-P value showed a slight percentage decline from the 2008 survey (RSD-P: 11).

Figure 1. Length frequency of largemouth bass collected from Woodstock Pond on October 11, 2011 (N: 107, CPUE: 165.3/hr)

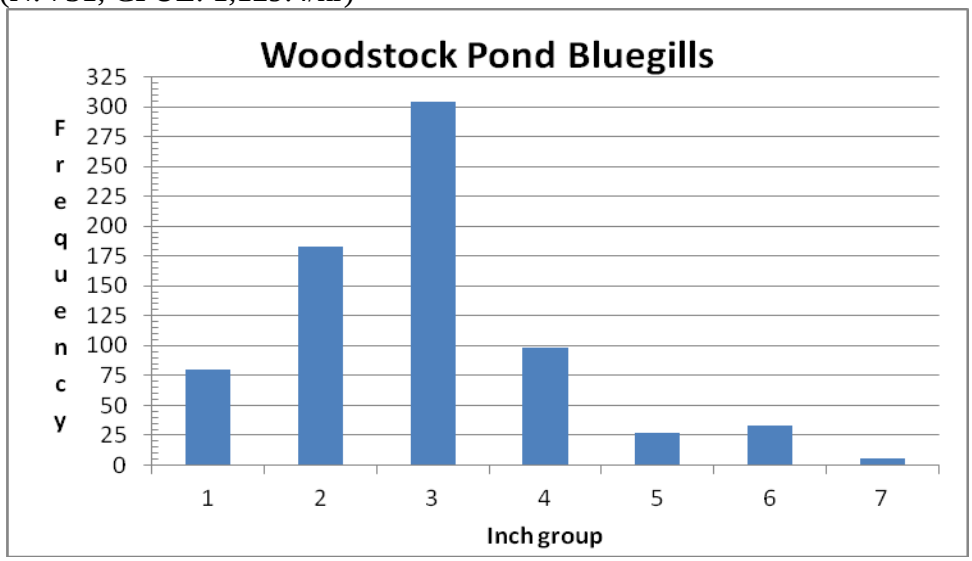



Weights were taken on largemouth bass to calculate relative weight values. Relative weight values are an indication of body condition. A value from 95 to 100 represents a fish that is in the healthy range and finding a decent amount of food. A higher relative weight value indicates fish with a better body condition. The relative weight values for stock, quality and preferred bass (>8", >12", >15") were 91, 92, and 87 respectively. These values show a decline from the 2008 survey (stock: 94, quality: 94, and preferred: 109). The 2011 relative weight values are below the desired range and provided further evidence that the forage base is insufficient to provide adequate size forage for the abundant bass population. The largest bass measured 17.6" and weighed 2.73 lbs.

**Bluegills**

The electrofishing survey showed an abundant bluegill population exists within Woodstock Pond. The survey collected an impressive total of 731 bluegills. The expanded CPUE of 1,129.4 bluegills/hr is well above the 2008 catch rate (373.5 f/hr) and the highest bluegill catch rate of any Region 1 water sampled in 2011. The size distribution can be seen on the attached length frequency graph. The length frequency graph shows the population to have an abundance of bluegills in the 2 to 4 inch range with limited numbers of fish greater than 6 inches. The PSD for bluegills is the proportion of bluegills over 8 cm (stock size) that are also at least 15 cm (quality size). The 2011 bluegill PSD value was only 9. This value describes the collection of 38 quality-sized bluegills from the collection of 440 stock-sized bluegills. The 2008 bluegill PSD value was 57 based on the collection of 173 stock-sized bluegills in which 98 of them were of quality-size in the 6 to 8 inch range.

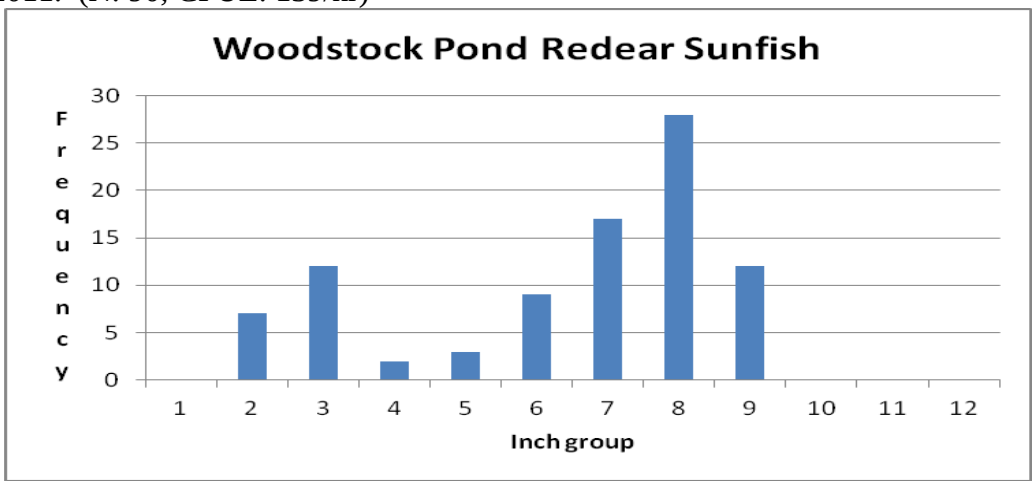
Figure 2. Length frequency of bluegills collected from Woodstock Pond on October 11, 2011. (N: 731, CPUE: 1,129.4/hr)




**Redear Sunfish**

The electrofishing survey showed the redear sunfish population was primarily dominated by fish in the 7 to 9 inch range. The survey results showed an increased abundance with 90 redear sunfish collected. The expanded CPUE of 139/hr is higher than the 2008 survey (CPUE: 90/hr). Past surveys have shown limited recruitment of juvenile redear sunfish less than 5 inches in length. This was not the case as the 2011 survey revealed the presence of decent year class of juvenile fish in the 2 to 4 inch size range. This assemblage of redear sunfish managed to survive being prey to the abundant bass population. The largest redear sunfish measured 248 mm (9.76") in length. Woodstock Pond provides anglers a great opportunity to catch some quality-sized redear sunfish.

Figure 3. Length frequency of redear sunfish collected from Woodstock Pond on October 11, 2011. (N: 90, CPUE: 139/hr)

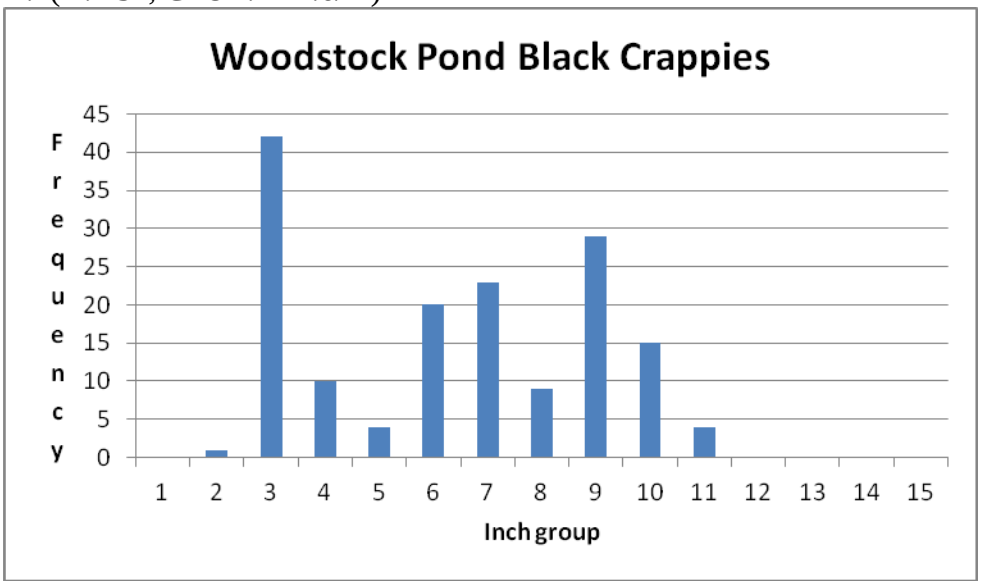



**Black Crappies**

The survey revealed the presence of 157 black crappies for a CPUE of 242.6/hr. This catch rate showed a major increase when compared to the 2008 survey (CPUE:

57/hr). The abundance of black crappies within Woodstock Pond is being driven by several great year classes of recruitment. The size distribution showed a large proportion of fish that anglers can take advantage of and harvest if they so desire. There was an abundance of crappies in the 6 to 8 inch range as well a large assemblage of fish in the 9 to 11 inch range. The largest black crappie measured 11.5 inches and weighed 0.84 lbs. Anglers have caught some decent crappies in the past. Anglers that are fishing Woodstock Pond for the first time may be pleasantly surprised by the decent black crappie fishing and the quality redear sunfish population. All black crappies were weighed to provide data for relative weight calculations. The stock-sized fish yielded a relative weight value of 90. The quality-sized crappies provided a relative weight value of 89 and the preferred-size crappies had a relative weight value of 88. These values are less than the desired range of 95–100 and show that these fish are having some difficulties in finding enough forage that they can successfully consume.

Figure 4. Length frequency of black crappies collected from Woodstock Pond on October 11, 2011. (N: 157, CPUE: 242.6/hr)




**Additional Species**

The pond has some additional diversity in the form of American eels and white catfish. Each of these species was collected in limited abundance and may provide some excitement to an angler from time to time. The survey was able to collect 4 American eels that ranged in size from 17 to 22 inches. The one white catfish that was collected measured in at 10.7 inches and weighed 0.53 lbs. Electrofishing surveys in the past have collected and observed several grass carp. No grass carp were observed during the 2011 survey. The grass carp were stocked a number of years ago to assist in the control of aquatic vegetation. Anglers should carefully release these fish if they happen to catch one while fishing Woodstock Pond. Past surveys have shown a limited population of golden shiners. The abundance and size structure of any shiners that may still be alive is not known at this time due to the lack of shiners in the collection. The abundance of bass and black crappies will surely have an impact on the survival rate of any naturally produced golden shiners.

**Summary**

An electrofishing sample gives you a snapshot picture of what the fishery looks like at any given time and a fairly accurate account of the fish assemblage that is present. 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 2008 survey showed a decent largemouth bass population (CPUE: 64.5/hr). The 2011 survey showed a major increase in the catch rate of bass (CPUE: 165.3/hr). The size distribution was similar to 2008 with an abundance of bass in the 11 to 14 inch range, but it also showed a large assemblage of fish in the 8 to 10 inch range. Only 7 preferred-sized bass (> 15") were collected. The limited number of bass greater than 15 inches may be a direct result of angler harvest. The current bass regulation limit is set at a minimum of 15 inches. All preferred-size bass were tagged with a floy tag. The specific data for each fish can be found within Table 1. Anglers are encouraged to leave the tags in place when releasing these fish. Anglers can call the DGIF office at (804) 829-6580 ext 129 to report the catch along with the tag number and size of the fish.

The survey revealed an abundance of bluegills present with a catch rate of 1,129.4 bluegills/hr. The majority of the collected bluegills were in the 3 to 5 inch range. The survey was similar to past years with some quality redear sunfish in the 7 to 9 inch range. The black crappie population appears to be rather abundant with a catch rate of 242.6 crappies/hr. Besides juvenile crappies from the 2010 spawn, there appears to be a few good year classes driving the population with a bulk of the sample consisting of fish in the 6 to 8 inch range and another more favorable group of fish in the 9 to 11 inch range.

Anglers can fish from the bank or from rented row boats. Shoreline angling access is best off of the dam where several fishing platforms and piers have 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. The park caters to a wide variety of activities. There are various trails for biking, hiking, and horseback riding. There are picnic shelters, playgrounds, an interpretive center, and a gift shop. Organized group activities are also offered.

Table 1. Floy tag numbers and corresponding length and weight data for the preferred bass collected from Woodstock Pond on October 11, 2011.

| Tag # | TL (inches) | Wt (lbs.) | TL (mm) | Wt (g) |
|---|---|---|---|---|
| **1525** | 16.46 | 2.321 | 418 | 1056 |
| **1526** | 15.04 | 1.571 | 382 | 714 |
| **1527** | 15.63 | 1.822 | 397 | 828 |
| **1528** | 16.02 | 1.993 | 407 | 906 |
| **1529** | 17.64 | 2.732 | 448 | 1242 |
| **1530** | 15.94 | 1.795 | 405 | 816 |
| **1531** | 15 | 1.575 | 381 | 716 |

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 129.