

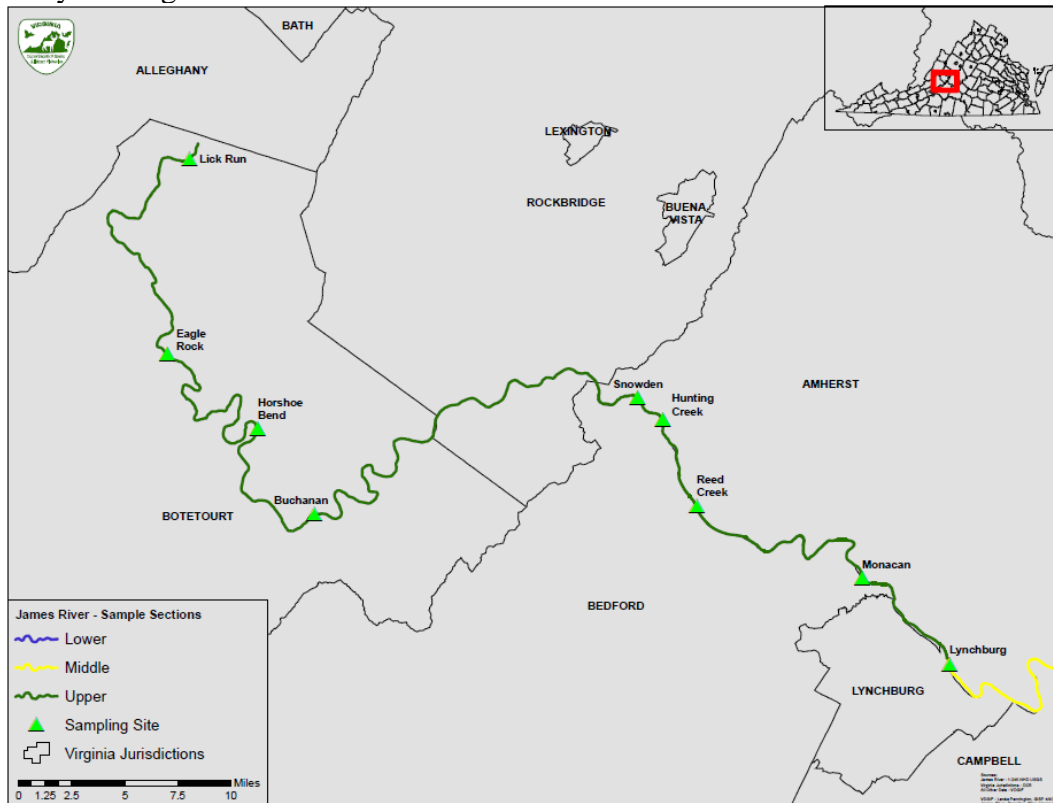


## Non-Tidal James River 2023

The non-tidal James River stretches approximately 250 miles from the confluence of the Jackson and Cowpasture rivers in Botetourt County to the fall-line near Richmond. This stretch of the James River has long been considered a top smallmouth bass fishery. In addition to smallmouth bass anglers will find opportunities to catch sunfish and catfish throughout the river as well as muskellunge in the river's upper end. Fishing regulations can be viewed online (<https://dwr.virginia.gov/waterbody/james-river-upper-middle/>) or in the table at the end of this report. Biologists routinely sample the river using boat electrofishing. Below are results from fall 2022 electrofishing surveys listed by river sections: Upper (Lick Run to Lynchburg), Middle (Lynchburg to Bosher's Dam), and Fall-line (Bosher's Dam to 14<sup>th</sup> Street).

### Upper James River (Lick Run to Lynchburg)

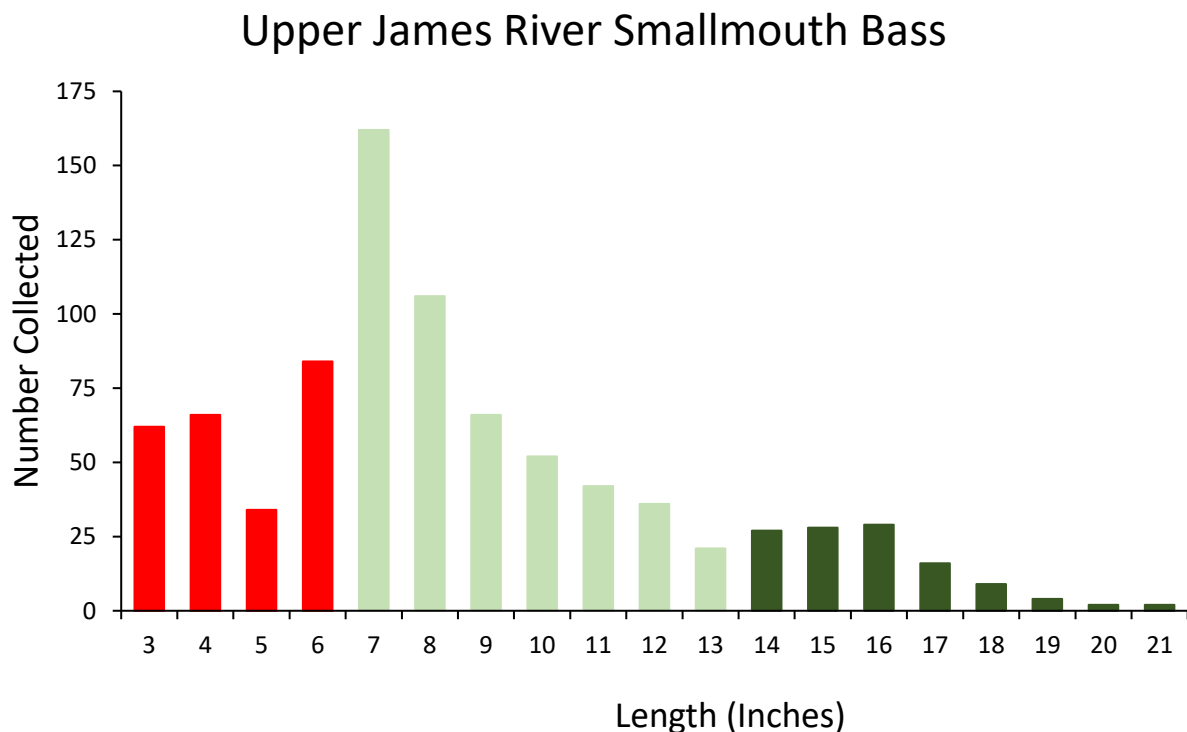
Beginning at the confluence of the Jackson and Cowpasture Rivers near Iron Gate, the upper James River flows approximately 90 miles downstream to the City of Lynchburg. Smallmouth bass, muskie, catfish, rock bass, and other sunfish species provide diverse fishing opportunities to anglers on the upper James River. To evaluate the fish community, the Virginia Department of Wildlife Resources collected fish using an electrofishing boat at multiple sites from Iron Gate to Lynchburg.



*Map of upper James River sampling sites and major access points.*

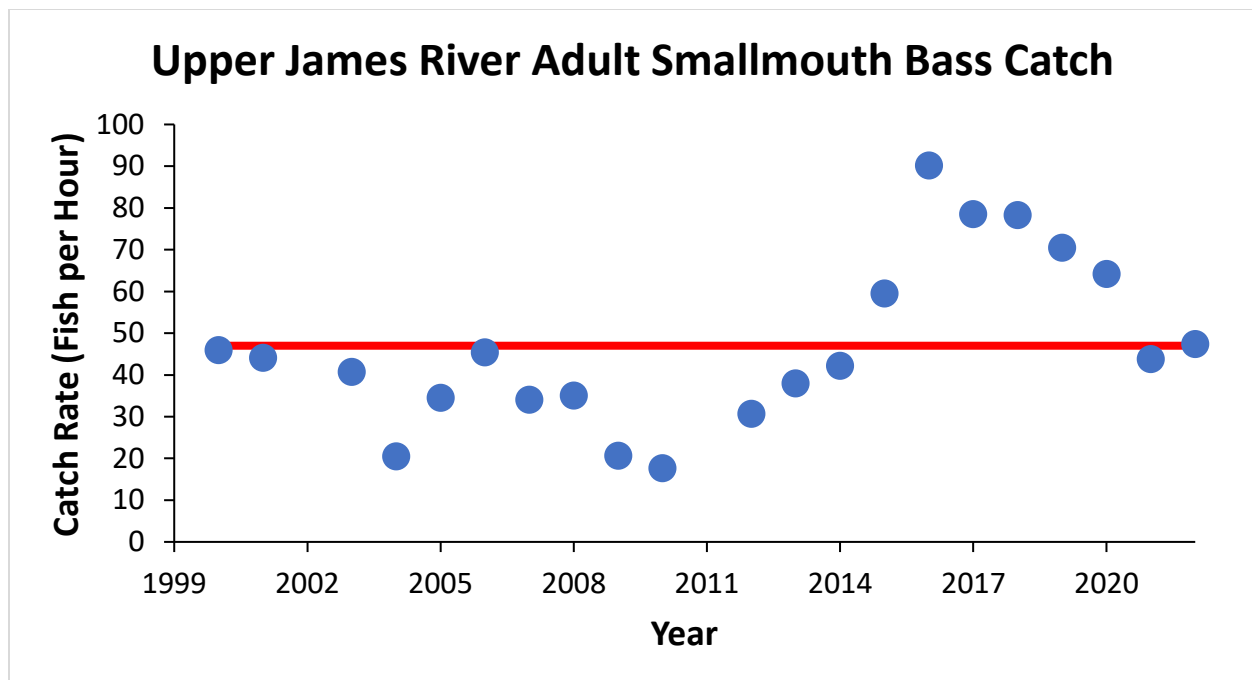
### Smallmouth Bass

Smallmouth bass, the most popular sportfish anglers seek, were the most abundant species collected in fall sampling. In 2022, 848 smallmouth bass, ranging from 3 to 21 inches, were collected. An above average spawn in 2021 has resulted in better numbers of small bass, ranging 7 to 9 inches collected in 2022. Approximately 70% of those bass are considered “catchable size” measuring 7 inches or greater. Anglers can expect to see some fish larger than 12 inches as they continue to persist from good year classes six to ten years ago. However, poor spawning success over the past 6 years has caused a noticeable decline in smallmouth bass numbers. Recreational usage of the upper James has become extremely popular. Anglers specifically targeting smallmouth bass should consider fishing in less frequented sections of the river.



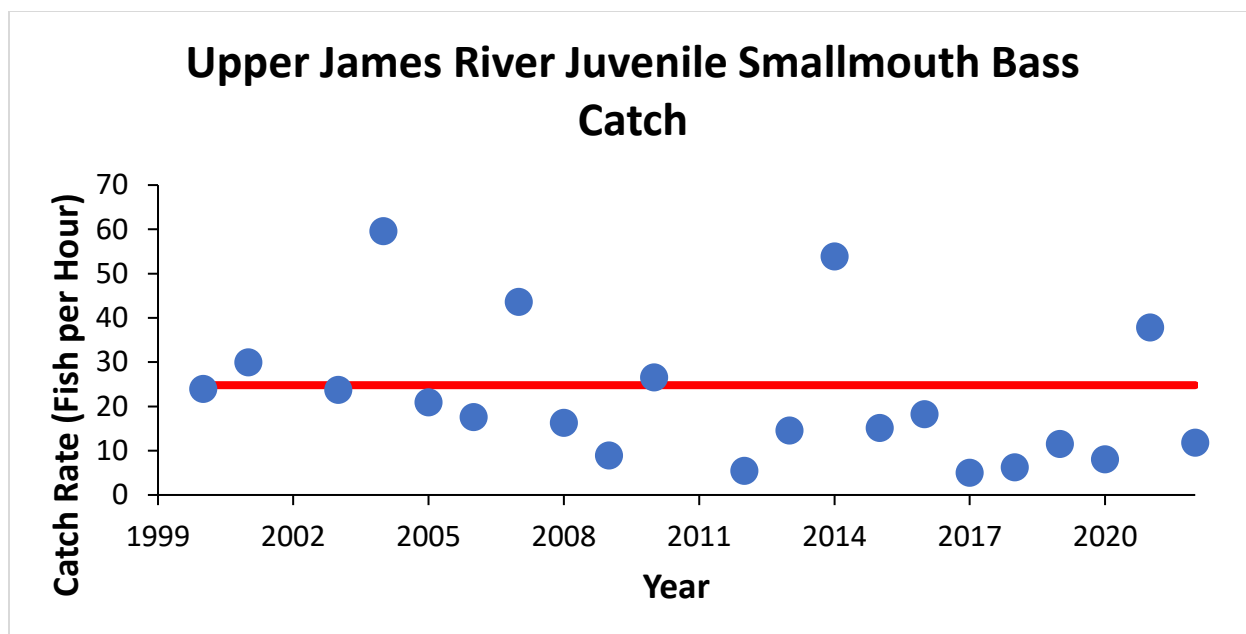
*Number and lengths of smallmouth bass collected from the upper James River in fall 2022. Juvenile bass (less than 7 inches) are represented with red bars, while adult smallmouth bass are shown with green bars. Current regulations protect smallmouth bass between 14 and 22 inches (dark green bars).*

The majority of adult smallmouth bass collected in 2022 samples were between 7 and 12 inches. Approximately 19% of adult smallmouth bass collected were 14 inches or greater and therefore protected under the current slot limit regulations. After collecting fish with electrofishing equipment, catch rates are calculated in terms of fish collected per hour. Catch rates of adult smallmouth bass averaged 51 per hour, which is slightly greater than the long-term average catch rate of 47 per hour.



*Annual catch of adult smallmouth bass (greater than 7 inches) from 2000-2022 in the upper James River, the red line represents the historic average catch rate.*

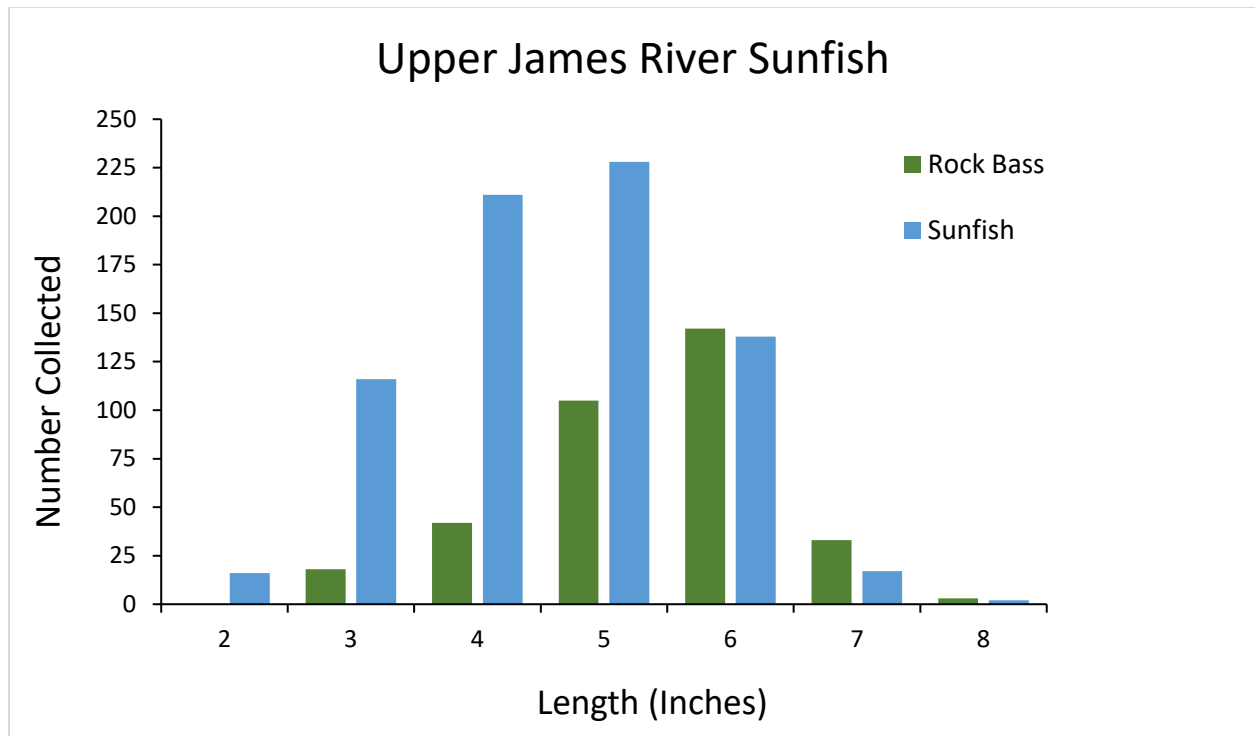
The fluctuation in catch rates over time is likely due to spawning success and juvenile survival in recent years. In the upper James River, smallmouth bass less than 6 inches in the fall are juveniles and usually 5-18 months old; meaning those individuals were born in the spring of that year or the previous year. Juvenile survival appears to be best in years with moderate June river flows and poor with high or low flows during June. Since 2000, juvenile catch rates have varied from 6 to 65 fish per hour with an average of 25 fish per hour. Unfortunately, the 2022 spawn appears to be poor with below average catches, collecting 14 juvenile smallmouth bass per hour of electrofishing.



*Annual catch of juvenile smallmouth bass (less than 7 inches) from 2000-2022 in the upper James River, the red line represents the historic average catch rate.*

### Sunfish

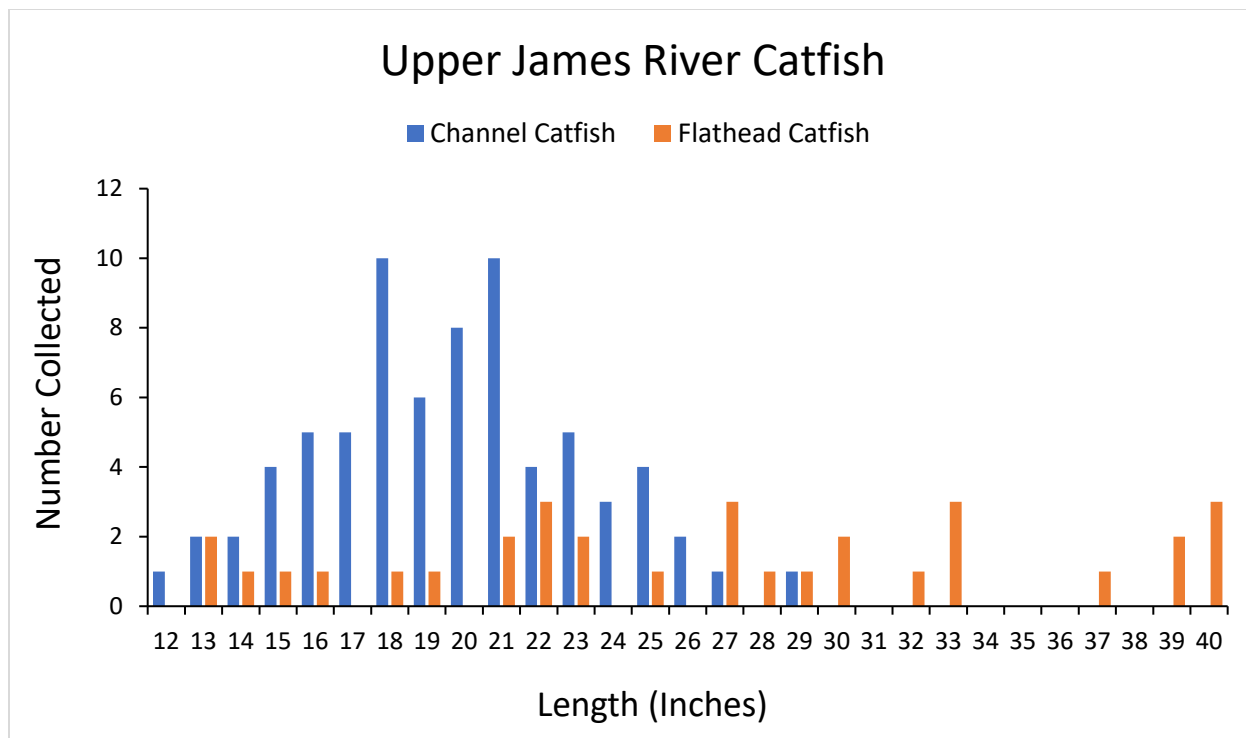
The upper James River is also home to a variety of sunfish including rock bass, redbreast sunfish, green sunfish, and bluegill. In 2022, a total of 1,072 sunfish were collected. Redbreast sunfish were the most abundant sunfish collected and ranged from 2 to 8 inches in length. Rockbass, bluegill, and green sunfish were also commonly collected and ranged from 2 to 8 inches in length. Although often overlooked, angling for sunfish can provide great entertainment, especially using light tackle or fly-fishing. Angler seeking sunfish should focus on fishing near banks, aquatic vegetation, and fallen trees. Spinners, small grubs, crickets, and worms all make excellent baits for catching sunfish.



*Numbers and sizes of rock bass and sunfish (redbreast sunfish, green sunfish, and bluegill) collected from the upper James River in fall 2022.*

### Catfish

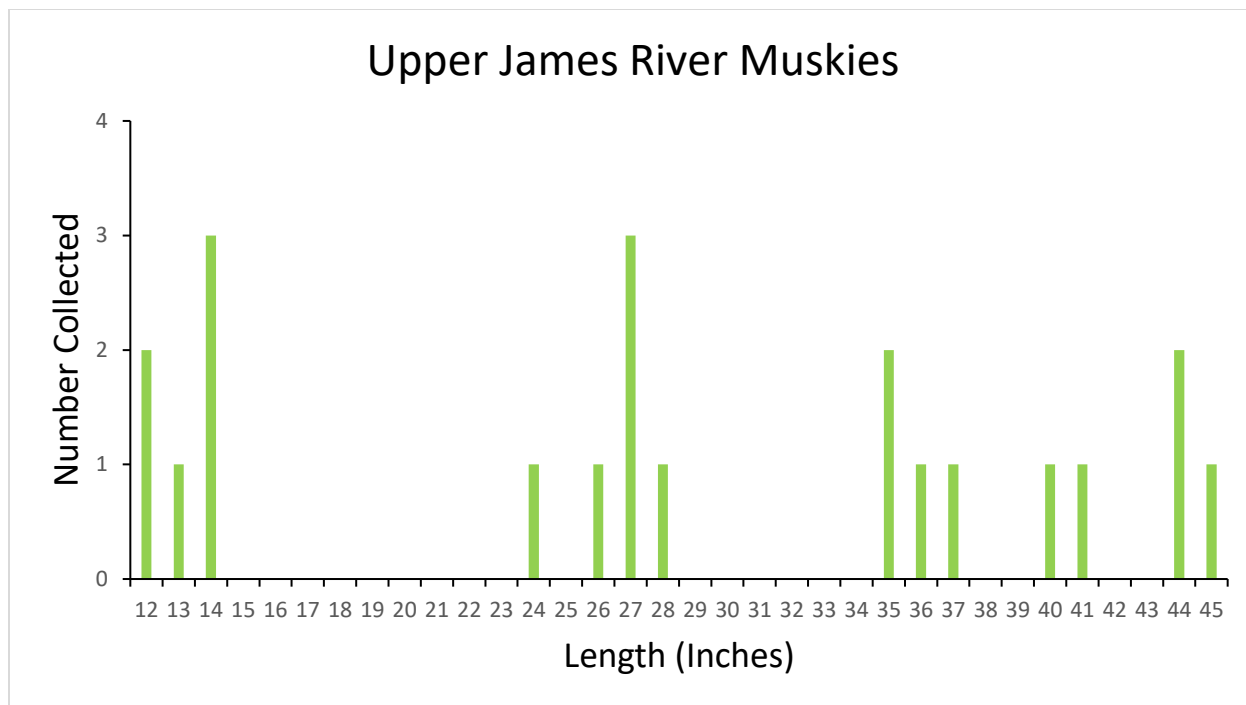
Seventy-four channel catfish and 41 flathead catfish were collected in fall 2022 samples. There are abundant numbers of catfish in the 15-25 inch range, with the potential for larger flathead catfish. Catfish can be difficult to collect using standard electrofishing equipment, so don't be discouraged by the lack of large catfish collected in 2022 samples. For the best success target deeper water. Some of the best numbers and largest sizes of flathead catfish can be found in downtown Lynchburg. Anglers fishing from the bank or a boat can land some trophy sized flatheads. There are even a few blue catfish now making their way up the river from downstream to Scott's Mill Dam in Lynchburg.



*Number and sizes of channel catfish and flathead catfish collected from the upper James River in fall 2022.*

### Muskellunge

The largest and most challenging fish to catch in the upper James is the muskie. Muskies were collected at almost all sampling sites and were most abundant in pool areas. Twenty-one muskies, ranging from 14 to 43 inches in length, were collected during fall community sampling in 2021. Six muskies collected were less than 16 inches in length. Muskies this size are considered young-of-the-year and reflect a successful spawn in spring 2022. More extensive muskie sampling is conducted during January-March each year. Results from this wintertime muskie sampling are available by contacting the Forest regional office. Muskies can be very picky so anglers often use a variety of baits throughout the year including large crankbaits, glide baits, swimbaits, spinnerbaits, and tubes.



*Number and lengths of muskellunge collected from the upper James River in fall 2022.*

For more information, please contact.

*George Palmer*

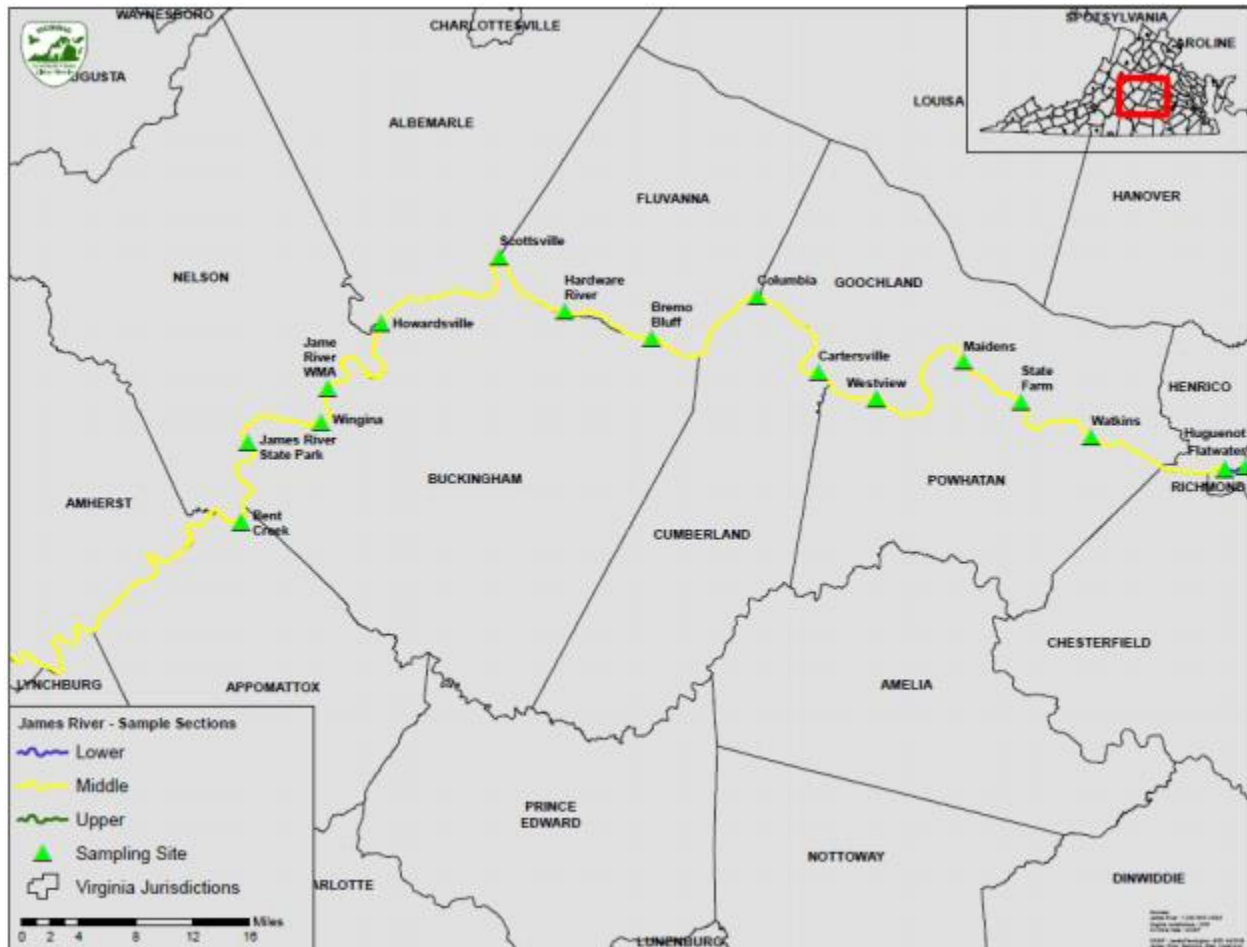
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## Middle James River (Lynchburg to Boshers's Dam)

The middle James River consists of the 130-mile portion of the river between Lynchburg and Boshers's Dam just upstream from Richmond. The middle section of the river consists of a series of shallow rocky riffles and slow deep pools. The middle river offers modest smallmouth bass action, fair numbers of sunfish, and an abundance of catfish.



*Map of Middle James River Sampling Locations and access sites*

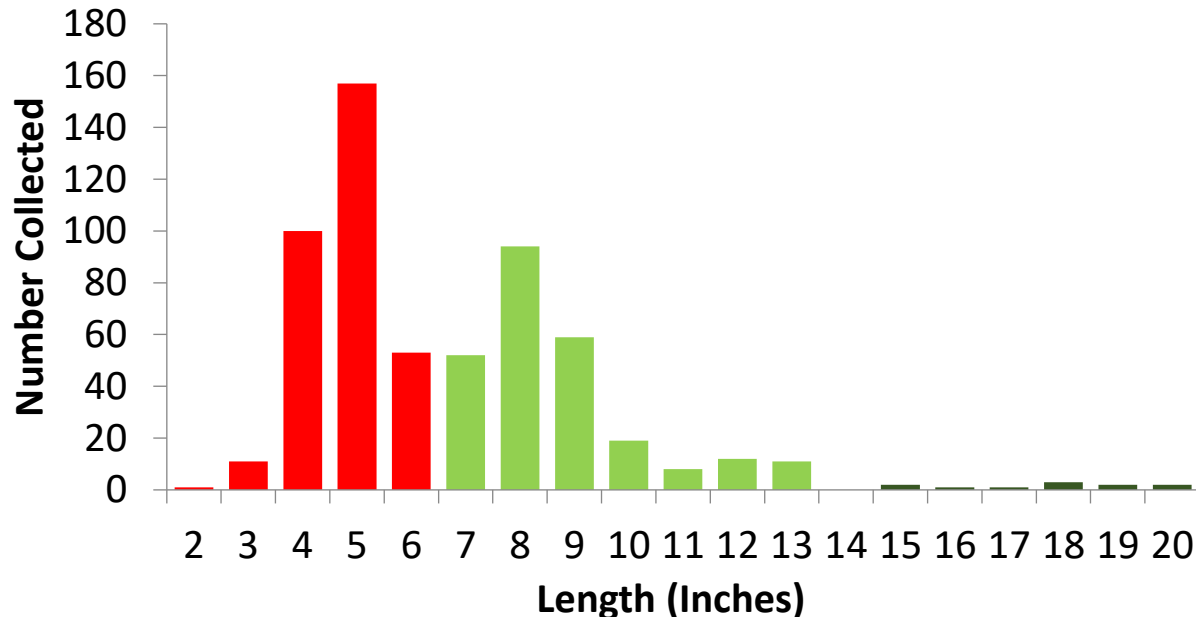


### Smallmouth Bass:

Smallmouth bass represent the dominant sportfish present in the middle river. In Fall 2022, 589 smallmouth bass were collected in this stretch, ranging in length from 2 to 20 inches.

Approximately 94% of these fish were less than 12 inches. Abundance of adult smallmouth has been low in the middle river over the last several years. However, favorable numbers of fish in the 8-9 inch range will continue to grow to larger sizes and keep anglers busy through much of 2023.

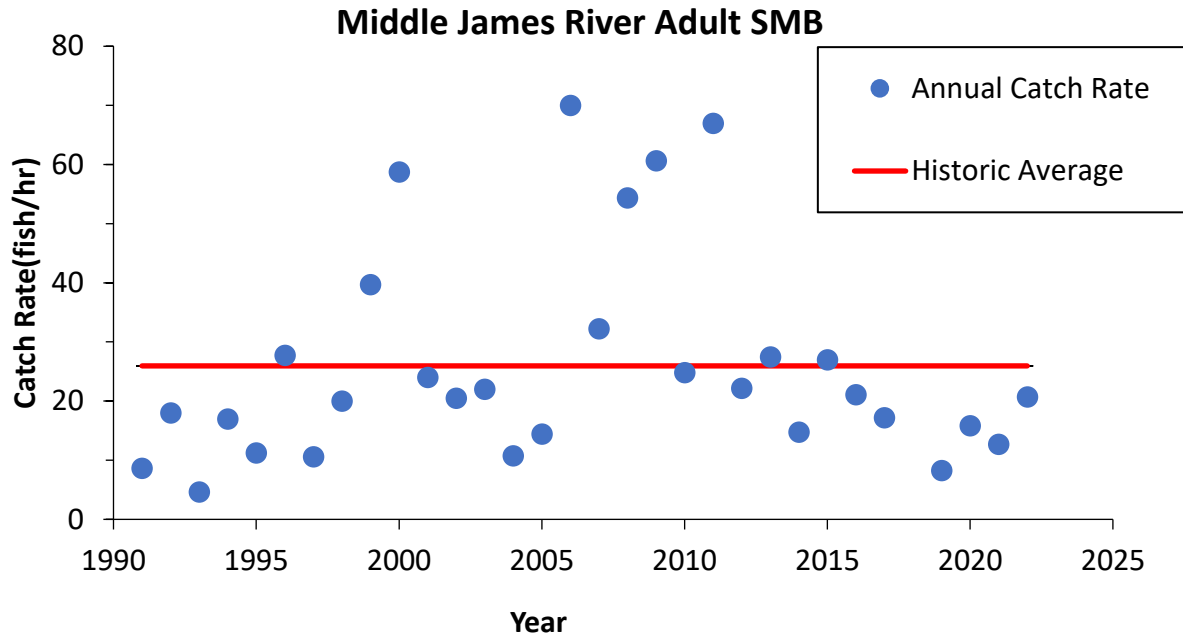
## Middle James River Smallmouth Bass 2022



*Smallmouth bass collected from the Middle James River in fall 2022 by length and number.*

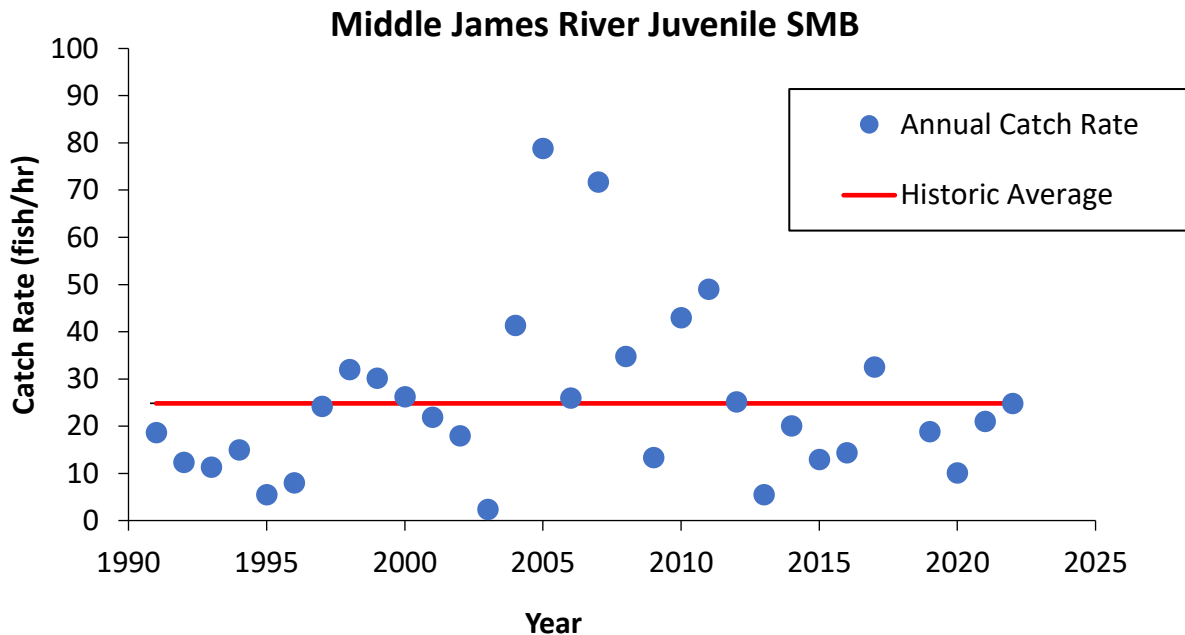
*Juvenile bass (less than 7 inches) are represented with red bars, while adult smallmouth bass are shown with green bars. Current regulations protect smallmouth bass between 14 and 22 inches (dark green bars).*

Since 2015, adult smallmouth abundances have fallen well below the historic average. Samples from 2020 represented the first improvement in adult catch over that period, though still below the historic average. Fortunately, 2022 saw a slight improvement in adult catch rate, and represented the highest adult catch rate observed since 2015. Low catch rates have led to improved growth, meaning the potential to connect with quality fish does still exist. In recent years favorable adult catch rates have been limited to the upper middle river in the area of Bent Creek. In 2022 several areas showed noticeable improvements with Bent Creek, James River WMA, Howardsville, Hardware River, Bremono Bluff/New Canton, and Westview all surpassing the historic average catch rate for adult smallmouth.



*Annual catch of adult smallmouth bass (greater than 7 inches) from 2000-2022 in the Middle James River, the red line represents the historic average catch rate.*

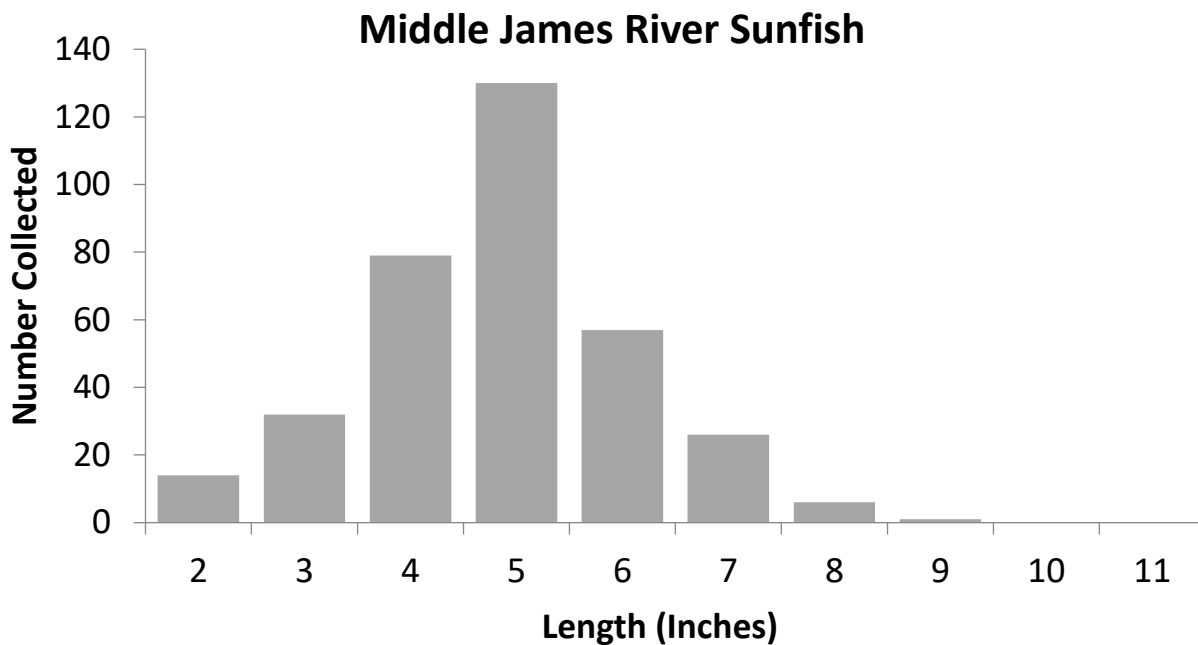
A significant factor in the negative trend in adult abundance observed over the last several years is poor spawning success and/or low survival of young smallmouth bass. Strong year classes have become less frequent. The fishery is still in desperate need of a successful spawn. Catch rates for Juvenile smallmouth in the middle James were nearly equal to the historic average, showing some signs of promise for the future.



*Annual catch of juvenile smallmouth bass (less than 7 inches) from 2000-2022 in the Middle James River, the red line represents the historic average catch rate.*

**Sunfish:**

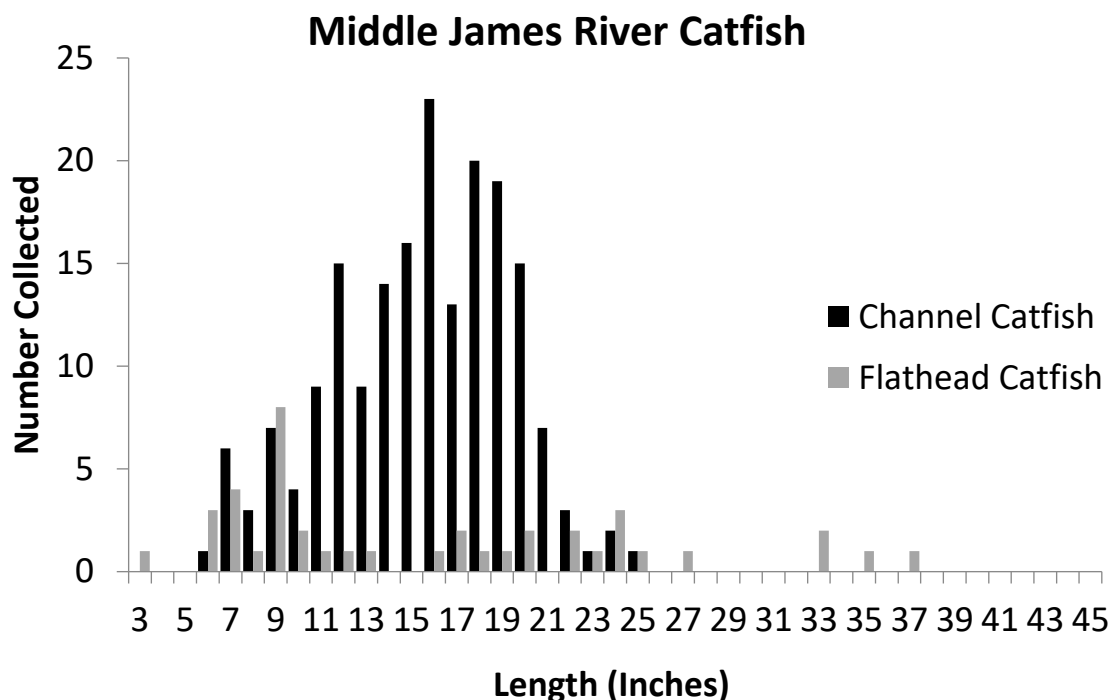
Historically, the middle James River supported healthy populations of redbreast sunfish, bluegill, and rock bass. However, in recent years the population has been dominated by bluegill with sparse numbers of redbreast sunfish, redear sunfish, and rock bass present as well. A total of 345 sunfish were collected during fall 2022 sampling efforts with bluegill representing 48% of total sunfish catch. While sunfish in the middle river are not as plentiful as the upper river, and have declined noticeably in recent years, fair numbers of fish in the 4-6 inch range provide anglers some action on light tackle. For best success with sunfish target shoreline debris and current eddies with night crawlers, crickets, beetlespins, grubs, or fly tackle. Take note of spawning beds in slack water areas during the summer months for improved success.



*Numbers and sizes of all sunfish species (bluegill, redbreast sunfish, redear sunfish, and rock bass) collected from the Middle James River in fall 2022.*

### Catfish:

While both smallmouth bass and sunfish numbers in the middle river continue to decline catfish numbers remain strong. A total of 229 catfish were collected from the middle river in 2022 with channel catfish representing 82% of the catch. This stretch of river is home to an abundance of catchable size channel catfish. Fair numbers of flathead catfish are also present with fish up to 37 inches observed in this stretch of river as well. Blue catfish have also appeared in the middle river in noticeable numbers in recent years. Target the upper and lower ends of deep pools for catfish. Use night crawlers, chicken liver, and cut bait for channel and blue catfish. Select live or cut bait for best success with flathead catfish.



*Number and lengths of channel catfish and flathead catfish collected from the Middle James River in fall 2022.*

For more information, please contact.

*Hunter Hatcher*

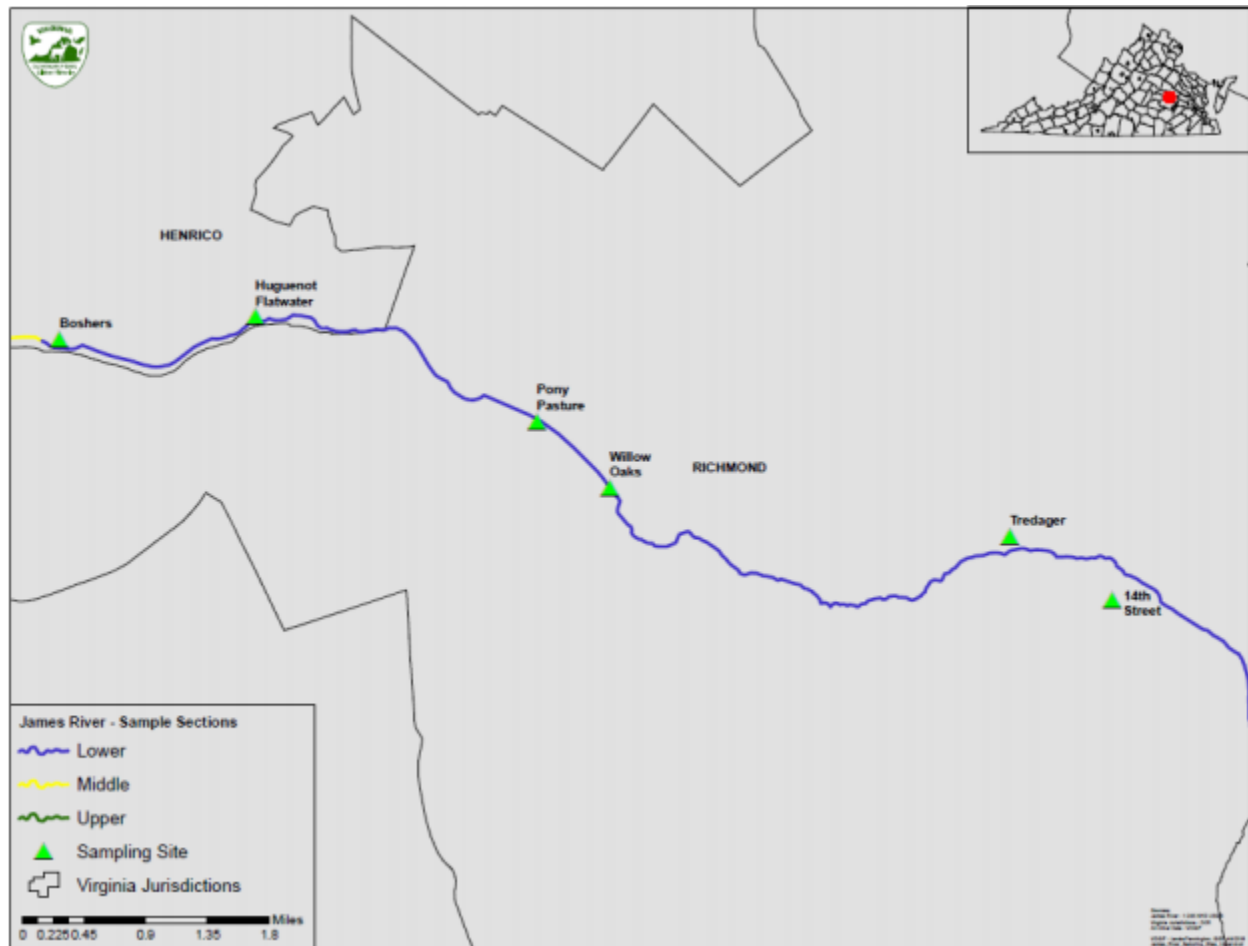
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## Fall-line James River (Bosher's Dam to 14<sup>th</sup> Street Bridge)

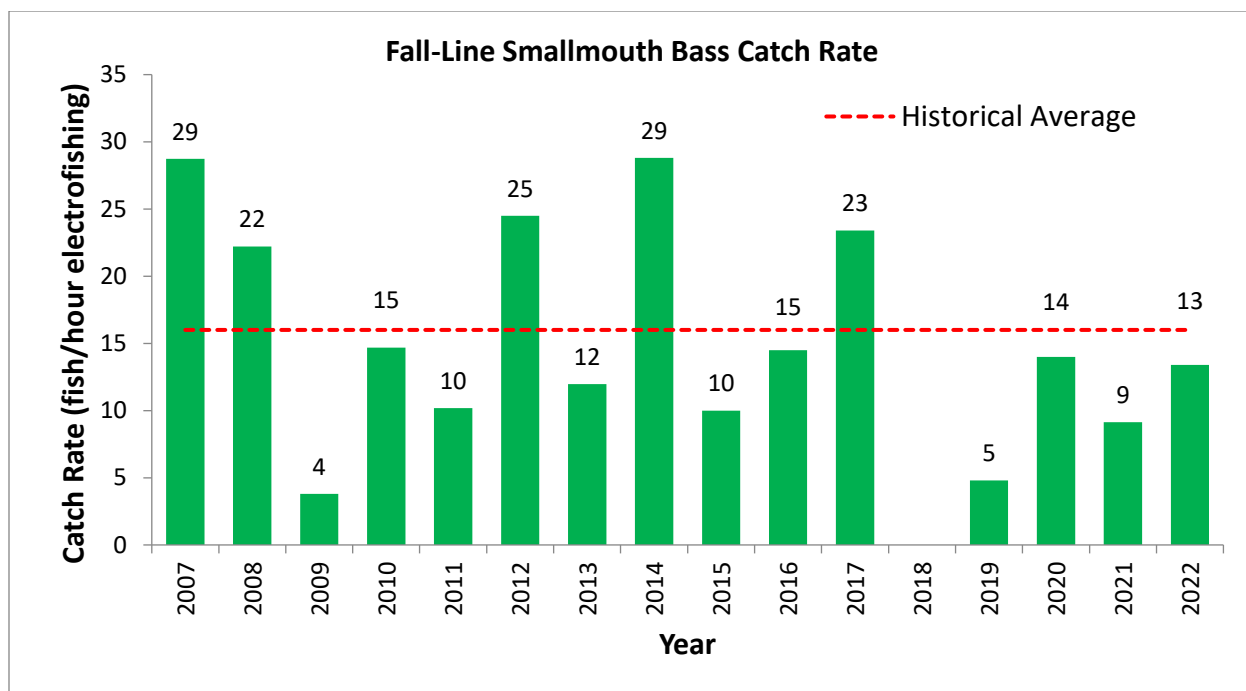
The 9-mile stretch of the James River that flows through Richmond (known locally as the Fall-Line section) separates the non-tidal and tidal portions of the James River. This section contains various habitat types including rocky outcrops, large runs, deep pools, shallow riffles, and intense rapids. The Fall-Line section is renowned for kayaking, canoeing, and has traditionally supported popular sport fisheries for trophy smallmouth bass, sunfish, and catfish. For a quick fish regulation guide for common species occurring in the non-tidal James River see Table 1 at the end of this report.



*Map of Fall-line James River sampling locations and access sites.*

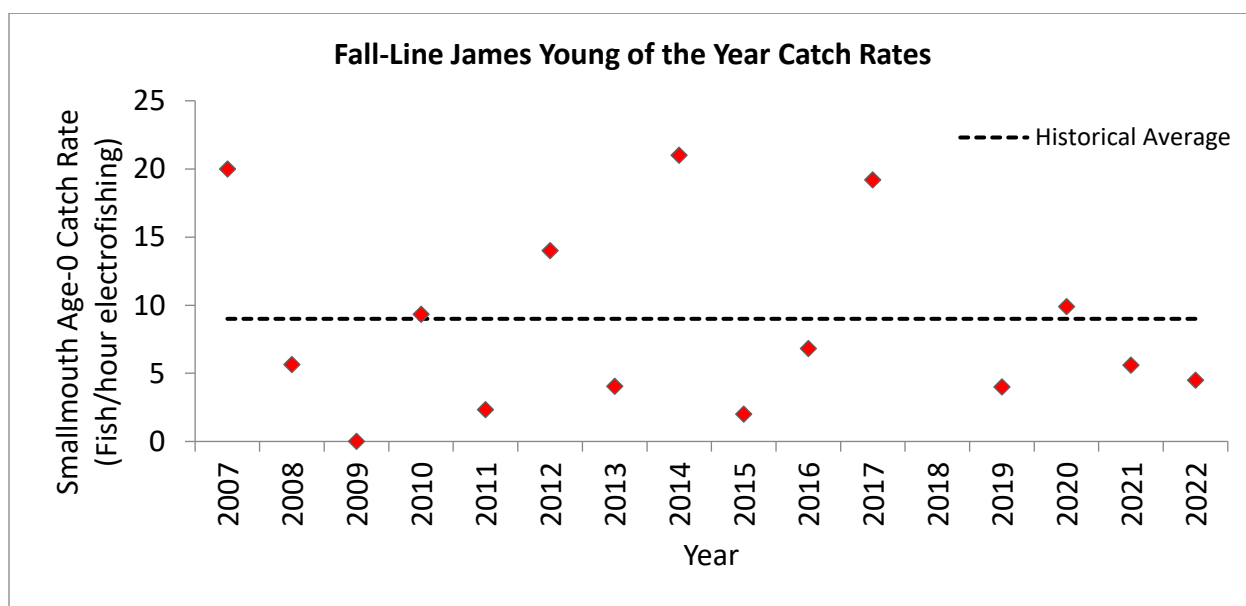
### Smallmouth Bass:

Smallmouth bass was the second most abundant sportfish collected throughout the Fall-Line in 2022, behind only catches of Redbreast Sunfish. The overall smallmouth bass catch was lower than the historical average for the Fall-Line, but slightly higher than the low catch observed in 2021 (see figure below).



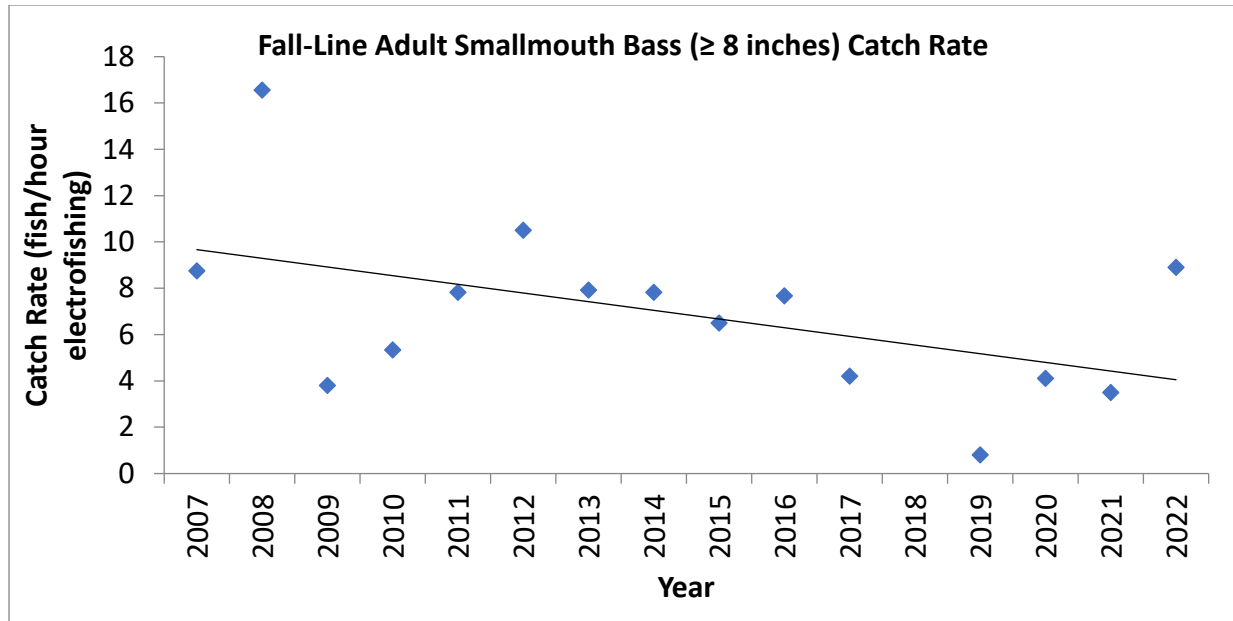
*Annual catch of smallmouth bass from the Fall-Line, James River. No Sampling Occurred in fall 2018 as a result of high-water levels.*

The less than average catch in 2022 was mainly due to a low catch of young-of-the-year smallmouth bass. Smallmouth bass reproduction was below average when compared to values observed since 2007. This average is much lower than values experienced in the upper and middle James (average 30 juveniles/hour) and is likely still too low to bolster the smallmouth bass population.



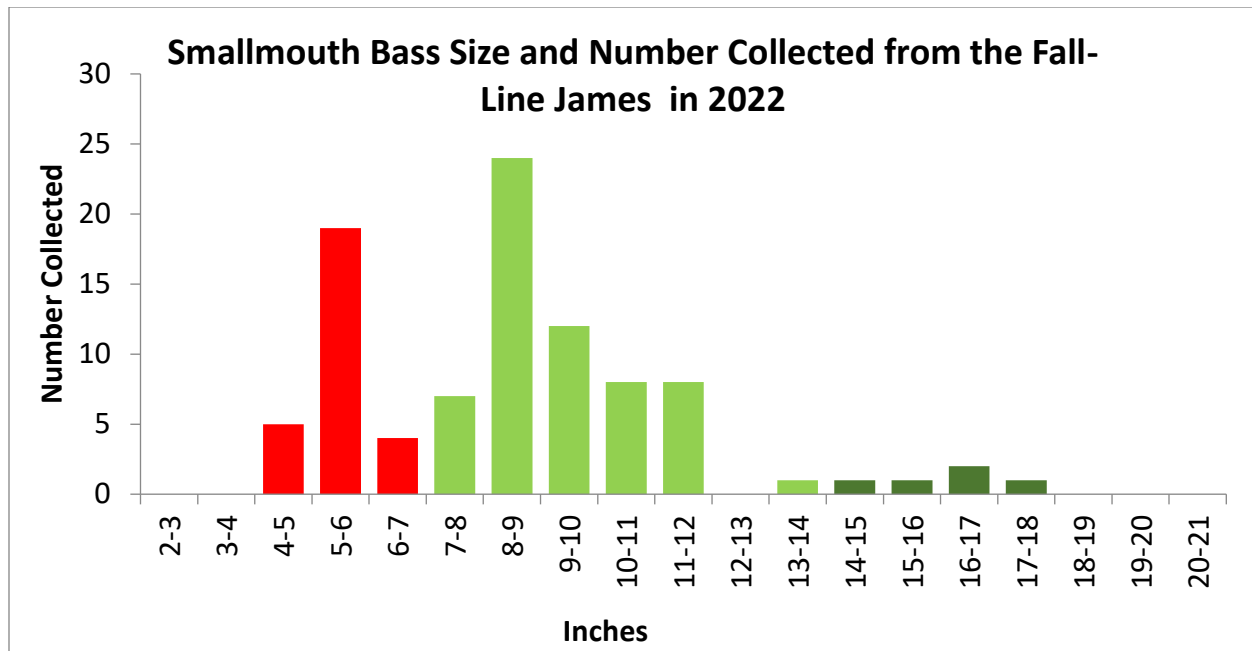
*Annual catch of juvenile smallmouth bass (less than 7 inches) in the Fall-line James River, the dashed line represents the historic average catch rate.*

Due to several years of poor and below average reproduction, the adult smallmouth bass catch has exhibited a downward trend since 2012. The 2022 catch was encouraging showing improvement from previous years, but this bump should be viewed with caution especially since there has been many years of poor recruitment prior to 2022. Future surveys will indicate if the increase in the adult population is realized or just an indication of sampling variability from year to year. More years of average spring flows that contribute to great bass reproduction, like in 2014 and 2017 (see previous figure), are needed to greatly increase numbers of adult smallmouth bass.



*Annual catch of adult smallmouth bass (greater than 7 inches) in the Fall-line James River, the line represents the overall trend in catch rate.*

Anglers should not expect to catch high numbers of adult smallmouth bass (> 9 inches) throughout the Fall-Line section due to reproduction issues. There are still some quality-sized and trophy-sized smallmouth in this stretch of river (see length figure below), but anglers will have to work to catch them. The largest smallmouth bass collected throughout the Fall-Line in 2022 measured 17.5 inches and weighed approximately 3lbs. Smallmouth bass spawned in 2020 and 2017 are the fish making up the majority of the smallmouth adult population. The 14-22 inch protective slot limit for smallmouth bass should help protect the some of these fish and the remaining adult fish in the population, but the adult population needs more successful spawns and better adult survival to rebound to historic populations.



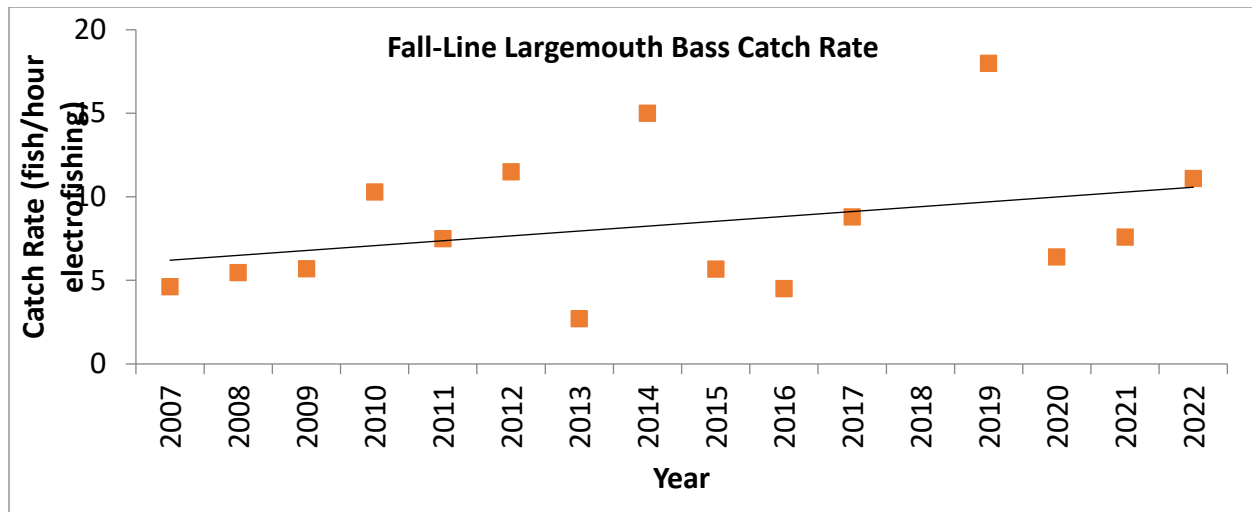
*Smallmouth bass collected from the Fall-line James River in fall 2022 by length and number. Juvenile bass (less than 7 inches) are represented with red bars, while adult smallmouth bass are shown with green bars. Current regulations protect smallmouth bass between 14 and 22 inches (dark green bars).*

Smallmouth bass were present at all sampling sites, so anglers can expect to find them throughout the Fall-Line section. Annual surveys indicate that the best sections of the river for bass are consistently between Powhite Bridge and Belle Island. Anglers should concentrate on shallow to mid-depth riffles or areas near the bank with some type of structure. Previous diet analysis of smallmouth bass indicated that the majority of them feed on shiners and crayfish. Any lures that mimic these diet items should be a must for smallmouth bass anglers of the James River.

### **Largemouth Bass:**

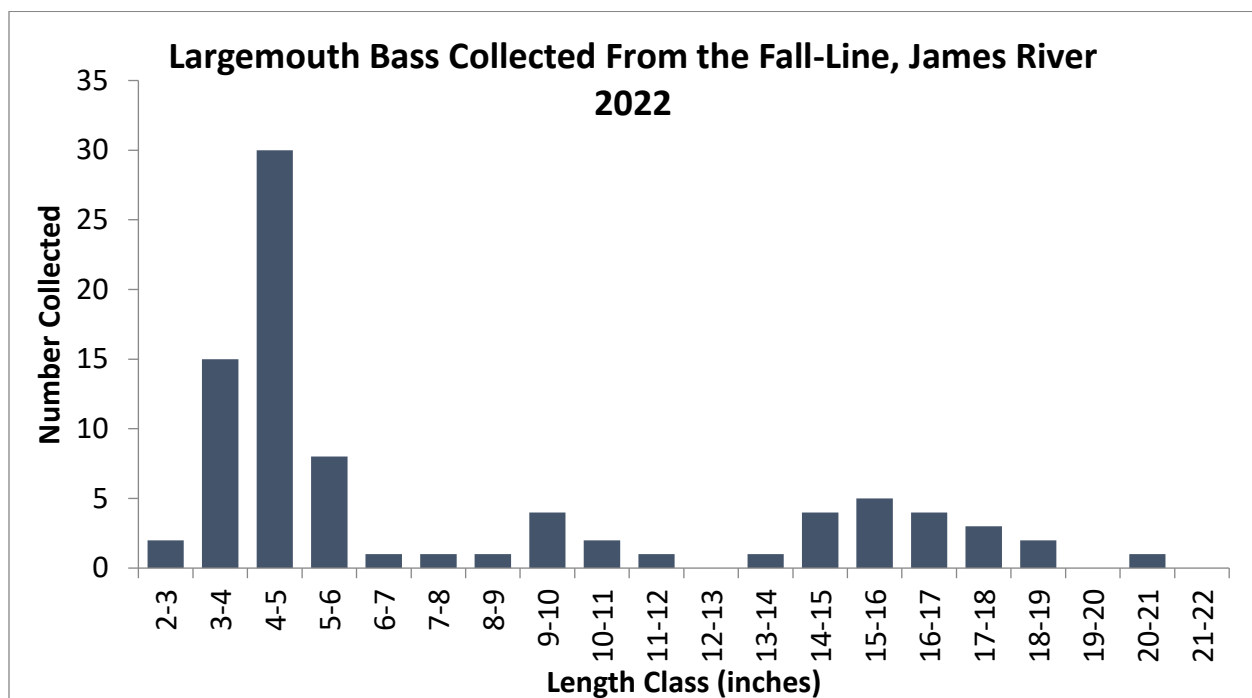
Largemouth bass populations are trending up in number throughout the Fall-Line since 2007 (see figure below). The increases in catch could be a result of changing habitat or unauthorized introductions throughout the Fall-Line. The presence of small juvenile largemouth bass in the sample indicate that the increase is more likely caused by changing habitat which is helping largemouth bass reproduce more effectively.





*Annual catch of largemouth bass from the Fall-Line, James River. The line represents the overall trend in catch rate.*

Largemouth bass collected ranged in size from 2 to 21 inches, with the average size fish measuring approximately 8 inches (see below). The largest largemouth bass collected measured nearly 21 inches and weighed 4 lbs. Anglers targeting largemouth bass should concentrate on slower-flow, pool areas and shoreline areas with timber and overhanging trees.

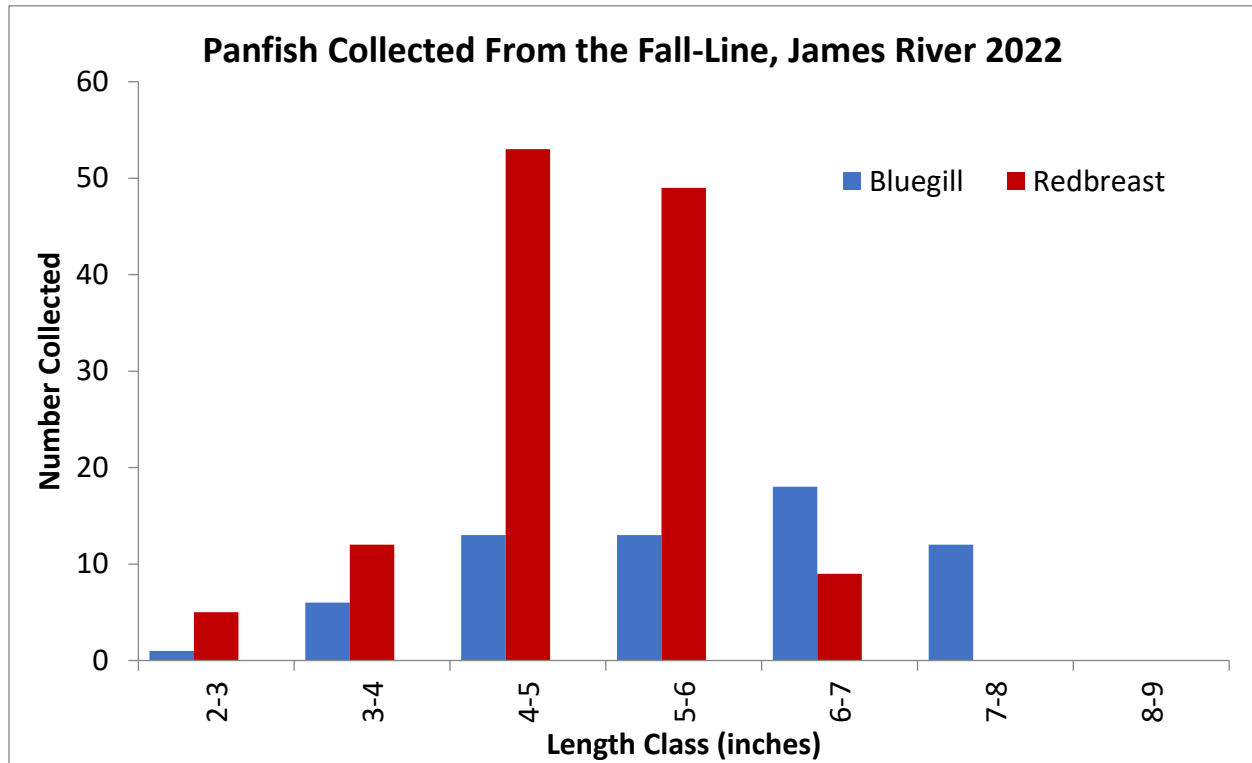


*Largemouth bass collected from the Fall-line James River in fall 2022 by length and number.*

#### **Sunfish (excluding bass):**

Sunfish catches were mostly composed of bluegill and redbreast sunfish. The only other sunfish collected were six green sunfish. Sunfish numbers continue to be below average for the Fall-Line section and reductions are primarily due to reduced catches of redbreast sunfish and rock

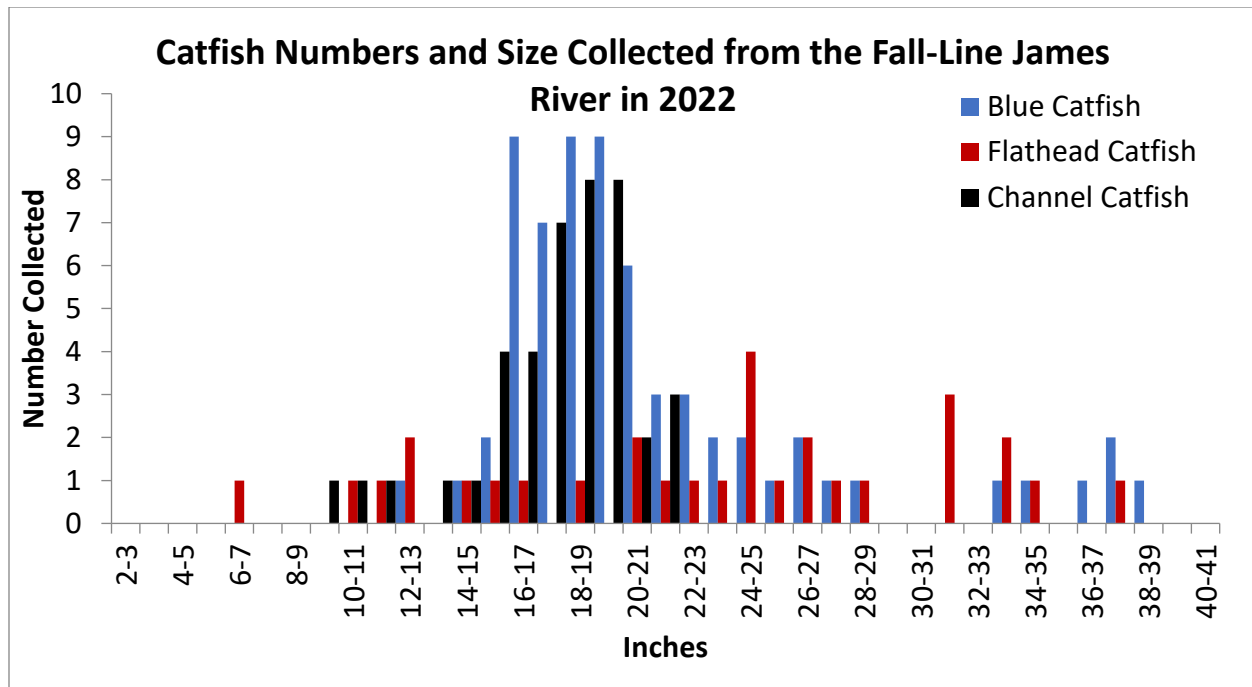
bass. Sunfish collected were small, with the majority measuring less than 7 inches (see figure below). Sunfish were collected in all locations throughout the Fall-Line section, and anglers targeting these species should concentrate their efforts around bank structure or slack water adjacent to rocky shoals and outcrops. Small twister tailed grubs, live crickets, and worms are outstanding baits for any of the sunfish species.



*Numbers and sizes of redbreast sunfish and bluegill collected from the Fall-line James River in fall 2022. No redear or rock bass were collected in 2022.*

### **Catfish:**

Catfish populations continue to be good within the Fall-Line. The blue and flathead catfish populations have good numbers of big fish (> 30 inches) available to anglers. Blue and channel catfish made up the majority of the catfish collected in 2022. There is an abundance of channel catfish (up to 23 inches). Although the blue and flathead catfish make up the majority of big fish, the smaller channels are fun to catch and the 14 to 20 inch sized catfish are the perfect size fish for a fillet dinner.



*Number and lengths of catfish collected from the Middle James River in fall 2022.*

Anglers looking to catch catfish should concentrate efforts on relatively deep water (greater than 6 feet deep) or waters adjacent to deep holes. The deep pockets of the Pony Pasture recreation area and the deep run just below the Wetlands recreational area (river section that flows past Willow Oaks Country Club) are great places for catfish anglers to wet a line. Anglers should try using live bait for flatheads and cut or stink-bait for blue and channel catfish.

The Fall-Line section of the James can provide a rewarding trip for any angler, but caution is warranted when fishing this stretch of river. The Fall-Line section is prone to flash flooding when there have been heavy rains in the head waters of the James River. Furthermore, boaters need to be conscious of the technical rapids within the Fall-Line section. Before journeying out, anglers should be aware of the current river conditions and boaters need to become familiar with the more technical rapids. To get up-to-date information on river flows and maps of the Fall-Line section, contact the James River Parks Systems at (804) 646-8911 or visit their website at <http://www.jamesriverpark.org>.

For more information on the James River through Richmond, please contact:

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