

# **Allegheny River Smallmouth Bass**

## **Western Pennsylvania**

### **Summer 2005-2024 Night Boat Electrofishing Surveys**



*Area Fisheries Manager Tim Wilson with a trophy-sized Smallmouth Bass (20.75" and 5.11 lbs.) captured at Kennerdell.*

The Allegheny River is a popular recreational fishing and boating destination flowing throughout much of western Pennsylvania. The river supports recreational fisheries for many species, the most popular of which is Smallmouth Bass. As part of our annual monitoring efforts, biologists from the Pennsylvania Fish and Boat Commission (PFBC) Fisheries Management Division Area 2 (Tionesta) office surveyed the Allegheny River's Smallmouth Bass populations from 2005-2024. Surveys were conducted at three fixed sites (East Brady, Kennerdell, and President) at night in August and September using night boat electrofishing. All three sites are located on the free-flowing portion of the Allegheny River; however, the habitat near East Brady is influenced by its proximity (about 10 river-miles) to the first lock and dam (Lock 9).

As part of the routine stock assessments of managed Smallmouth Bass fisheries, PFBC biologists use catch-per-unit-effort (CPUE; expressed herein as number of fish collected per hour of electrofishing) values to estimate population relative abundance. The CPUE of legal-length fish ( $\geq 12$  inches) statistic serves as the principal evaluation benchmark. During surveys between 2005 and 2024, a total of 7,151 bass have been captured with the highest average catch rates occurring at Kennerdell and President, respectively (Table 1). These free-flowing areas contain excellent habitat in the form of big boulders that Smallmouth Bass prefer.

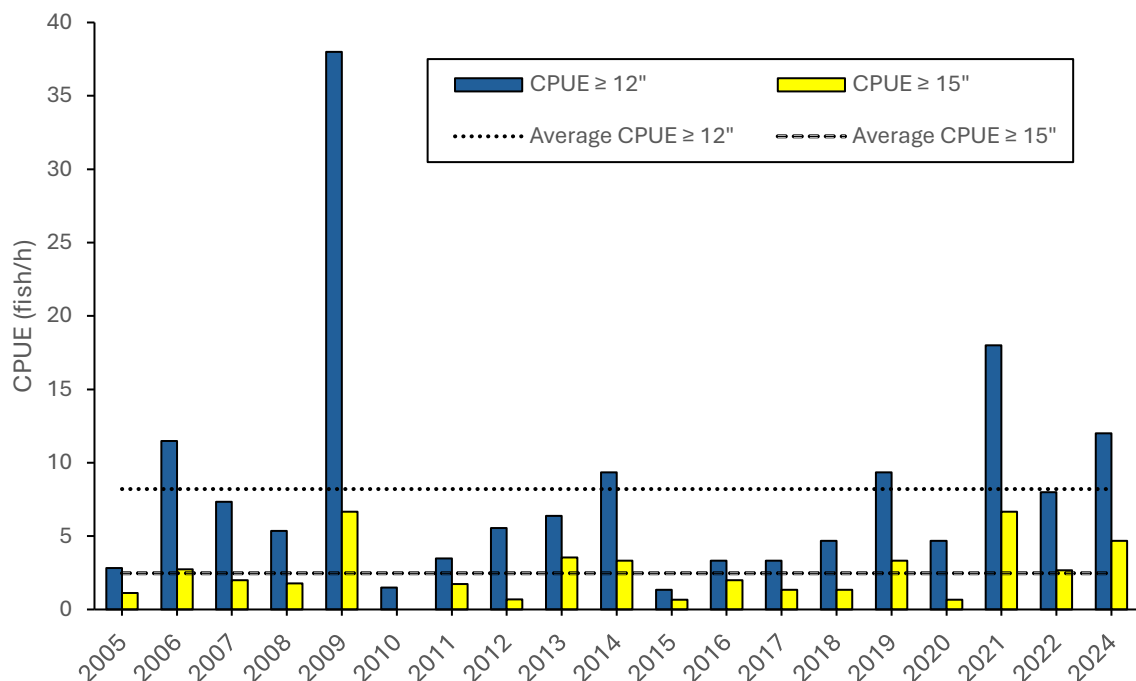
**Table 1.** *Smallmouth Bass catch summary statistics at three fixed sites on the Allegheny River from 2005-2024.*

	East Brady	Kennerdell	President
Total number of bass collected	1,584	2,874	2,693
Number of Bass $\geq 12$ "	243	291	455
Number of Bass $\geq 15$ "	72	86	188
Number of Trophy bass ( $\geq 20$ "	0	2	8
Average CPUE	54.3	148.9	124.2
Average CPUE $\geq 12$ "	8.2	14.4	20.9
Average CPUE $\geq 15$ "	2.5	3.9	8.2

**Table 2.** *Smallmouth Bass length frequency distribution of fish collected during summer 2024 night boat electrofishing surveys at three fixed sites at the Allegheny River.*

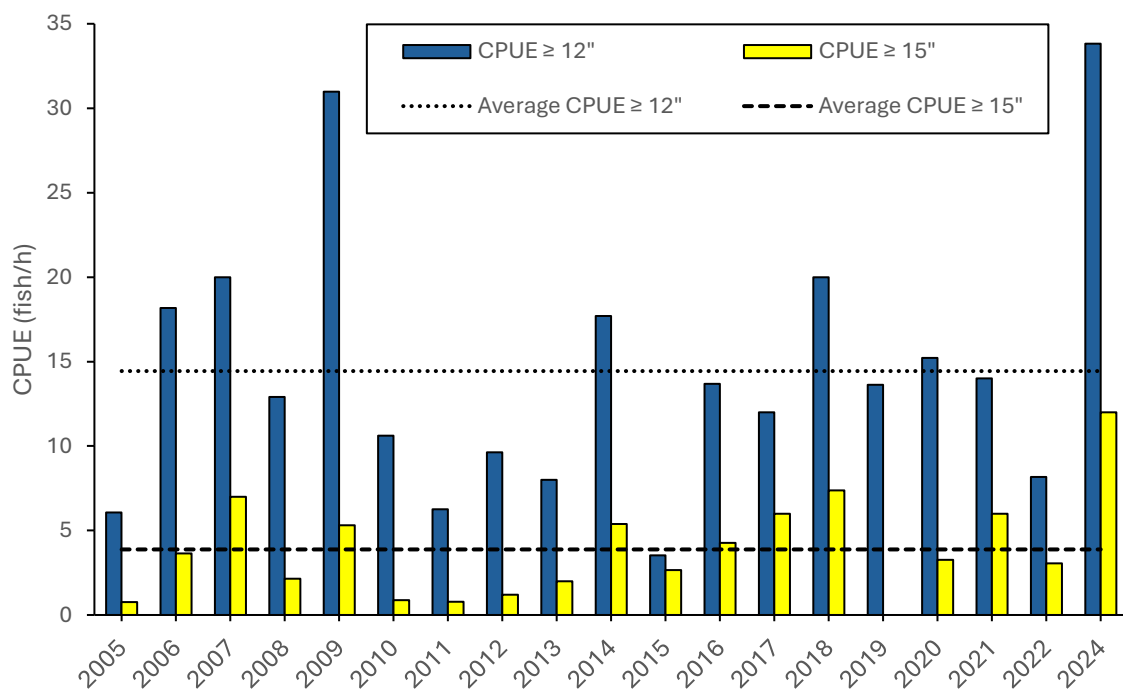
Length (inches)	East Brady	Kennerdell	President
2	0	4	2
3	7	12	10
4	2	8	6
5	10	65	74
6	16	41	16
7	14	25	4
8	29	51	24
9	30	62	24
10	11	31	12
11	7	9	5
12	5	5	5
13	2	6	11
14	4	9	7
15	1	3	2
16	3	2	4
17	3	4	5
18	0	1	6
19	0	0	0
20	0	0	0
21	0	1	0
Total	144	339	217

Of the three fixed sites, East Brady has the lowest catch rate historically (Table 1). This is likely due to the influence of the lock and dam. Habitat at the East Brady site lacks fast-shallow water and boulder habitat, which is preferred by Smallmouth Bass. Catch rates vary from year to year, but since 2019, catch rates of fish  $\geq 12$  and  $\geq 15$  inches have exceeded or met the respective long-term average each year except for 2020 (Figure 1). Catch rates in 2024 at East Brady were the third highest on record over the past 19 years.



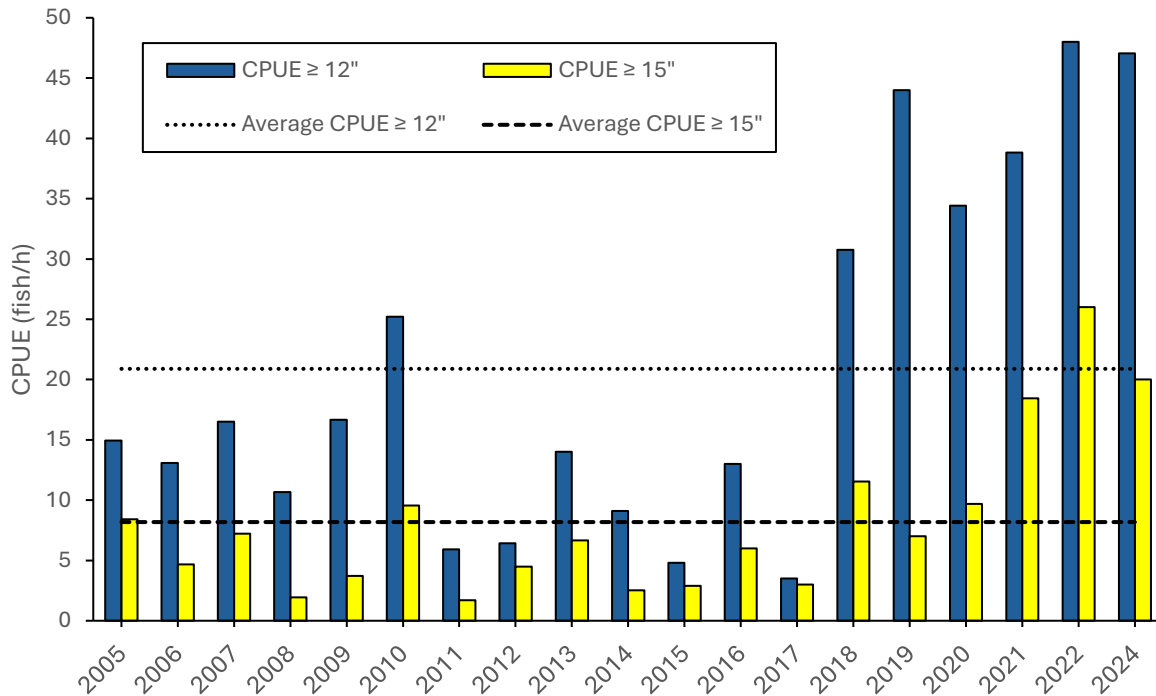
**Figure 1.** Boat electrofishing catch rates of Smallmouth Bass at East Brady on the Allegheny River from 2005 – 2024.

The Kennerdell site has produced the highest average total CPUE over the past 19 years of the three fixed sites. Average catch rates of bass  $\geq 12$  inches and  $\geq 15$  inches were slightly less than double the average catch rates in East Brady (Table 1). Catch rates vary from year to year, but the 2024 survey produced the highest CPUE for both bass  $\geq 12$  inches and  $\geq 15$  inches since 2018 (Figure 2). The largest bass captured during the 2024 survey (pictured above) came from Kennerdell.



**Figure 2.** Boat electrofishing catch rates of Smallmouth Bass at Kennerdell on the Allegheny River from 2005 – 2024.

The President site has produced the highest average CPUE of bass  $\geq 12$  inches and  $\geq 15$  inches over the past 19 years. Since 2018, catch rates of Smallmouth Bass  $\geq 12$  inches at our President site have been outstanding, greatly exceeding the average each year. Catch rates of bass  $\geq 15$  inches have also been above average since 2018, especially from 2021 to present, exceeding the average each year except in 2019 (Figure 3). Our surveys detected an increase in bass  $\geq 12$  inches starting in 2018 and now those fish have grown and are showing up as an increase in the number of bass  $\geq 15$  inches presently. In addition to the high abundance of fish 12-20 inches, the President site has produced the highest number of trophy bass ( $\geq 20$  inches); a total of eight since 2005.



**Figure 3.** Boat electrofishing catch rates of Smallmouth Bass at President on the Allegheny River from 2005 – 2024.



Area 2 Fisheries Biologist Aides Joel Dean (left) and Ben Smith (right) with two nice adult Smallmouth Bass captured in President.

In summary, the Allegheny River continues to provide excellent fishing opportunities for Smallmouth Bass. There is a high abundance of fish  $\geq 12$  inches currently present and available to anglers with a chance to encounter a fish of trophy caliber, especially in the free-flowing sections of the river. In addition, several age-1 and age-2 fish were collected which is a promising sign for the future of Allegheny River Smallmouth Bass fishing. Good luck out there!

*Fisheries Management Area 2*