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Lakeview Reservoir 2020 Popular Report **Virginia Department of Wildlife Resources**

This 42-acre impoundment of Swift Creek is located in the City of Colonial Heights. The reservoir was originally constructed as a water supply impoundment, but is currently managed by the City of Colonial Heights for recreation and hydropower generation. A small park along the southern shoreline near the dam offers a fishing pier and a boat ramp for angler access. A fair amount of shoreline access is also available along the side of the parking lot. The reservoir can be defined as a riverine style impoundment with a narrow channel that snakes its way through the surrounding hillside. The fishery receives a fair amount of fishing pressure during the peak park visitation seasons of late spring and summer along with some pressure from the surrounding homeowners. The reservoir is open to fishing from sunrise to sunset. Boaters can use trolling motors only as gasoline engines use is prohibited. Lakeview Reservoir has become a popular destination for anglers fishing from a kayak or a canoe.

The Virginia Department of Wildlife Resources conducted an electrofishing survey of Lakeview Reservoir on October 6th, 2020. The previous full community, electrofishing survey was conducted on April 27th, 2018. The survey was conducted along two shoreline locations to assess the present fish assemblage. The water temperature during the survey ranged from 18.3°C to 20.3°C. Electrofishing efforts consisted of shocking along the shoreline habitat as close as possible, with the majority of the effort concentrated in the 2 to 4 foot depth range. Each survey run was 1,200 seconds in length (20 minutes). The electrofishing effort of 0.66 hour yielded 16 fish species. A total of 568 fish were collected with the vast majority of the fish gizzard shad and bluegill. This report will concentrate primarily upon the largemouth bass and bluegill populations.

Table 1. Catch rate of all fish species collected during the electrofishing survey of Lakeview Reservoir on October 6th, 2020

Species	# collected	CPUE (#/hr)	% of collection
Gizzard Shad	231	346.5	40.67
Bluegill	224	336	39.44
Largemouth Bass	53	79.5	9.33
Common Carp	18	27	3.17
Redear Sunfish	9	13.5	1.58
Bowfin	9	13.5	1.58
Yellow Perch	8	12	1.41
White Perch	3	4.5	0.52
Channel Catfish	3	4.5	0.52
Chain Pickerel	2	3	0.35
Black Crappie	2	3	0.35
Golden Shiner	2	3	0.35
Creek Chubsucker	1	1.5	0.18
Shorthead Redhorse	1	1.5	0.18
Warmouth Sunfish	1	1.5	0.18
American Eel	1	1.5	0.18
Total fish collected	568		

Largemouth Bass

The largemouth bass population within Lakeview Reservoir appears to remain in fair to decent shape. The fall survey provided 53 largemouth bass for a CPUE (Catch Per Unit of Effort) of 79 fish/hr. This catch rate showed a slight decline when compared to the 2018 survey (CPUE = 88 fish/hr). The size distribution ranged from 6 to 46 centimeters (2.4 to 18 inches). Several year classes of bass are represented in the length frequency histogram (Figure 1). The survey failed to match some of excitement found in past surveys. How much of an impact recent flooding has had on the overall strength of the bass population is hard to assess with this one-time survey. Additional surveys will be needed to draw more of a conclusion.

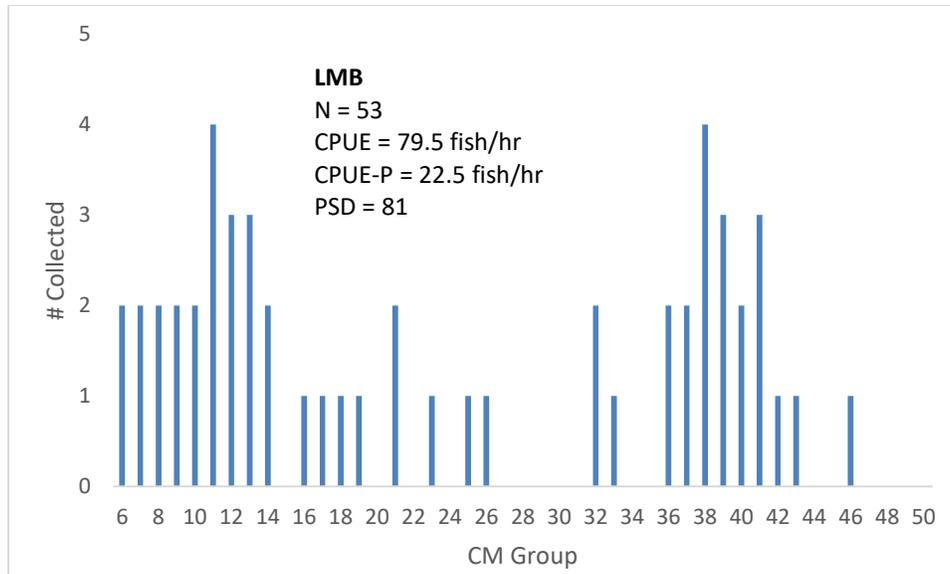


Figure 1. Length frequency of largemouth bass collected from electrofishing survey of Lakeview Reservoir on October 6th, 2020

A high number of juvenile bass in the 6 to 14 cm range were collected. These fish most likely represent the collection of Young of Year (YOY) from the 2020 spawn, with variable growth rate showing some fish growing faster than others do. Catch rates during any given electrofishing survey are highly dependent on the activity pattern of the fish as to whether or not they are within close proximity to the shoreline areas that are surveyed. Past surveys have revealed a few larger bass in the system with the largest being around 7 pounds. Deep water along the main creek channel provides plenty of habitat for larger fish to escape being detected. The 2020 survey was not nearly as productive with the largest bass measured 18.4 inches with a weight of 3.77 pounds. Our sampling efforts are just a representative picture of the fish community collected along the shoreline and various habitat structures on the survey day. The fishery has some potential to produce a limited number of trophy largemouth bass. The excessive amounts of forage fish, gizzard shad and juvenile bluegill, can make bass fishing for the average angler a bit difficult. The massive flood event of mid-August 2020 might have had some impact on the overall bass population.

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-sized). The sample provided a PSD value of 81, which is well above the desired range of 40–60 that would represent a balanced population. The 2020 PSD value revealed a large increase from 2018 value (PSD = 65). 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 2020 RSD-

P value of 56 yielded a large increase from the 2018 survey (RSD-P = 42). The catch rate of preferred-sized bass (22.5 fish/hr) showed a slight decline from 2018 (CPUE-P = 25.5 fish/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. The higher the value, the better the condition of the fish in terms of overall body mass. The relative weight values for stock, quality and preferred bass ($\geq 8''$, $\geq 12''$, $\geq 15''$) were 99, 98 and 98 respectively. The relative weight values showed a favorable increase from 2018 (stock = 92, quality = 93, preferred = 93). The increase in relative weight values may reflect decreased competition for forage due to a decline in the overall abundance of bass or possible decline in the black crappie population. The difference in survey time might also have been reflected as bass might have started to transition into their fall feeding pattern.

Bluegill and Redear Sunfish

The bluegill fishery within Lakeview Reservoir appears to consist primarily of small fish less than 12 centimeters in length (5 inches). The electrofishing survey yielded the collection of 244 bluegill (CPUE = 336 fish/hr), which showed a massive decline from 2018 (CPUE = 609 fish/hr). The catch rate of juvenile bluegill (CPUE = 87 fish/hr) failed to match the 2018 survey (CPUE = 214 juvenile fish/hr). The bluegill size distribution ranged from 3 to 16 centimeters (1.5 to 6.5 inches). The PSD for bluegill is the proportion of bluegill over 3.15 inches (stock size) that are also at least 5.9 inches (quality size). The bluegill PSD value of 2 showed a less than ideal balance to the population and fell well below the desired range of 20-40. On a positive note, the bluegill PSD did not drop any lower than what was discovered in 2018 (PSD = 2). The collection consisted of only 4 quality-sized bluegill from 166 stock-sized fish. The low abundance of bluegill greater than 6 inches in length may reflect the complications any fishery has when the bulk of the fish biomass is tied up in the production of gizzard shad. Stunted growth rates in this high flow through system may also factor into the lack of large bluegill. The level of bluegill harvest by anglers is not known at this time.

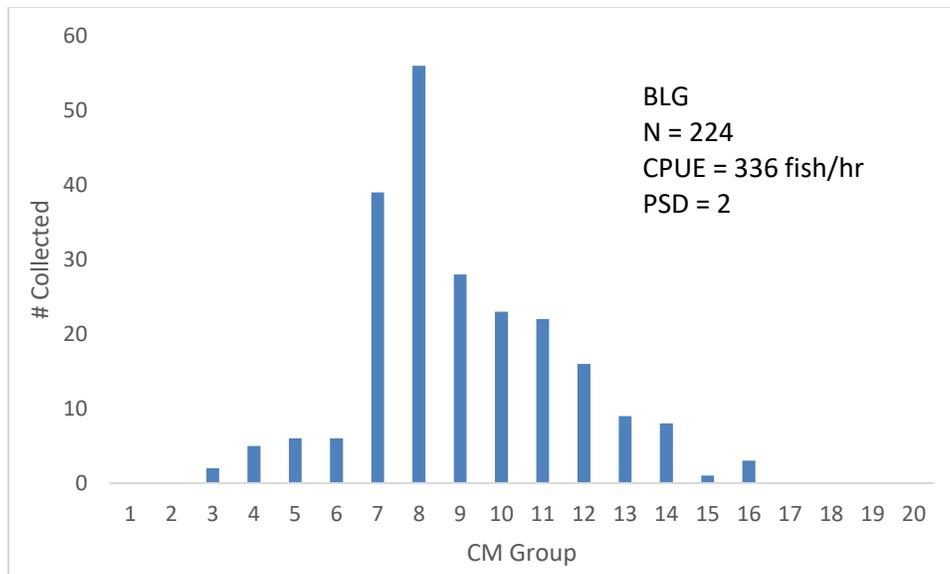


Figure 2. Length frequency distribution of bluegill collected during the electrofishing survey of Lakeview Reservoir on October 6th, 2020

The redear sunfish population is not nearly as abundant as the bluegill population, but the size structure showed some promise in producing a few larger fish. The survey collected 9 redear sunfish for a CPUE of 13.5 fish/hr. This catch rate showed a disappointing decline from the 2018 survey (CPUE = 39 fish/hr). The size distribution of collected fish ranged from 6-19 cm (2.4 to 7.5 inches). The average sized redear sunfish measured better than the collected bluegill. The 2018 survey showed some of the potential that the fishery has in growing larger redear sunfish. A redear sunfish that measured 12.09 inches with a weight of 1.33 pounds stole the show. This Frisbee shaped redear sunfish would come as a very nice surprise for any angler fishing for sunfish on Lakeview Reservoir. The limited abundance of juvenile redear sunfish less than 10 cm (4”) may be a reflection of the increased siltation of the reservoir that have created vast areas of the shallows unsuitable for fish spawning.

Common Carp and Bowfin

The Lakeview Reservoir fishery has an abundance of common carp. The survey was successfully in collecting 18 common carp for a catch rate of 27 fish/hr. This catch rate showed an increase from 2018 (CPUE = 13.5 fish/hr). Collected carp ranged in size from 58 to 79 centimeters (22.8 to 31.3 inches). The average size carp measured 25.9 inches, which was an increase from 2018 (mean TL = 23.87”). Anglers willing to try something different might want to try fishing for these strong and hard fighting fish. If you hook into a 6-pound carp, you will think you have a 12-pound bass on the end of your line. The majority of the encountered carp came from within or near the shoreline vegetation coverage in the form of water willow. Common carp will rummage through the water willow to find a variety of aquatic insects and macro-invertebrates. Carp are not a desired fish species for the majority of the angling public in the United States, but are a treasured

resource over in Europe. Past surveys on Lakeview Reservoir have encountered a few anglers fly-fishing for carp on the flats.

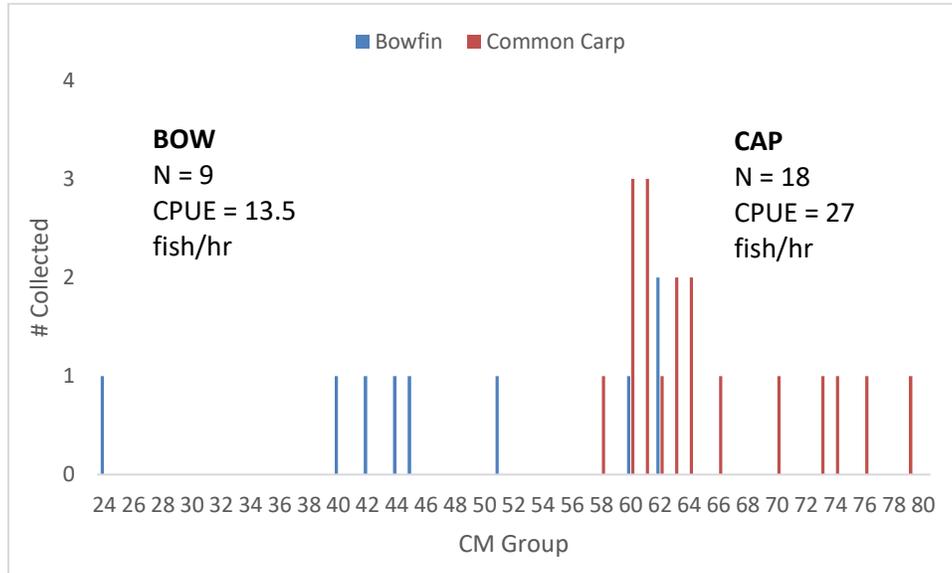


Figure 3. Length frequency distribution of common carp and bowfin collected during the electrofishing survey of Lakeview Reservoir on October 6th, 2020

The survey revealed an increased abundance of bowfin with the collection of nine fish. Past surveys have typically revealed a couple of bowfin here and there. The fall survey might have found the bowfin in a more active pattern just outside of the aquatic vegetation. Collected bowfin ranged in size from 24 to 62 centimeters (9.6 to 24.6 inches). Anglers might find some additional excitement from the bowfin population, but the chance of catching a bowfin greater than 6 pounds appears to be rather limited.

Additional Species of Interest

The electrofishing survey produced a total of 16 fish species. The species diversity is greater than most waters sampled in 2020. Refer to Table 1 on the second page of this report for the full list of collected fish species. The survey revealed a limited number of black crappie with 2 collected (CPUE = 3 fish/hr). The crappie schools were most likely holding in deeper water. Past angler reports have shown some solid potential with 2 to 2.5 pound crappie caught over the last couple of years. The 2018 survey had the largest crappie measured at 13.7 inches with a weight of 1.44 lbs. This larger crappie, and others like it, are most likely feeding upon juvenile gizzard shad produced each spring. So there is some hope of catching a larger crappie every once in a while.

The survey collected an increased abundance of gizzard shad with 231 collected (CPUE = 346 fish/hr). This catch rate showed an amazing increase from 2018, which only had 12 collected. The gizzard shad population will influence the overall growth potential of the bluegill population

due to the competition for limited food resources. The 2020 survey did not reveal any additional Northern Snakehead. Northern Snakehead were first discovered/recorded in Lakeview Reservoir during the April 27th, 2018 electrofishing survey. One snakehead of 12.52 inches and 0.62 pound was collected. Three additional small snakeheads of roughly the same size were collected and removed from the fishery on May 4th, 2018. Anglers are encouraged to contact the Region 1 office at (804) 829-6580 if they happen to catch any Northern Snakeheads from Lakeview Reservoir or any other impoundment, river, or stream within the Swift Creek, Appomattox, and James River watersheds. The 2020 survey revealed a limited collection of channel catfish. Similar to the black crappie, channel catfish can be difficult to collect if they are holding in deeper water. Lakeview Reservoir has some potential to produce some quality channel catfish.

Electrofishing Summary

Lakeview Reservoir provides fishing opportunities for anglers that live in and around the greater Colonial Heights region. Most of the fishing pressure on the reservoir appears to be from local anglers willing to get in a few hours of fishing when their schedule permits. The reservoir has a decent largemouth bass population. The majority of the better bass were collected along the northern shoreline in the middle of the reservoir. The lily pads and water willow along this stretch of the shoreline provides an attractive area for these fish to forage on bluegill and any schools of shad that bounce near the bank. Most electrofishing surveys have revealed a respectable abundance of 2 to 3 pound fish. The fishery has typically shown an abundance of gizzard shad that will interest many of the larger bass in the system. Schools of smaller shad in the 5 to 8 inch range will be consumed by a wider size range of largemouth bass. Bass anglers should try to pattern their lures to match the forage base of gizzard shad and juvenile bluegill. The bluegill population continues to be rather abundant even though a large decline in catch rate was observed. The majority of bluegill are less than 5 inches in length with very few fish ever making it past the 6-inch size mark. The average size bluegill leaves something to be desired. The redear sunfish population appears to be limited in abundance, but their size potential is greater than the bluegill population. The survey yielded a limited abundance of black crappie. The deep water within the main creek channel and in the lower basin are prime areas for schooling crappie to hide from the electrofishing boat. Dedicated crappie anglers may be able to locate some larger crappie that typically hold near downed trees. The yellow perch population appears to have serious limitations with only a few small fish observed during the survey. Lakeview Reservoir and its high flow through dynamics places limitations on the fishery's productivity. The fishery has some potential to interested anglers that are willing to put in enough time on the water to figure out the most productive fishing patterns. Anglers are encouraged to try their luck with the common carp when the bass are not cooperating.

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