



## **Chandler's Millpond 2013 Fisheries Management Report**

### **Virginia Department of Game and Inland Fisheries**

Chandler's Millpond is a picturesque 75-acre impoundment located in Westmoreland County in the "Northern Neck" of Virginia. The Sturman family originally built the millpond around 1670 on Cat Point Creek. Several individuals privately own the pond, but the Department of Game and Inland Fisheries has an agreement with them to allow public fishing. The dam was breached in September 1993 during a large storm event, which deposited up to 16" of rain in some parts of the watershed. During the winter of 1994-1995, the dam was rebuilt and a Denil fish ladder was added to accommodate potential spawning runs of river herring that historically ascended the stream. The pond was restocked with bluegill, largemouth bass, redear sunfish and channel catfish and was closed to fishing to allow these fish to establish a self-sustaining population. The pond was re-opened to public fishing on July 1, 1998. The pond is located off of Route 3, approximately one mile west of Montross. The pond has an average depth of about 6 feet. The shoreline has abundant habitat in the form of fallen trees and patches of lily pads. The boat ramp and courtesy pier are open to fishing 24 hours a day, seven days a week. There is currently a 12 to 15 inch slot limit with a creel limit of 5 bass per day. No bass between 12 and 15 inches in length can be harvested or in possession. Anglers can harvest up to the creel limit of 5 bass per day as long as the bass are less than 12 inches or greater than 15 inches.

The Virginia Department of Game and Inland Fisheries sampled Chandler's Millpond on April 10, 2012. The electrofishing effort of 2,400 seconds (0.66 hour) was used to attain a representative sample of the present fishery. Two 20-minute sample runs were conducted along the shoreline. The first survey run was conducted within the eastern creek arm. The second survey run was conducted within the western creek arm. A total of 12 fish species were collected. This report will concentrate primarily upon the largemouth bass, bluegill, black crappie and redear sunfish that were collected.

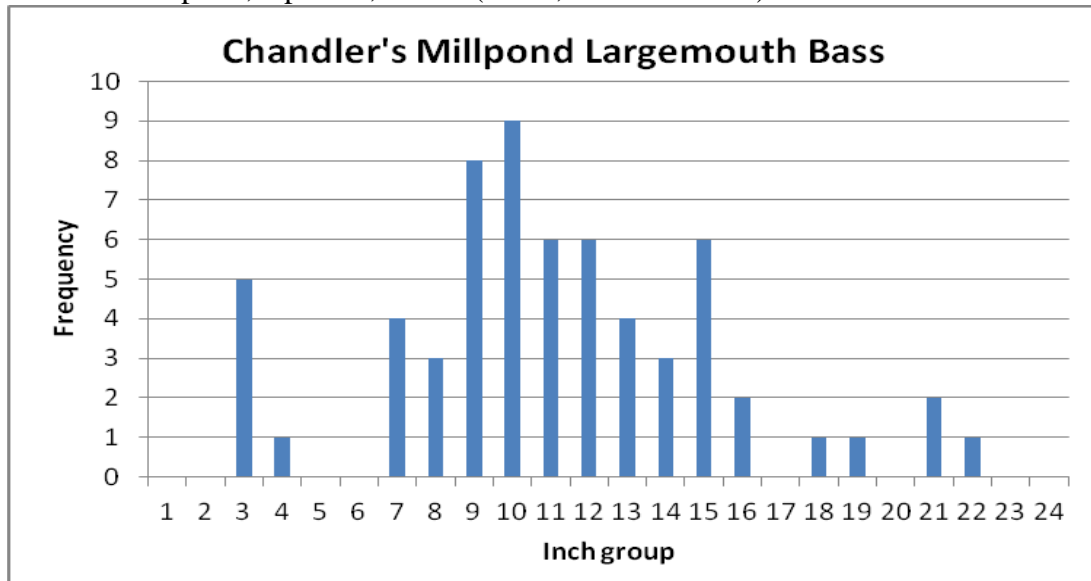
Table 1. Summary of the primary fish species collected by electrofishing of Chandler's Millpond, April 10, 2012.

<b>Species</b>	<b># Collected</b>	<b>Largest Length</b>	<b>Average Length</b>
Largemouth Bass	62	22.09"	11.48"
Bluegill	374	8.35"	5.09"
Black Crappie	27	11.89"	8.8"
Redear Sunfish	81	8.78"	6.6"

## Largemouth Bass

The largemouth bass fishery appears to be in decent shape. The electrofishing sample collected 62 largemouth bass for a CPUE (Catch Per Unit of Effort) of 93 f/hr. This catch rate showed a slight increase from the 2011 sample (CPUE: 90 f/hr). The size distribution of collected bass is represented on the histogram below. The sample consisted of 13 preferred-sized bass that measured 15 inches or greater. The 12 to 15 inch slot limit on largemouth bass appears to have been protecting bass at least on the lower end of the slot. The sample showed a total of 36 bass below the slot limit. The largest bass measured 22.09 inches and weighed 4.96 pounds. Chandler's Millpond has historically produced some larger bass in the 6 to 8 pound range, but the 2012 survey was unsuccessful in finding any of them.

Figure 1. Length frequency of largemouth bass collected from electrofishing of Chandler's Millpond, April 10, 2012. (N: 62, CPUE: 93 f/hr)



Fisheries biologists of the past established certain size classifications to describe the fish they collected. It is through these size classifications that population dynamics are analyzed. The size designations are stock, quality, preferred, memorable, and trophy. 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). A balanced bass/bluegill fishery has a bass PSD value within the 40–70 range. 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. 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 PSD and RSD-P values represent the distribution of collected fish, but one must take into account the total number of bass collected along with the total of stock-sized bass in the sample.

The survey revealed a PSD value of 52. This showed a slight decline from the 2011 survey (PSD: 59). The 2012 PSD value is a direct reflection of the 27 quality-sized bass that were collected. The sample had a total of 52 bass that were stock size or larger.

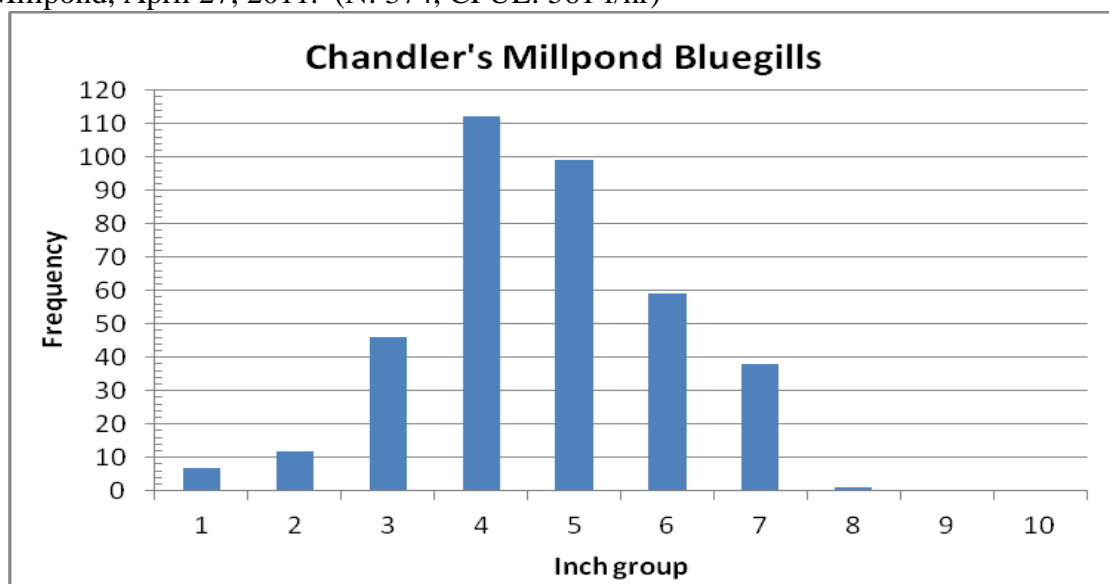
This PSD value is within the desired range of 40–60 that represents a balanced bass fishery. The 2012 RSD-P value of 25 is a direct reflection of the 13 preferred-sized bass collected. This value showed an increase when compared to the 2011 survey (RSD-P: 16).

All collected largemouth bass were weighed 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, preferred and memorable bass (>8", >12", >15", >20") were 95, 96, 97 and 93 respectfully. These relative weight values showed some improvements from the 2011 values (stock: 92, quality: 92, preferred: 97), but a decline for the three memorable sized bass (2011 Wr: 98). The 2012 relative weight values show that the bass are finding enough prey items to reach to or close to the desired relative weight range. The bass population must be monitored on a regular basis to verify whether or not a stock-piling of the bass below the slot is occurring.

### Bluegills

The 2012 survey collected a total of 374 bluegills (CPUE: 561 f/hr). This catch rate showed a major increase when compared to the 2011 survey (CPUE: 405 f/hr). The 2012 size distribution was nothing to write home about with the majority of the bluegills within the 4 to 6 inch range. A fair abundance of 7 inch bluegills and one 8 inch bluegill were collected. The PSD for bluegill is the proportion of stock-size bluegills over 8 cm (3.15") that are also a quality size of at least 15 cm (5.9"). The bluegill PSD value was 28 and falls within the desired 20 to 40 range that would represent a balanced fishery. This PSD value showed an increase from the 2011 survey (PSD: 24). Anglers will be able to have a fair chance at catching decent numbers of bluegills even though the overall size structure of the population is not as attractive as past years.

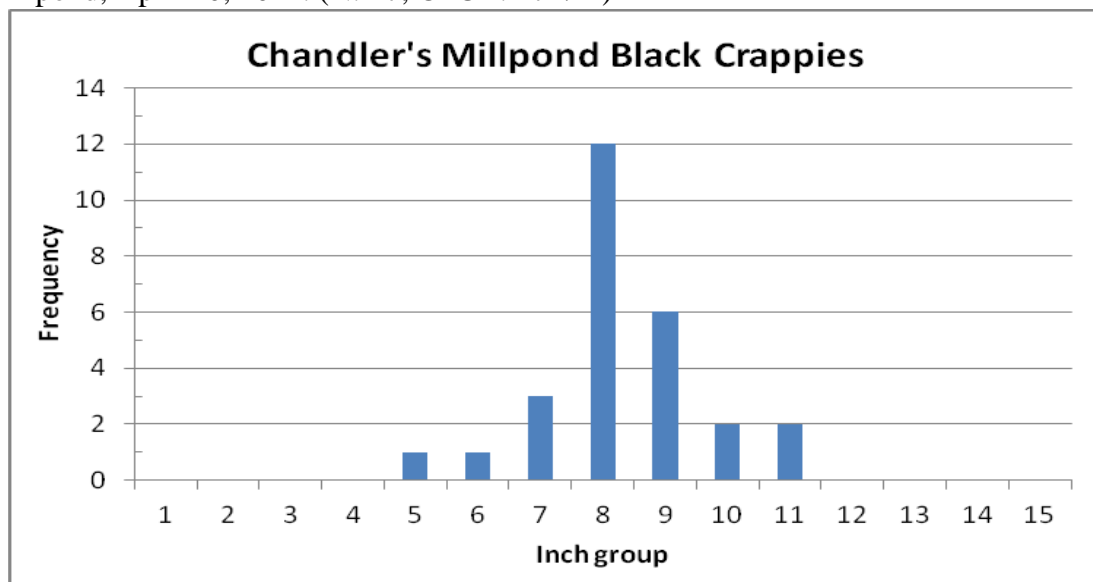
Figure 2. Length frequency of bluegills collected from electrofishing of Chandler's Millpond, April 27, 2011. (N: 374, CPUE: 561 f/hr)



### Black Crappies

The sample collected a total of only 27 black crappies (CPUE: 40.5 f/hr). This catch rate showed a favorable increase from the 2011 survey (CPUE: 30 f/hr). The 2012 crappie distribution ranged from 5 to 11 inches with the majority of fish in the 8 to 9 inch range. There appears to be limited recruitment occurring with only 2 crappies less than 7 inches collected. Electrofishing for crappies tends to be hit or miss, depending on the location of schooling fish. The crappies were weighed to evaluate their relative weights. The relative weight values for stock, quality and preferred-sized crappies (>5", >7.9" and >9.8") were 86, 86 and 79 respectfully. These values are well below the desired range of 95 to 100. These low relative weight values indicate that the crappies are experiencing difficulties in finding adequate forage. The 2012 relative weight values were similar to the 2011 survey (stock: 86, quality: 86 and preferred: 83). The only difference noted was the decline in relative weight value (Wr: 79) from the 4 preferred-sized crappies. The black crappies would most likely be happy to eat any small bait that swims their way.

Figure 3. Length frequency of black crappies collected from electrofishing of Chandler's Millpond, April 10, 2012. (N: 27, CPUE: 27 f/hr)

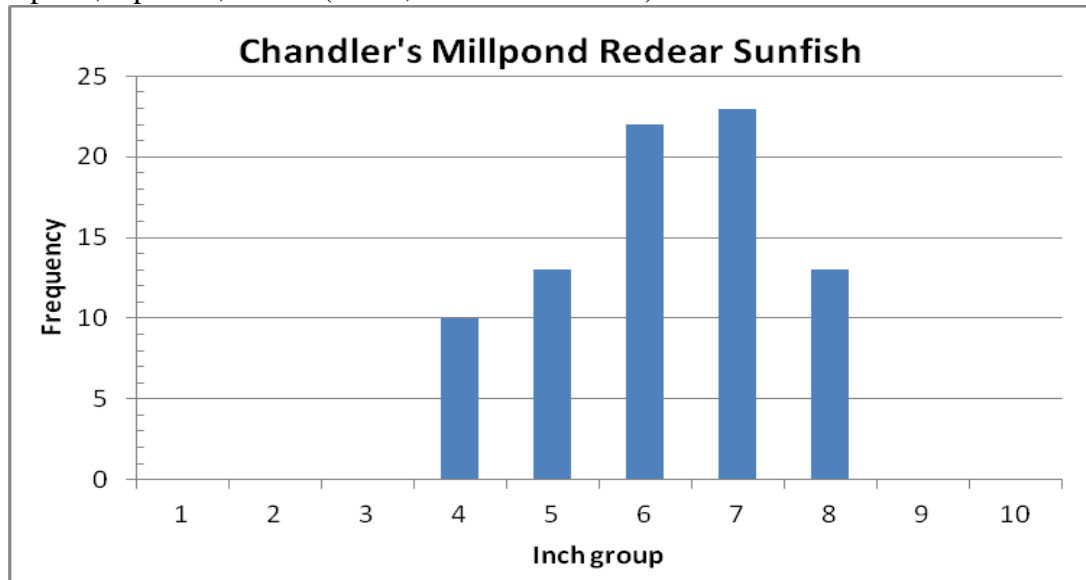


### Redear Sunfish

The sample collected a total of 81 redear sunfish (CPUE: 121.5 f/hr). This catch rate showed an increase from the 2011 survey (CPUE: 85.5 f/hr). The collected redear sunfish showed a limited distribution range from 4 to 8 inches. The majority of fish were in the 6 to 7 inch range. These larger fish will provide most of the action for anglers targeting the sunfish fishery. The large proportion of the redear catch came from the western shoreline of the eastern creek arm. These fish were near the banks in about two feet of water in a pre-spawn pattern most likely looking for suitable spawning areas. The fishery has shown the ability over the years to produce a decent number of redear sunfish in the 7 to 8 inch range. The redear sunfish collection is similar to past surveys in showing very low recruitment of juvenile fish. No redear sunfish less than 4 inches in

size were collected. The foraging ability of the largemouth bass and black crappie populations most likely limits the survival of any redear sunfish juveniles.

Figure 4. Length frequency of redear sunfish collected from electrofishing of Chandler's Millpond, April 10, 2012. (N: 81, CPUE: 121.5 f/hr)



### **Additional Species**

The sample collected a total of 12 fish species. In addition to the above listed species, there were seven species collected in limited abundance. These species were channel catfish, creek chubsucker, flier, white perch, chain pickerel, golden shiner and warmouth sunfish.

The survey collected 4 channel catfish that ranged in size from 12.5 to 13.4 inches. Chandler's Millpond has a limited channel catfish fishery that can produce some quality fish. Anglers have reported catching channel catfish in the 6 to 8 pound range. Two creek chubsuckers of 8 and 9.5 inches were collected. The survey collected five flier sunfish that measured in the 4 to 6 inch range. One rather large white perch of 10.5 inches was collected. A total of 3 chain pickerel (13 to 18 inch range) were collected. The survey collected 3 golden shiners and 1 warmouth. These species will provide some diversity to the fishery and surprise an angler from time to time.

A total of 64 gizzard shad were collected. These shad were rather large and measured in the 10 to 15 inch range. Any gizzard shad less than 12 inches in length could provide a large meal for a trophy bass. Shad over 12 inches in length are hampering the growth of sunfish species through competition for limited zooplankton.

### **Summary**

The electrofishing sample of Chandler's Millpond revealed a decent abundance of largemouth bass with a catch rate of 93 bass/hr. The catch rate of preferred bass (19.5/hr) showed an improvement from the 2011 survey (CPUE: 12/hr). The slot limit of 12 to 15 inches appears to have blended various year classes together on the length frequency distribution graph. The 2012 electrofishing survey did not provide any of the larger bass

in the 6 to 7 pound range that have recently made Chandler's Millpond an exciting fishery for anglers of the Northern Neck.

The bluegill fishery consists primarily of medium-sized fish in the 4 to 6 inch range. The pond has some potential to grow larger bluegills. A fair abundance of 7 inch bluegills were present in our sample. The pond continues to produce some decent redear sunfish in the 6 to 8 inch range. The sample of 27 black crappies showed most fish to be centered in the 8 to 9 inch range. Chandler's Millpond would be a good place to take young anglers out on a boat in hopes of catching a variety of fish species. Anglers that fish Chandler's Millpond can expect to have decent action from a variety of fish species with the main attraction being the bass fishery. An occasional channel catfish might come as a nice surprise as well. It was a slow year for citations at Chandler's Millpond as only one citation-sized largemouth bass was reported.