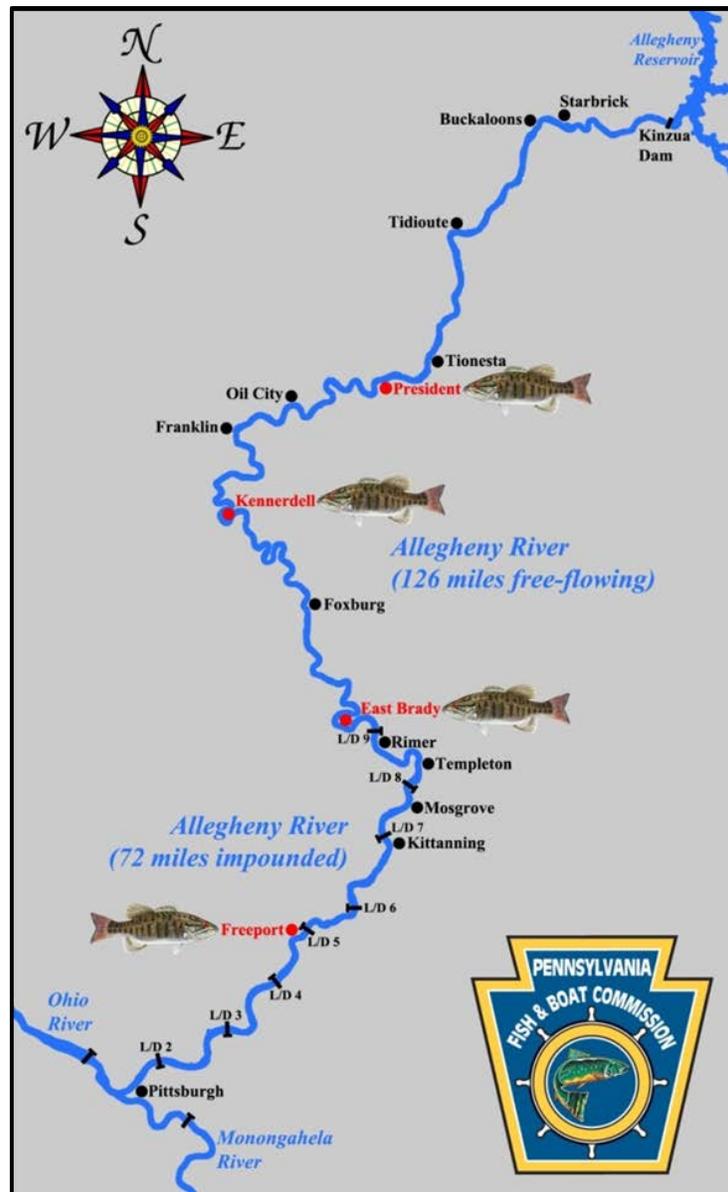


# **Allegheny River Smallmouth Bass**

## **Western Pennsylvania**

### **Summer 2015-2018 Night Boat Electrofishing Surveys**

The Allegheny River is a popular recreational fishing and boating destination flowing throughout much of Western Pennsylvania. The river supports popular recreational fisheries for many game species, the most popular of which is Smallmouth Bass. As part of an ongoing evaluation of flowing waters across the Commonwealth, biologists with the Pennsylvania Fish and Boat Commission (PFBC) Fisheries Management Division's Area 2 (Tionesta) and Area 8 (Somerset) offices surveyed the Allegheny River's Smallmouth Bass populations from 2015-2018. As in our previous monitoring reports on the Allegheny River (2005-2012 and 2013-2014), the surveys were conducted at four fixed sites (Freeport, East Brady, Kennerdell, and President) at night in August and September using night boat electrofishing gear. These locations are found in both the free flowing and impounded portion of the Allegheny River (Figure 1). Site descriptions can be found in the previous [Allegheny River biologist report from 2013-2014](#).



*Figure 1. The four Allegheny River fixed sites depicted in red are surveyed annually for adult Smallmouth Bass. Also depicted (in black) are other fixed sites and L/D sites surveyed routinely for broader-scope inventories (e.g., IBI assessment) or during target species-specific evaluations (e.g., YOY Walleye).*

As part of 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 abundances. This statistic serves as the principal evaluation benchmark, primarily for legal-length fish. Both mean and median CPUE values were computed for Smallmouth Bass  $\geq 12$  inches and  $\geq 15$  inches using the previous 14 years of survey data. Median or middle values were computed to characterize individual site-specific benchmarks in figures below, the mean was computed to compare CPUE among sites in tables below. Table 1 illustrates catch statistics from each of the four sites over the past 14 years of Smallmouth Bass surveys on the Allegheny River. A total of 6,329 bass have been captured with the highest mean catch rates measured at the Kennerdell and President sites. These free-flowing areas have excellent habitat in the form of big boulders that Smallmouth Bass prefer. Many of our larger bass ( $\geq 17$  inches) collected during these surveys have come from these two free flowing sites.

**Table 1. Smallmouth Bass catch summary statistics at four fixed sites on the Allegheny River from 2005-2018.**

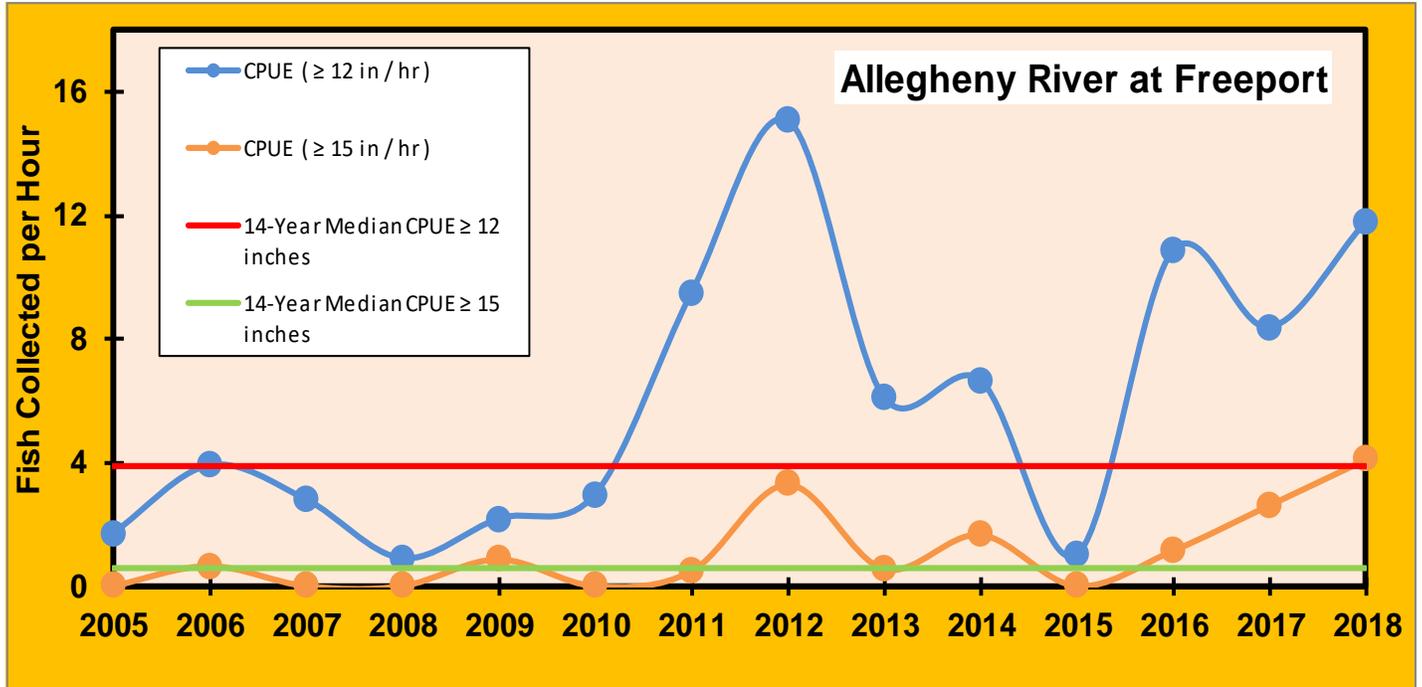
	Freeport	East Brady	Kennerdell	President
<b>Total number of bass collected</b>	1,805	1,027	1,834	1,663
<b>Number of trophy bass collected (<math>\geq 20</math> inches)</b>	1	0	0	4
<b>Number of memorable bass collected (<math>\geq 17</math> inches and <math>&lt; 20</math> inches)</b>	9	10	35	58
<b>Number of “preferred” bass collected (<math>\geq 14</math> inches and <math>&lt; 17</math> inches)</b>	44	62	61	74
<b>Mean CPUE (bass collected per hour)</b>	66	33	115	127
<b>CPUE range (minimum-maximum bass collected per hour)</b>	39 - 111	12 - 147	50 - 294	44 - 199

Over the past 30 years, PFBC biologists have found that catch rates of legal-length Smallmouth Bass are typically much greater at free-flowing sites than impounded sites. As a result, the median CPUE value for Freeport was determined independent of the median of the other three sites. Although East Brady is a transitional site possessing some habitat created by L/D 9 downstream, it was included in the free-flowing sites evaluation due to its proximity to and influence of upstream riffle-run habitat.



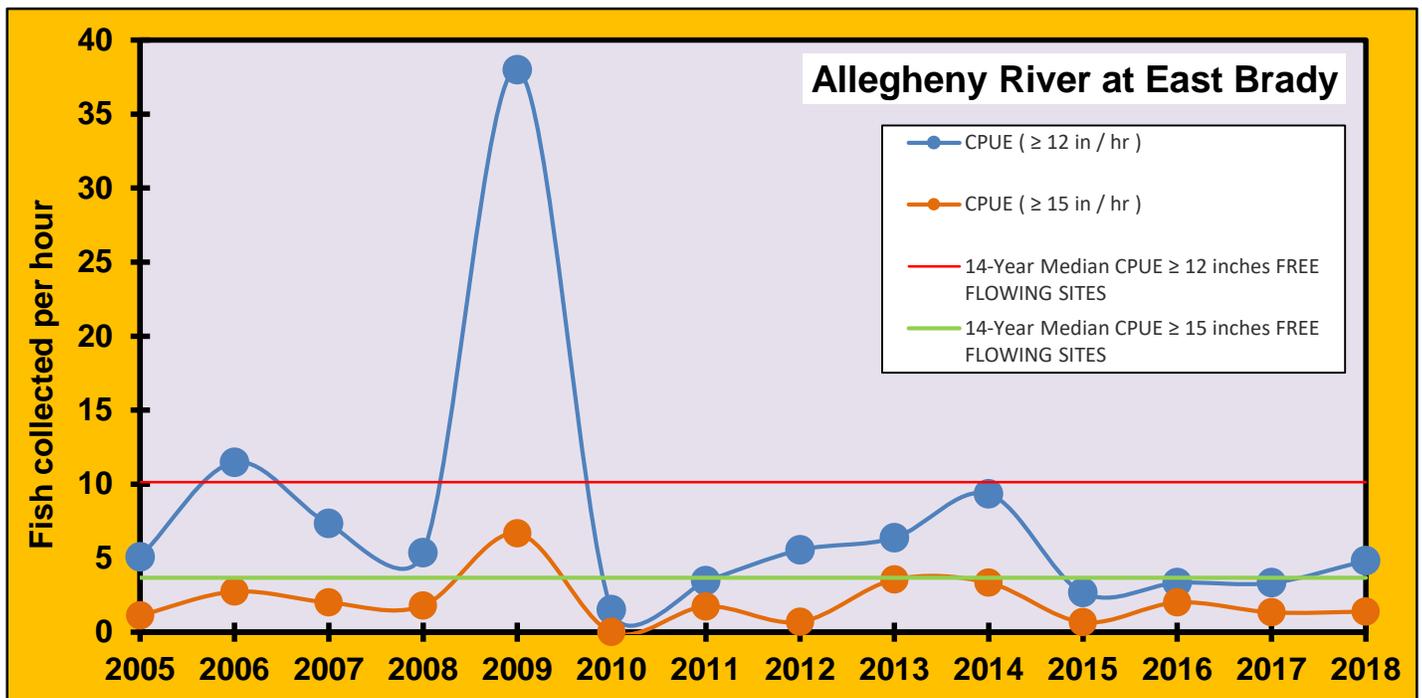
*Former Area 2 Fisheries Biologist Aide Nick Yaroszewski and former Area 8 Fisheries Manager Rick Lorson each holding a couple of nice Smallmouth Bass from the Kennerdell site in 2016.*

Figure 1 (below) presents a time series of Smallmouth Bass catch rates at our impounded Freeport site on the Allegheny River. As one can see, catch rates vary by year at our fixed sites. However, since 2011, all but one survey has produced a catch rate of legal ( $\geq 12$  inches) sized bass above the 14-year median or above average, indicating good fishing opportunities have been and continue to be available here.



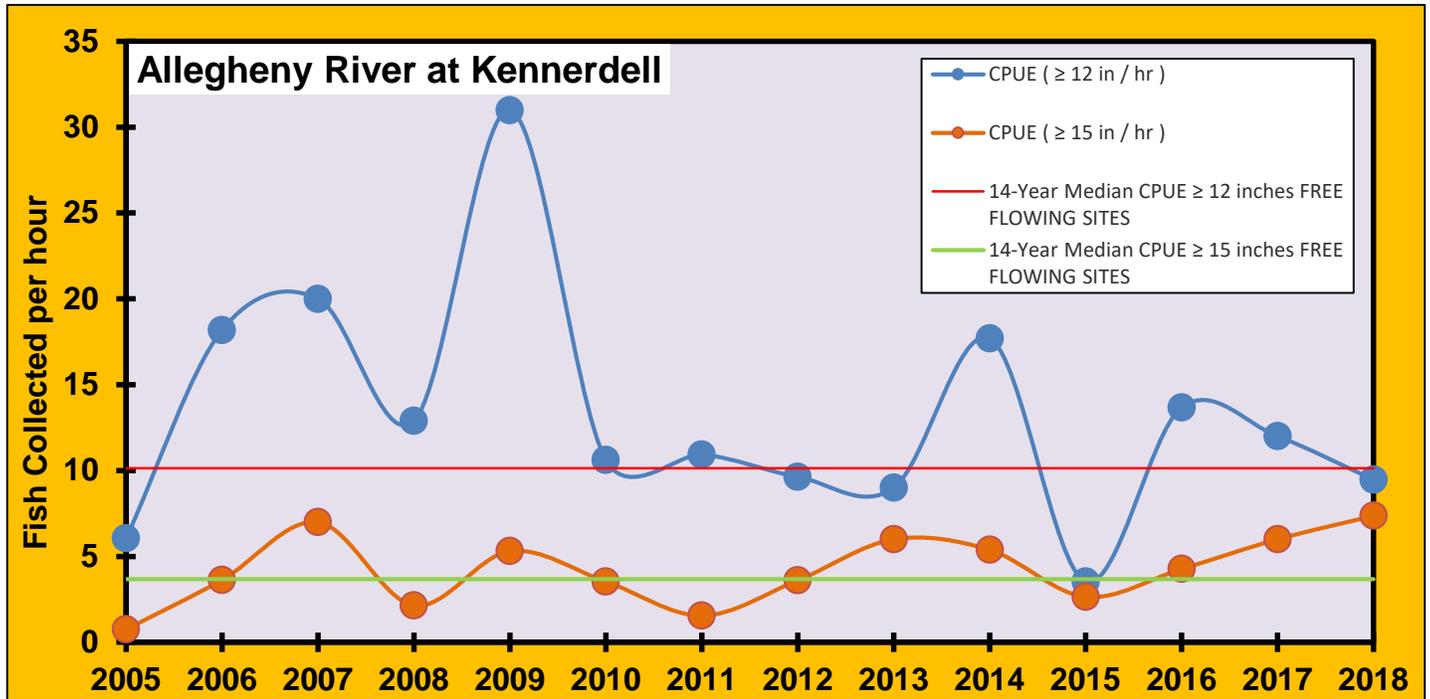
**Figure 1. Catch rates of Smallmouth Bass at Freeport on the Allegheny River from 2005 to 2018.**

At East Brady, catch rates of Smallmouth Bass have been poor the last few years (Figure 2). Although catch rates are rarely as high as at the other two free flowing sites, numbers of 12 and 15-inch fish have been lower than the median for the past few years.



**Figure 2. Catch rates of Smallmouth Bass at East Brady on the Allegheny River from 2005 to 2018.**

In contrast to the East Brady site, catch rates at Kennerdell have been good two of the past four years. After a down year in 2015, catch rates in both 2016 and 2017 exceeded the long-term medians for free flowing sites (Figure 3). Catch rates in 2018 were slightly below the median for fish over 12 inches but were the highest recorded for fish over 15 inches. Some quality Smallmouth Bass are present, as evidenced by some of our photos in this report.



**Figure 3. Catch rates of Smallmouth Bass at Kennerdell on the Allegheny River from 2005 to 2018.**



*Former Area 8 Fisheries Manager with a nice Smallmouth Bass from Kennerdell on the Allegheny River.*

At President, catch rates of 12-inch and 15-inch bass have varied over the past few years (Figure 4). Catch rates of 15-inch bass were the third highest in 2016 of the past 14 years but declined to near the long-term average for President in 2017. However, catch rates rebounded in 2018 to a record high for fish over 12 inches and to the second highest catch rate for fish over 15 inches, indicating good bass fishing opportunities are present at President.

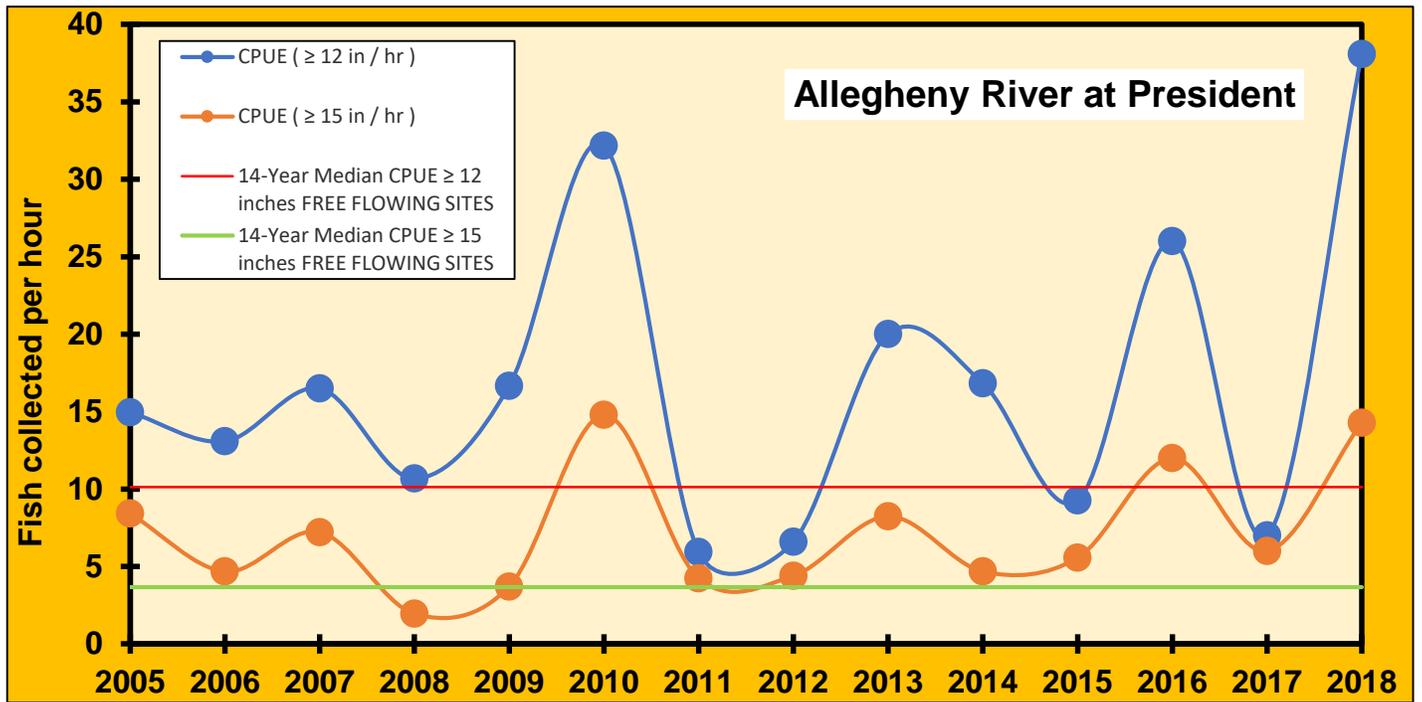


Figure 4. Catch rates of Smallmouth Bass at President on the Allegheny River from 2005 to 2018.



*Four nice Smallmouth Bass from President on the Allegheny River in 2016.*

In summary, the Allegheny River continues to provide good fishing opportunities for Smallmouth Bass. As with any population, sizes and numbers of fish vary from year to year and angler catch may be expected to change as well. We

look forward to reporting our findings regarding the Allegheny River's Smallmouth Bass populations at the four fixed site locations in 2019.

*Mike Depew and Brian Ensign  
Area 8 and Area 2 Biologists*