

Project II: Evaluation of new recreational and commercial regulations on catfish in the Ohio River

Project Objectives:

1. Determine abundance (CPUE), size structure, and condition of blue, channel, and flathead catfish in the Ohio River, and evaluate the effects of new regulations on blue, channel, and flathead catfish in the Ohio River, particularly trophy-size catfish.
2. Quantify age, growth, and mortality of the three species in each reach, and compare to previous data to determine if any changes have occurred over time.
3. Model the catfish populations and estimate the impacts of harvest (predict how varying length limits may affect the population given the current amount of harvest).

Trotline Surveys

During spring and summer 2016, trotlines (50 hooks/line) baited with cut gizzard shad were used to sample blue catfish, channel catfish, and flathead catfish. KDFWR crews completed sampling in the Meldahl, Cannelton, and Smithland pools of the Ohio River, and Indiana Department of Natural Resources sampled in the JT Meyers Pool. One-hundred twenty-four total trotlines were fished throughout those pools: 35 in Meldahl Pool, 33 in Cannelton Pool, 32 in JT Meyers Pool, and 24 in Smithland Pool (Table 1). CPUE of blue catfish and channel catfish increased from 2015 sampling in both the upper and trophy permit sections of the Ohio River (Table 2). Blue catfish CPUE (3.6 fish/line) in 2016 was higher than the historical average (2.1 fish/line) in the upper section of the Ohio River, but below the historical average (2.9 fish/line) in the trophy permit section. The 2016 Channel catfish CPUE in both the upper (2.2 fish/line) and trophy permit (1.9 fish/line) were above the historical averages (1.9 fish/line and 1.1 fish/line, respectively). Flathead catfish CPUE in 2016 decreased from 2015 levels in the upper and trophy permit sections of the river, and was below the historical average in both sections.

Blue catfish collected with trotlines ranged from 11.6 – 43.1 in in the upper section of the Ohio River with a mean length of 24.5 in, and ranged from 15.7 – 42.1 in in the trophy permit section with a mean length of 24.3 in (Table 3). Lengths of channel catfish ranged from 12.3 – 29.7 in with a mean length of 19.4 in in the upper section of the Ohio River, and ranged from 14.6 – 35.8 in with a mean length of 20.0 in in the trophy permit section. Flathead catfish lengths ranged from 19.6 – 38.1 in with a mean length of 25.5 in in the upper section, and only one flathead catfish (25.5 in) was sampled in the trophy permit section of the Ohio River. Although catch rates increased, trophy catfish—defined as blue catfish and flathead catfish ≥ 35.0 in and channel catfish ≥ 28.0 in—percentage decreased, and accounted for 2.8% of the total catfish catch in the upper section, 3.8% in the trophy permit section, and 3.1% overall (down from 4.8% in 2015 and from 4.5% in 2014; Figures 1, 2, and 3).

Trotline catch rates for different size groups of each species of catfish were also examined. Overall, blue catfish CPUE has increased gradually each year since 2013. Most size groups examined in the trophy permit section of the Ohio River have remained fairly stable over the years, so the increase in overall CPUE can be primarily attributed to an increase in CPUE of 12.0 – 19.9 in, 20.0 – 29.9 in, and 30.0 – 34.0 in blue catfish in the upper section (Table 4). Channel catfish CPUE has also increased each year since 2013, with increased catch rates of 12.0 – 19.9 in and 20.0 – 27.9 in occurring in the upper section since 2013 and in the trophy permit section since 2015 (Table 5). The overall CPUE in 2016 of both these size groups was greater than the historical average. Flathead catfish are not as commonly sampled on trotlines, and CPUE for all size groups examined have remained consistent since 2004 (Table 6).

Hoop Net Surveys

Letters requesting ride-alongs with commercial hoop net anglers were mailed out in late 2015 and again in early 2016; however, no responses were received from anglers on the Ohio River. Department hoop netting was conducted in the Meldahl, Cannelton, and Smithland pools to gather data from hoop net catch of blue catfish, channel catfish, and flathead catfish. Unbaited, single nets were set overnight for two consecutive net nights in the main stem of the river. A total of 139 hoop nets were set for a total of 278

net-nights; 86 in Meldahl Pool, 164 in Cannelton Pool, and 28 in Smithland Pool (Table 7). Blue catfish overall CPUE in 2016 was <0.1 fish/net-night and was below historical average hoop net catch of 0.4 (Table 8). Catch rates of channel catfish in both section of the Ohio River were below historical averages and total channel catfish CPUE (0.2 fish/net-night) was well below the historical average (0.8 fish/net-night). Flathead catfish are the primary target for hoop net sampling. The 2016 CPUE of 0.4 fish/net-night in the upper section of the river (0.4 fish/net-night) remained unchanged from 2015, but increased in the trophy permit section from 0.7 fish/net-night to 1.6 fish/net-night. Total flathead catfish CPUE (0.5 fish/net-night) was also below the historical average (0.9 fish/net-night).

Blue catfish collected in hoop nets ranged from 8.7 – 40.0 in in the upper section of the Ohio River with a mean length of 22.2 in; however, no blue catfish were captured in the trophy permit section (Table 9). Trophy blue catfish accounted for 11.1% of fish sampled in the upper section (Figure 1). Lengths of channel catfish ranged from 9.8 – 26.1 in with a mean length of 17.4 in in the upper section of the Ohio River, and ranged from 12.5 – 13.2 in with a mean length of 12.9 in in the trophy permit section. No trophy channel catfish were sampled (Figure 2). Flathead catfish lengths ranged from 7.5 – 42.5 in with a mean length of 23.3 in in the upper section, and ranged from 8.3 – 28.3 in with a mean length of 21.6 in in the trophy permit section of the Ohio River. Trophy flathead catfish accounted for 4.8% of flathead catfish sampled in the upper section of the Ohio River, 0.0% in the trophy permit section, and 3.3% overall (Figure 3).

Hoop net catch rates for different size groups of each species of catfish were also examined. Total CPUE of blue catfish has declined for two consecutive years. In both the upper and trophy permit sections of the river, this is related to declining catch rates in the 20.0 – 29.9 in and 30.0 – 34.9 in size groups (Table 10). Channel catfish catch rates have declined each year since sampling began (NOTE: large time gap between samples). Decreases in CPUE can be seen in all size groups from 2006 to 2007 in both the upper and trophy permit sections, but catch rates have remained stable over the past two years for all size groups (Table 11). Overall flathead catfish CPUE has declined each year since 2013, as is the case for the upper section of the Ohio River. The most notable decreases occurred from 2013 to 2014, with a smaller decrease between 2014 and 2015. In the upper section, 12.0 – 19.9 in, 20.0 – 29.9 in, and 30.0 – 34.9 in size groups have all shown declines since 2013 (Table 12).

Electrofishing Surveys

Low-pulse DC electrofishing was conducted in June 2016. Previously, every pool of the Ohio River bordering Kentucky received 3.0 hr of electrofishing effort in 15-minute transects (1.0 hr each in the upper, middle, and lower thirds of the pool) with two exceptions. The Greenup Pool (1.0 hr of effort) and the Lower River (Pool 52, Pool 53, and the open river; 2.0 hr effort) received less effort due to their smaller areas. Beginning in 2016 six pools were sampled; Meldahl, Markland, and Cannelton in the upper section and Newburgh, JT Meyers, and Smithland in the trophy permit section. More overall effort was put into each pool in order to decrease error in the sample. A total of 30.0 hr of electrofishing effort was conducted (15.0 hr in the upper section and 15.0 hr in the trophy permit section) resulting in a total catch of 526 blue catfish, 187 channel catfish, and 1064 flathead catfish (Table 13). Overall CPUE of blue catfish was 17.5 fish/hr, a slight decrease from 2015 (19.0 fish/hr), but was above the historical average of 11.5 fish/hr. The same trend can be seen in both the upper and trophy permit sections of the Ohio River (Table 14). CPUE of channel catfish has been variable over the seven years of sampling. Overall CPUE of channel catfish in 2016 was 6.2 fish/hr, a decrease from 2015 (9.4 fish/hr). CPUE of channel catfish was 10.0 fish/hr in the upper section of the Ohio River, and just 2.5 fish/hr in the trophy permit section (Table 14). Overall flathead catfish CPUE was 35.5 fish/hr, down slightly from 37.6 fish/hr in 2015, but was above the historical average (27.4 fish/hr). The 2016 CPUE of flathead catfish in the upper section of the Ohio River was 37.0 fish/hr and decreased slightly from 2015 (40.9 fish/hr), while CPUE of flathead catfish in the trophy permit section was 33.9 fish/hr and was nearly identical to 2015 catch rates (Table 14).

Blue catfish collected with electrofishing ranged from 8.5 – 43.8 in in the upper section of the Ohio River with a mean length of 19.5 in, and ranged from 4.7 – 44.7 in with a mean length of 19.5 in in the trophy permit section. Trophy blue catfish accounted for 6.8% of fish sampled in the upper section, 1.3% in the

trophy permit section of the Ohio River, and 2.7% overall. Lengths of channel catfish ranged from 4.7 – 23.7 in with a mean length of 12.6 in in the upper section of the Ohio River, and ranged from 4.3 – 26.1 in with a mean length of 12.8 in in the trophy permit section. No trophy channel catfish were sampled. Flathead catfish lengths ranged from 3.1 – 48.7 in with a mean length of 15.5 in in the upper section, and ranged from 3.5 – 42.4 in with a mean length of 16.7 in in the trophy permit section of the Ohio River. Trophy flathead catfish accounted for 1.3% of flathead catfish sampled in the upper section of the Ohio River, 2.2% in the trophy permit section, and 1.7% overall (Table 15; Figures 1, 2, and 3).

Electrofishing catch rates for different size groups of each species of catfish were also examined (Table 16). Overall CPUE of blue catfish has decreased for two consecutive years. The upper section of the Ohio River shares this trend, but the trophy permit section has remained fairly stable since a large decrease from 2013 to 2014. Trends in size groups CPUE are nearly identical for the upper and lower sections. CPUE of <12.0 in and 12.0 – 19.9 in blue catfish continued to decrease, while 20.0 – 29.9 in blue catfish CPUE has increased for three consecutive years. Overall increases in catch rates of ≥ 35.0 in blue catfish can be attributed to an increase in fish collected in the upper section of the Ohio River in 2015 and 2016 (Table 16). Overall channel catfish electrofishing CPUE has decreased since 2013. This trend is consistent with the trophy permit section of the Ohio River (Table 17). Flathead catfish catch rates have remained relatively stable since 2013 (Table 18).

Catfish Tournament Surveys

Recreational catfish tournaments were attended in four Ohio River pools to gather additional catfish data. A total of 7 tournaments were attended with 815 boats competing. Collectively, catfish tournament anglers weighed in 1,258 blue catfish, 385 channel catfish, and 113 flathead catfish, with a total catfish CPUE of 2.2 fish/boat (identical to 2015). Of all catfish weighed in, 9.7% were considered trophy catfish as defined by recreational regulations discussed above (Table 19). Additionally, trophy blue catfish were more commonly caught in the trophy permit section of the river, while trophy channel catfish and flathead catfish were more commonly caught in the upper section. In 2016, this trend was not evident as the Meldahl Pool had a higher percentage of trophy blue catfish than both channel catfish and flathead catfish combined. Catch rates for blue catfish and flathead catfish were similar to those over the past 3 years in both the upper and trophy permit sections, while CPUE of channel cats has decreased since 2013 (Table 20).

Blue catfish sampled at catfish tournaments ranged from 14.2 – 48.0 in with a mean length of 27.3 in and mean CPUE of 1.6 fish/boat in the upper section of the river, and ranged from 12.8 – 51.1 in with a mean length of 29.2 and mean CPUE of 1.5 fish/boat in the trophy permit section. Channel catfish lengths ranged from 15.0 – 33.0 in with a mean length of 23.9 in and mean CPUE of 0.7 fish/boat in the upper section, and ranged from 15.8 – 29.2 in with a mean length of 22.8 in and mean CPUE of 0.3 fish/boat in the trophy permit section of the Ohio River. Flathead catfish were not as commonly caught (CPUE=0.2 fish/boat in the upper section and CPUE=0.1 fish/boat in the trophy permit section). Flathead catfish ranged from 16.5 – 48.2 in with a mean length of 25.3 in with a mean CPUE of 0.2 fish/boat in the upper section of the Ohio River, and ranged from 15.8 – 41.8 in with a mean length of 25.9 in and mean CPUE of 0.1 fish/boat in the trophy permit section (Table 21). Tournament catch rates of trophy catfish for blue catfish, channel catfish, and flathead catfish have remained stable since 2013 (Figures 1, 2, and 3).

Tournament catch rates for different size groups of each species of catfish were also examined. Overall, blue catfish CPUE has remained stable since 2013; however, blue catfish CPUE in the upper section has increased slightly over the last 2 years. CPUE of 12.0 – 19.9 in blue catfish in the upper section of the Ohio River have decreased each year since 2013, likely because CPUE of 20.0 – 29.9 in blue catfish has increased (bigger fish brought to weigh in). Catch rates of all size groups of blue catfish in the trophy permit section of the river have fluctuated very little over the past four years (Table 22). Catch rates of channel catfish have decreased since 2013. This decrease can be attributed to a decrease in CPUE of 20.0 – 27.9 in channel catfish in the upper section of the Ohio River (Table 23). CPUE of channel catfish may continue to decrease in the future if more and larger blue catfish and flathead catfish are brought to weigh in by tournament anglers. Flathead catfish are not typically targeted by tournament anglers, and CPUE for all size groups examined have remained consistent since 2004 (Table 24).

Relative Weight

Relative weight (W_r) for each species of catfish was also calculated. Fish collected from all sampling methods used including catfish tournaments were combined to provide a more representative estimate for the entire populations of each catfish species. Overall W_r of blue catfish in 2016 was 107 (upper section = 107, trophy permit section = 107). W_r has not dropped below 100 in the past four years. Overall relative weight of channel catfish was 98 in the upper section of the Ohio River and 96 in the trophy permit section (97 overall). Flathead catfish overall relative weight was 106, and was 100 in the upper section and 111 in the trophy permit section (Table 25).

Mortality Estimates

In 2012, otoliths were taken from blue catfish, channel catfish, and flathead catfish to assess mean lengths at age of capture for each species. On average, it took blue catfish 15 years to reach trophy size (≥ 35.0 in), channel catfish greater than 17 years to reach trophy size (≥ 28.0 in), and 20 years for flathead catfish to reach trophy size (≥ 35.0 in; Table 26). Total annual mortality estimates were made on all three species of catfish based off length-at-age of capture data from otoliths removed from Ohio River catfish in 2012 and paired with unaged catfish collected with multiple sampling techniques in 2016. Using Fishery Analysis and Modeling Simulator, an unweighted catch-curve regression was run on each species of catfish for each sampling method to calculate a range of mortality estimates. In 2016 river-wide total annual mortality rates ranged from 16.0 – 17.4% for blue catfish and were lower in the upper section (13.8 – 14.2 %) than the trophy permit section (17.0 – 18.6%). Channel catfish total annual mortality rate was 16.8% overall (18.0 % in the upper section and 15.9% in the trophy permit section). Overall flathead catfish total annual mortality rates ranged from 14.5 – 16.0% (12.8 – 18.0% in the upper section and 14.5 – 14.9% in the trophy permit section; Table 27).

Commercial Fishing Industry

Commercial fishing for catfish has long been present in the Ohio River, but recent concerns of potential overharvest have warranted further investigations. Trends for harvest were similar for channel catfish and flathead catfish from 2004 – 2015. Harvest of blue catfish began increasing from 2004 to 2005 and has remained near that level through 2015 with a peak in pounds harvested in 2013 (Figure 4). Unfortunately, commercial fish harvest reports do not include detailed information about gear (number of net nights, baited vs. unbaited, length of gillnet, etc.); however, the number of hooks fished for trotlines is required to be reported. Although trotline harvest should not be considered indicative of the entire commercial catfish harvest, it is the best available method to analyze trends in commercial catfish harvest rates. Effort (number of hooks) and pounds harvested by trotlines were examined to determine if harvest rates (lbs/hook) varied over the years. Although there were fluctuations in harvest from 2004 – 2015, harvest rates of channel catfish and flathead catfish have remained relatively stable over that same time period and showed slight increases from 2014 to 2015 (Figure 5). The harvest rate of blue catfish increased sharply from 2004 to 2005, then increased gradually from 2005 – 2014. Recent decreases in pounds of channel catfish and flathead catfish harvested in 2013 and 2014 are likely not a result of decreased harvest rates, but rather a decrease in effort. Conversely, blue catfish trotline catch rates decreased slightly in 2015 while overall pounds harvested increased, indicating that more effort was used to harvest fewer fish.

For more information on commercial harvest of catfish from the Ohio River please refer to Statewide Fisheries Investigations Project, Subsection II, Project IX: Commercial Fish Harvest in Kentucky.

Table 1. CPUE (fish/line) of blue catfish, channel catfish, and flathead catfish collected during trotline surveys on the Ohio River in 2016. Standard errors are in parentheses.

| Pool | Pool | No. of trotlines | Effort (hooks) | No. of Blue Catfish | CPUE | No. of Channel Catfish | CPUE | No. of Flathead Catfish | CPUE |
|---------------|-----------|------------------|----------------|---------------------|-----------|------------------------|-----------|-------------------------|-------------|
| Upper | Meldahl | 35 | 1750 | 110 | 3.1 (0.4) | 93 | 2.6 (0.3) | 1 | <0.1 (<0.1) |
| | Cannelton | 33 | 1650 | 132 | 4.0 (0.4) | 55 | 1.7 (0.3) | 5 | 0.2 (0.1) |
| | Total | 68 | 3400 | 242 | | 148 | | 6 | |
| | Mean | | | | 3.6 (0.3) | | 2.2 (0.2) | | 0.1 (<0.1) |
| Trophy permit | JT Meyers | 32 | 1600 | 98 | 3.1 (0.4) | 87 | 2.7 (0.3) | 1 | <0.1 (<0.1) |
| | Smithland | 24 | 1200 | 7 | 0.3 (0.1) | 20 | 0.8 (0.2) | 0 | 0.0 |
| | Total | 56 | 2800 | 105 | | 107 | | 1 | |
| | Mean | | | | 1.9 (0.3) | | 1.9 (0.2) | | <0.1 (<0.1) |
| Overall | Total | 124 | 6200 | 347 | | 255 | | 7 | |
| | Mean | | | | 2.8 (0.2) | | 2.1 (0.2) | | 0.1 (<0.1) |

Table 2. CPUE (fish/line) of blue catfish, channel catfish, and flathead catfish collected during trotline surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Species | | |
|---------------|---------|--------------|-----------------|------------------|
| | | Blue catfish | Channel catfish | Flathead catfish |
| Upper | 2005 | 0.0 | 1.9 (0.4) | 0.6 (0.3) |
| | 2010 | 4.0 (0.4) | 2.6 (0.3) | <0.1 (<0.1) |
| | 2012 | 2.3 (0.6) | 2.3 (0.8) | 0.1 (<0.1) |
| | 2013 | 1.0 (0.5) | 1.3 (0.3) | 0.1 (<0.1) |
| | 2014 | 1.9 (0.4) | 1.4 (0.2) | 0.3 (0.1) |
| | 2015 | 1.9 (0.3) | 1.6 (0.3) | 0.2 (0.1) |
| | 2016 | 3.6 (0.3) | 2.2 (0.2) | 0.1 (<0.1) |
| | Mean | 2.1 (0.4) | 1.9 (0.2) | 0.2 (0.1) |
| Trophy permit | 2004 | 1.5 (0.3) | 1.1 (0.4) | 0.1 (0.1) |
| | 2005 | 1.8 (0.4) | 0.5 (0.1) | 0.1 (0.1) |
| | 2006 | 6.6 (1.2) | 1.2 (0.3) | <0.1 (<0.1) |
| | 2007 | 2.4 (0.5) | 1.2 (0.4) | <0.1 (<0.1) |
| | 2008 | 5.9 (0.7) | 1.6 (0.3) | 0.1 (<0.1) |
| | 2011 | 3.9 (0.6) | 2.0 (0.4) | 0.1 (<0.1) |
| | 2012 | 3.9 (1.8) | 0.4 (0.1) | 0.0 |
| | 2013 | 1.3 (0.4) | 1.0 (0.3) | <0.1 (<0.1) |
| | 2014 | 0.9 (0.2) | 0.6 (0.2) | 0.1 (<0.1) |
| | 2015 | 1.3 (0.2) | 0.7 (0.2) | 0.4 (0.1) |
| | 2016 | 1.9 (0.3) | 1.9 (0.2) | <0.1 (<0.1) |
| | Mean | 2.9 (0.6) | 1.1 (0.2) | 0.1 (<0.1) |
| | Overall | 2004 | 1.5 (0.3) | 1.1 (0.4) |
| 2005 | | 1.5 (0.4) | 0.8 (0.1) | 0.2 (0.1) |
| 2006 | | 6.6 (1.2) | 1.2 (0.3) | <0.1 (<0.1) |
| 2007 | | 2.4 (0.5) | 1.2 (0.4) | <0.1 (<0.1) |
| 2008 | | 5.9 (0.7) | 1.6 (0.3) | 0.1 (<0.1) |
| 2010 | | 4.0 (0.4) | 2.6 (0.3) | <0.1 (<0.1) |
| 2011 | | 3.9 (0.6) | 2.0 (0.4) | 0.1 (<0.1) |
| 2012 | | 3.0 (0.8) | 1.6 (0.6) | <0.1 (<0.1) |
| 2013 | | 1.2 (0.2) | 1.1 (0.1) | 0.1 (<0.1) |
| 2014 | | 1.3 (0.1) | 1.0 (0.1) | 0.2 (0.1) |
| 2015 | | 1.6 (0.2) | 1.2 (0.1) | 0.3 (0.1) |
| 2016 | | 2.8 (0.2) | 2.1 (0.2) | 0.1 (<0.1) |
| Mean | | 3.0 (0.5) | 1.5 (0.2) | 0.1 (<0.1) |

Table 3. Length frequency, and CPUE (fish/line) of blue catfish, channel catfish, and flathead catfish collected during trotline surveys on Ohio River in 2016. Standard errors are in parentheses.

| Section | Pool | Species | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | Total | CPUE | |
|---------------|-----------|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----------|-----------|-------------|
| Upper | Meldahl | Blue catfish | | | | | 1 | 1 | 2 | 8 | 13 | 16 | 5 | 10 | 5 | 2 | 2 | 6 | 5 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 1 | | | | | | | | 110 | 3.1 (0.4) | | |
| | | Channel catfish | | | 2 | 1 | 3 | 6 | 10 | 8 | 13 | 8 | 13 | 7 | 8 | 3 | 5 | 2 | 2 | 1 | 1 | | | | | | | | | | | | | | | | 93 | 2.6 (0.3) |
| | | Flathead catfish | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | <0.1 (<0.1) |
| | Cannelton | Blue catfish | 1 | 1 | 2 | 2 | 9 | 8 | 4 | 3 | 10 | 3 | 5 | 4 | 7 | 11 | 7 | 8 | 12 | 7 | 5 | 6 | 3 | 4 | 3 | 2 | 2 | | | 2 | | | | | 1 | 132 | 4.0 (0.4) | |
| | | Channel catfish | 4 | 1 | 3 | 6 | 6 | 14 | 6 | 6 | 4 | 2 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | 55 | 1.7 (0.2) |
| | | Flathead catfish | | | | | | | | | | 1 | | | | | 2 | | 1 | | | | | | | | | | | | | | | | | | 5 | 0.2 (0.1) |
| | Total | Blue catfish | 1 | 1 | 2 | 2 | 10 | 9 | 6 | 11 | 23 | 19 | 10 | 14 | 12 | 13 | 9 | 14 | 17 | 10 | 9 | 10 | 8 | 9 | 8 | 7 | 3 | | 2 | 2 | | | | | 1 | 242 | 3.6 (0.3) | |
| | | Channel catfish | 4 | 3 | 4 | 9 | 12 | 24 | 14 | 19 | 12 | 15 | 8 | 10 | 3 | 5 | 2 | 2 | 1 | 1 | | | | | | | | | | | | | | | | | 148 | 2.2 (0.2) |
| | | Flathead catfish | | | | | | | | | 1 | 1 | | | | 2 | | 1 | | | | | | | | | | | | | | | | | | | 6 | 0.1 (<0.1) |
| Trophy permit | JT Meyers | Blue catfish | | | | | 2 | 1 | 2 | 9 | 14 | 14 | 10 | 8 | 3 | 3 | 3 | 7 | 1 | 3 | | 4 | 3 | 1 | 2 | 2 | 1 | 2 | | | | | 1 | 2 | | 98 | 3.1 (0.4) | |
| | | Channel catfish | | | | 3 | 11 | 5 | 10 | 4 | 10 | 12 | 6 | 8 | 6 | 5 | 4 | | | 2 | | | | | | | | | | | | | | | | | 87 | 2.7 (0.3) |
| | | Flathead catfish | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | <0.1 (<0.1) |
| | Smithland | Blue catfish | | | | | | | | | | | | | | | | | 1 | | | 1 | 2 | | 2 | | | 1 | | | | | | | | 7 | 0.3 (0.1) | |
| | | Channel catfish | | | | | 1 | | 1 | 4 | 5 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | 20 | 0.8 (0.2) |
| | | Flathead catfish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.0 |
| | Total | Blue catfish | | | | | 2 | 1 | 2 | 9 | 14 | 14 | 10 | 8 | 3 | 3 | 3 | 8 | 1 | 3 | 1 | 6 | 3 | 3 | 2 | 2 | 2 | 2 | | | | | 1 | 2 | | 105 | 1.9 (0.3) | |
| | | Channel catfish | | | | 3 | 12 | 5 | 11 | 8 | 15 | 15 | 8 | 10 | 8 | 5 | 4 | | | 2 | | | | | | | | | | | | | | | | | 107 | 1.9 (0.2) |
| | | Flathead catfish | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | <0.1 (<0.1) |
| Overall | Total | Blue catfish | 1 | 1 | 2 | 2 | 12 | 10 | 8 | 20 | 37 | 33 | 20 | 22 | 15 | 16 | 12 | 22 | 18 | 13 | 10 | 16 | 11 | 12 | 10 | 9 | 5 | 2 | 2 | 2 | | | 1 | 2 | 1 | 347 | 2.8 (0.2) | |
| | | Channel catfish | 4 | 3 | 7 | 21 | 17 | 35 | 22 | 34 | 27 | 23 | 18 | 18 | 8 | 9 | 2 | 4 | 1 | 1 | | | | | | | 1 | | | | | | | | | 255 | 2.1 (0.2) | |
| | | Flathead catfish | | | | | | | | | 1 | 1 | | | | | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | 7 | 0.1 (<0.1) |

Table 4. CPUE by size group of blue catfish collected during trotline surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total | |
|---------------|---------|-------------|-------------|-------------|-------------|-------------|------------|-----------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | | |
| Upper | 2005 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | 2010 | 0.0 | 0.2 (<0.1) | 1.9 (0.3) | 1.1 (0.3) | 0.7 (0.2) | 4.0 (0.4) | |
| | 2012 | 0.1 (<0.1) | 0.1 (0.1) | 1.4 (0.6) | 0.4 (0.2) | 0.2 (0.1) | 2.3 (0.6) | |
| | 2013 | <0.1 (<0.1) | 0.2 (0.1) | 0.6 (0.3) | 0.1 (0.1) | <0.1 (<0.1) | 1.0 (0.5) | |
| | 2014 | <0.1 (<0.1) | 0.6 (0.3) | 0.7 (0.4) | 0.4 (0.1) | 0.2 (0.1) | 1.9 (0.4) | |
| | 2015 | <0.1 (<0.1) | 0.6 (0.2) | 0.7 (0.4) | 0.4 (0.2) | 0.2 (0.1) | 1.9 (0.3) | |
| | 2016 | <0.1 (<0.1) | 0.9 (0.4) | 1.9 (0.3) | 0.6 (0.2) | 0.1 (<0.1) | 3.6 (0.3) | |
| | Mean | <0.1 (<0.1) | 0.4 (0.1) | 1.0 (0.3) | 0.4 (0.1) | 0.2 (0.1) | 2.1 (0.4) | |
| Trophy permit | 2004 | 0.0 | 0.3 (0.2) | 0.9 (0.2) | 0.3 (0.2) | 0.1 (0.1) | 1.5 (0.3) | |
| | 2005 | 0.0 | <0.1 (<0.1) | 1.3 (0.5) | 0.3 (0.2) | 0.2 (0.1) | 1.8 (0.4) | |
| | 2006 | <0.1 (<0.1) | 0.8 (0.2) | 5.0 (1.0) | 0.6 (0.2) | 0.2 (0.1) | 6.6 (1.2) | |
| | 2007 | 0.0 | 0.3 (0.1) | 1.5 (0.4) | 0.5 (0.2) | 0.1 (<0.1) | 2.4 (0.5) | |
| | 2008 | 0.0 | 0.6 (0.2) | 4.1 (0.8) | 1.0 (0.1) | 0.1 (0.1) | 5.9 (0.7) | |
| | 2011 | 0.0 | 0.2 (0.1) | 2.7 (0.5) | 0.9 (0.3) | 0.3 (0.1) | 3.9 (0.6) | |
| | 2012 | <0.1 (<0.1) | 1.6 (0.8) | 2.0 (0.9) | 0.2 (0.2) | 0.1 (0.1) | 3.9 (1.8) | |
| | 2013 | 0.2 (0.1) | 0.4 (0.1) | 0.6 (0.2) | 0.1 (0.1) | <0.1 (<0.1) | 1.3 (0.4) | |
| | 2014 | 0.0 | 0.4 (0.2) | 0.3 (0.2) | 0.1 (0.1) | <0.1 (<0.1) | 0.9 (0.2) | |
| | 2015 | 0.0 | 0.3 (0.2) | 0.7 (0.5) | 0.2 (0.2) | 0.1 (<0.1) | 1.3 (0.2) | |
| | 2016 | 0.0 | 0.5 (0.2) | 1.0 (0.6) | 0.3 (0.1) | 0.1 (<0.1) | 1.9 (0.3) | |
| | | Mean | <0.1 (<0.1) | 0.5 (0.1) | 1.8 (0.5) | 0.4 (0.1) | 0.1 (<0.1) | 2.9 (0.6) |
| | Overall | 2004 | 0.0 | 0.3 (0.2) | 0.9 (0.2) | 0.3 (0.2) | 0.1 (0.1) | 1.5 (0.3) |
| 2005 | | 0.0 | <0.1 (<0.1) | 1.0 (0.6) | 0.2 (0.1) | 0.2 (0.1) | 1.5 (0.4) | |
| 2006 | | <0.1 (<0.1) | 0.8 (0.2) | 5.0 (1.0) | 0.6 (0.2) | 0.2 (0.1) | 6.6 (1.2) | |
| 2007 | | 0.0 | 0.3 (0.1) | 1.5 (0.4) | 0.5 (0.2) | 0.1 (<0.1) | 2.4 (0.5) | |
| 2008 | | 0.0 | 0.6 (0.2) | 4.1 (0.8) | 1.0 (0.1) | 0.1 (0.1) | 5.9 (0.7) | |
| 2010 | | 0.0 | 0.2 (<0.1) | 1.9 (0.3) | 1.1 (0.3) | 0.7 (0.2) | 4.0 (0.4) | |
| 2011 | | 0.0 | 0.2 (0.1) | 2.7 (0.5) | 0.9 (0.3) | 0.3 (0.1) | 3.9 (0.6) | |
| 2012 | | 0.1 (<0.1) | 0.7 (0.3) | 1.7 (0.3) | 0.3 (0.2) | 0.2 (0.1) | 3.0 (0.8) | |
| 2013 | | 0.1 (<0.1) | 0.3 (0.1) | 0.6 (0.1) | 0.1 (<0.1) | <0.1 (<0.1) | 1.2 (0.2) | |
| 2014 | | <0.1 (<0.1) | 0.5 (0.1) | 0.5 (0.1) | 0.2 (<0.1) | 0.1 (0.1) | 1.3 (0.1) | |
| 2015 | | <0.1 (<0.1) | 0.5 (0.2) | 0.7 (0.2) | 0.3 (0.1) | 0.1 (<0.1) | 1.6 (0.2) | |
| 2016 | | <0.1 (<0.1) | 0.7 (0.2) | 1.5 (0.4) | 0.5 (0.2) | 0.1 (<0.1) | 2.8 (0.2) | |
| | | Mean | <0.1 (<0.1) | 0.4 (0.1) | 1.8 (0.4) | 0.5 (0.1) | 0.2 (0.1) | 3.0 (0.5) |

Table 5. CPUE by size group of channel catfish collected during trotline surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | Total | |
|---------------|------|-------------|-------------|-------------|-------------|-------------|-----------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 27.9 | ≥28.0 | | |
| Upper | 2005 | 0.0 | 0.6 (0.2) | 1.3 (0.4) | 0.0 | 1.9 (0.4) | |
| | 2010 | 0.0 | 0.7 (0.2) | 1.9 (0.4) | <0.1 (<0.1) | 2.6 (0.3) | |
| | 2012 | 0.0 | 1.2 (0.3) | 1.1 (0.4) | 0.0 | 2.3 (0.8) | |
| | 2013 | 0.0 | 0.8 (0.4) | 0.4 (0.2) | 0.0 | 1.3 (0.3) | |
| | 2014 | 0.0 | 0.9 (0.4) | 0.5 (0.2) | 0.0 | 1.4 (0.2) | |
| | 2015 | <0.1 (<0.1) | 0.9 (0.4) | 0.7 (0.3) | 0.0 | 1.6 (0.3) | |
| | 2016 | 0.0 | 1.3 (0.3) | 0.8 (0.2) | <0.1 (<0.1) | 2.2 (0.2) | |
| | Mean | <0.1 (<0.1) | 0.9 (0.1) | 1.0 (0.2) | <0.1 (<0.1) | 1.9 (0.2) | |
| Trophy permit | 2004 | 0.0 | 0.7 (0.4) | 0.4 (0.2) | 0.0 | 1.1 (0.4) | |
| | 2005 | 0.0 | 0.3 (0.1) | 0.1 (0.1) | 0.0 | 0.5 (0.1) | |
| | 2006 | 0.0 | 0.7 (0.2) | 0.6 (0.2) | 0.0 | 1.2 (0.3) | |
| | 2007 | 0.0 | 0.6 (0.2) | 0.6 (0.2) | 0.0 | 1.2 (0.4) | |
| | 2008 | 0.0 | 0.9 (0.2) | 0.6 (0.2) | 0.1 (<0.1) | 1.6 (0.3) | |
| | 2011 | 0.0 | 1.2 (0.3) | 0.8 (0.3) | 0.0 | 2.0 (0.4) | |
| | 2012 | 0.0 | 0.2 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.4 (0.1) | |
| | 2013 | <0.1 (<0.1) | 0.5 (0.3) | 0.4 (0.2) | 0.0 | 1.0 (0.3) | |
| | 2014 | <0.1 (<0.1) | 0.2 (0.1) | 0.3 (0.1) | 0.0 | 0.6 (0.2) | |
| | 2015 | 0.0 | 0.3 (0.2) | 0.3 (0.2) | 0.0 | 0.7 (0.2) | |
| | 2016 | 0.0 | 1.0 (0.4) | 0.9 (0.2) | <0.1 (<0.1) | 1.9 (0.2) | |
| | | Mean | <0.1 (<0.1) | 0.6 (0.1) | 0.5 (0.1) | <0.1 (<0.1) | 1.1 (0.2) |
| Overall | 2004 | 0.0 | 0.7 (0.4) | 0.4 (0.2) | 0.0 | 1.1 (0.4) | |
| | 2005 | 0.0 | 0.4 (0.3) | 0.4 (0.2) | 0.0 | 0.8 (0.1) | |
| | 2006 | 0.0 | 0.7 (0.2) | 0.6 (0.2) | 0.0 | 1.2 (0.3) | |
| | 2007 | 0.0 | 0.6 (0.2) | 0.6 (0.2) | 0.0 | 1.2 (0.4) | |
| | 2008 | 0.0 | 0.9 (0.2) | 0.6 (0.2) | 0.1 (<0.1) | 1.6 (0.3) | |
| | 2010 | 0.0 | 0.7 (0.2) | 1.9 (0.4) | <0.1 (<0.1) | 2.6 (0.3) | |
| | 2011 | 0.0 | 1.2 (0.3) | 0.8 (0.3) | 0.0 | 2.0 (0.4) | |
| | 2012 | 0.0 | 0.8 (0.2) | 0.7 (0.2) | <0.1 (<0.1) | 1.6 (0.6) | |
| | 2013 | <0.1 (<0.1) | 0.7 (0.1) | 0.4 (0.1) | 0.0 | 1.1 (0.1) | |
| | 2014 | <0.1 (<0.1) | 0.6 (0.2) | 0.4 (0.1) | 0.0 | 1.0 (0.1) | |
| | 2015 | <0.1 (<0.1) | 0.7 (0.2) | 0.5 (0.1) | 0.0 | 1.2 (0.1) | |
| | 2016 | 0.0 | 1.2 (0.4) | 0.9 (0.2) | <0.1 (<0.1) | 2.1 (0.2) | |
| | | Mean | <0.1 (<0.1) | 0.8 (0.1) | 0.7 (0.1) | <0.1 (<0.1) | 1.5 (0.2) |

Table 6. CPUE by size group of flathead catfish collected during trotline surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|---------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2005 | 0.0 | 0.0 | 0.4 (0.2) | 0.3 (0.3) | 0.0 | 0.6 (0.3) |
| | 2010 | 0.0 | 0.0 | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) |
| | 2012 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | 0.1 (<0.1) |
| | 2013 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | 0.0 | 0.1 (<0.1) |
| | 2014 | 0.0 | 0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | 0.0 | 0.3 (0.1) |
| | 2015 | 0.0 | 0.1 (<0.1) | 0.1 (0.1) | 0.0 | 0.0 | 0.2 (0.1) |
| | 2016 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) |
| Mean | 0.0 | <0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) | |
| Trophy permit | 2004 | 0.0 | 0.1 (0.1) | 0.0 | 0.0 | 0.0 | 0.1 (0.1) |
| | 2005 | 0.0 | 0.0 | 0.1 (<0.1) | 0.0 | 0.1 (0.1) | 0.1 (0.1) |
| | 2006 | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) |
| | 2007 | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) |
| | 2008 | 0.0 | 0.0 | 0.1 (<0.1) | 0.0 | 0.0 | 0.1 (<0.1) |
| | 2011 | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |
| | 2012 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2013 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | 0.0 | <0.1 (<0.1) |
| | 2014 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) |
| | 2015 | 0.0 | 0.2 (0.1) | 0.2 (0.1) | 0.0 | 0.0 | 0.4 (0.1) |
| | 2016 | 0.0 | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | <0.1 (<0.1) |
| | Mean | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |
| | Overall | 2004 | 0.0 | 0.1 (0.1) | 0.0 | 0.0 | 0.0 |
| 2005 | | 0.0 | 0.0 | 0.1 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| 2006 | | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) |
| 2007 | | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) |
| 2008 | | 0.0 | 0.0 | 0.1 (<0.1) | 0.0 | 0.0 | 0.1 (<0.1) |
| 2010 | | 0.0 | 0.0 | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) |
| 2011 | | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |
| 2012 | | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) |
| 2013 | | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | 0.0 | 0.1 (<0.1) |
| 2014 | | 0.0 | 0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| 2015 | | 0.0 | 0.1 (<0.1) | 0.2 (0.1) | 0.0 | 0.0 | 0.3 (0.1) |
| 2016 | | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) |
| Mean | | 0 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |

Table 7. CPUE (fish/net-night) of blue catfish, channel catfish, and flathead catfish during hoopnet surveys in Meldahl, Cannelton, and Smithland pools of the Ohio River in 2016. Standard errors are in parentheses.

| Section | Pool | No. of hoopnets | Effort (net nights) | No. of Blue | | No. of Channel | | No. of Flathead | |
|---------------|-----------|-----------------|---------------------|-------------|-------------|----------------|-----------|-----------------|------------|
| | | | | Catfish | CPUE | Catfish | CPUE | Catfish | CPUE |
| Upper | Meldahl | 43 | 86 | 1 | <0.1 (<0.1) | 14 | 0.2 (0.1) | 28 | 0.3 (<0.1) |
| | Cannelton | 82 | 164 | 8 | <0.1 (<0.1) | 37 | 0.2 (0.1) | 77 | 0.5 (0.1) |
| | Total | 125 | 250 | 9 | | 51 | | 105 | |
| | Mean | | | | <0.1 (<0.1) | | 0.2 (0.1) | | 0.4 (0.1) |
| Trophy permit | Smithland | 14 | 28 | 0 | 0.0 | 2 | 0.1 (0.1) | 44 | 1.6 (0.4) |
| | Total | 14 | 28 | 0 | | 2 | | 44 | |
| | Mean | | | | 0.0 | | 0.1 (0.1) | | 1.6 (0.4) |
| Overall | Total | 139 | 278 | 9 | | 53 | | 149 | |
| | Mean | | | | <0.1 (<0.1) | | 0.2 (0.1) | | 0.5 (0.1) |

Table 8. CPUE (fish/net-night) of blue catfish, channel catfish, and flathead catfish collected during hoopnet surveys on the Ohio River from 2006 - 2016. Standard errors are in parentheses.

| Section | Year | Species | | |
|---------------|--------|--------------|-----------------|------------------|
| | | Blue catfish | Channel catfish | Flathead catfish |
| Upper | 2006 | 0.0 | 2.7 (0.6) | 0.8 (0.4) |
| | 2007 | <0.1 (<0.1) | 0.3 (<0.1) | 0.2 (0.1) |
| | 2013* | 0.6 (0.2) | | 2.9 (0.5) |
| | 2014* | 0.4 (0.2) | | 0.8 (0.3) |
| | 2015 | <0.1 (<0.1) | 0.2 (0.1) | 0.4 (0.1) |
| | 2016 | <0.1 (<0.1) | 0.2 (0.1) | 0.4 (0.1) |
| | Mean | 0.2 (0.1) | 0.9 (0.6) | 0.9 (0.4) |
| Trophy permit | 2006 | 0.0 | 0.4 (0.4) | 4.8 (1.6) |
| | 2013* | 1.0 (0.2) | | 2.0 (1.1) |
| | 2014* | 1.2 (0.2) | | 0.8 (0.1) |
| | 2015* | 0.6 (0.3) | | 0.7 (0.3) |
| | 2016 | 0.0 | 0.1 (0.1) | 1.6 (0.4) |
| | Mean | 0.6 (0.3) | 0.2 (0.2) | 2.0 (0.7) |
| Overall | 2006 | 0.0 | 2.4 (0.2) | 1.0 (0.4) |
| | 2007 | <0.1 (<0.1) | 0.3 (<0.1) | 0.2 (0.1) |
| | 2013* | 0.7 (0.2) | | 2.6 (0.3) |
| | 2014* | 0.8 (0.6) | | 0.8 (0.1) |
| | 2015** | <0.1 (<0.1) | 0.2 (0.1) | 0.5 (0.1) |
| | 2016 | <0.1 (<0.1) | 0.2 (0.1) | 0.5 (0.1) |
| | Mean | 0.4 (0.1) | 0.8 (0.3) | 0.9 (0.4) |

*Numbers calculated from ride-alongs with commercial fishermen.

**Numbers calculated from ride-alongs with commercial fishermen and KDFWR sampling.

Table 9. Length frequency and CPUE (fish/net/night) of blue catfish, channel catfish, and flathead catfish sampled during hoopnet sampling in the Meldahl, Cannelton, and Smithland pools during 2016 on the Ohio River. Standard errors are in parentheses.

| Section | Pool | Species | Inch class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total | CPUE |
|---------------|-----------|------------------|------------|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------|-----|-------------|------------|-----------|--|--|-------|------|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | | | | | | |
| Upper | Meldahl | Blue catfish | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | <0.1 (<0.1) | | | | | | |
| | | Channel catfish | | 1 | | | | 2 | 1 | | 2 | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | | | | | | | | | | | | | | | | | 14 | 0.2 (0.1) | | | | | |
| | | Flathead catfish | | | | | | | | | 1 | 2 | 1 | 2 | 6 | 5 | 2 | 4 | | 1 | 1 | 2 | | | | | 1 | | | | | | | | | | | 28 | 0.3 (<0.1) | | | | | |
| | Cannelton | Blue catfish | | | | | | 1 | | 1 | | | | 2 | | | | 1 | | | | | | 1 | 1 | | | | | | | | | 1 | | | 8 | <0.1 (<0.1) | | | | | | |
| | | Channel catfish | | | 4 | | 2 | 1 | 1 | 5 | 4 | 5 | 3 | 2 | 4 | 2 | 3 | 1 | | | | | | | | | | | | | | | | | | | | 37 | 0.2 (0.1) | | | | | |
| | | Flathead catfish | 1 | | | 1 | | | | 1 | 4 | 4 | 7 | 4 | 1 | 3 | 10 | 8 | 7 | 5 | 4 | 1 | 4 | 3 | | | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 77 | 0.5 (0.2) | | | | |
| | Total | Blue catfish | 1 | | | | | 1 | | 1 | | | 2 | | | | 1 | | | | | | 1 | 1 | | | | | | | | | | | 1 | | 9 | <0.1 (<0.1) | | | | | | |
| | | Channel catfish | | 1 | 4 | | 2 | 3 | 2 | 5 | 6 | 6 | 4 | 3 | 5 | 3 | 3 | 2 | | | 1 | 1 | | | | | | | | | | | | | | | 51 | 0.2 (0.1) | | | | | | |
| | | Flathead catfish | 1 | | | 1 | | | | 1 | 5 | 6 | 8 | 6 | 7 | 8 | 12 | 12 | 7 | 6 | 5 | 3 | 4 | 3 | | | 1 | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 105 | 0.5 (0.1) | | | | | |
| Trophy permit | Smithland | Blue catfish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.0 | | | | | | | |
| | | Channel catfish | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0.1 (0.1) | | | | | | |
| | | Flathead catfish | 1 | | | | 1 | | | 1 | | | 1 | 4 | 6 | 7 | 9 | 7 | 3 | 2 | 1 | | 1 | | | | | | | | | | | | | | 44 | 1.6 (0.4) | | | | | | |
| | Total | Blue catfish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.0 | | | | | | |
| | | Channel catfish | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0.1 (0.1) | | | | | | |
| | | Flathead catfish | 1 | | | 1 | | | 1 | | 1 | 4 | 6 | 7 | 9 | 7 | 3 | 2 | 1 | | 1 | | | | | | | | | | | | | | | | 44 | 1.6 (0.4) | | | | | | |
| Overall | Total | Blue catfish | 1 | | | | 1 | | 1 | | | 2 | | | | 1 | | | | | | 1 | 1 | | | | | | | | | | 1 | | 9 | <0.1 (<0.1) | | | | | | | | |
| | | Channel catfish | | 1 | 4 | | 3 | 4 | 2 | 5 | 6 | 6 | 4 | 3 | 5 | 3 | 3 | 2 | | | 1 | 1 | | | | | | | | | | | | | | | 53 | 0.2 (0.1) | | | | | | |
| | | Flathead catfish | 1 | 1 | | 1 | 1 | | 2 | 5 | 6 | 9 | 10 | 13 | 15 | 21 | 19 | 10 | 8 | 6 | 3 | 5 | 3 | | | 1 | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 149 | 0.5 (0.1) | | | | | |

Table 10. CPUE by size group of blue catfish collected during hoopnet surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2006 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2007 | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | <0.1 (<0.1) |
| | 2013* | 0.0 | 0.0 | 0.4 (0.3) | 0.1 (<0.1) | 0.1 (<0.1) | 0.6 (0.2) |
| | 2014* | <0.1 (<0.1) | 0.3 (0.2) | 0.0 | <0.1 (<0.1) | 0.0 | 0.4 (0.2) |
| | 2015 | 0.0 | 0.0 | 0.0 | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) |
| | 2016 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) |
| | Mean | <0.1 (<0.1) | 0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| Trophy permit | 2006 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2013* | 0.1 (<0.1) | 0.1 (<0.1) | 0.6 (0.4) | 0.2 (<0.1) | 0.1 (<0.1) | 1.0 (0.2) |
| | 2014* | <0.1 (<0.1) | 0.2 (0.1) | 0.7 (0.3) | 0.2 (<0.1) | 0.1 (<0.1) | 1.2 (0.2) |
| | 2015* | 0.0 | <0.1 (<0.1) | 0.4 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.6 (0.3) |
| | 2016 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Mean | <0.1 (<0.1) | 0.1 (<0.1) | 0.3 (0.1) | 0.1 (<0.1) | <0.1 (<0.1) | 0.6 (0.3) |
| Overall | 2006 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2007 | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | 0.0 | 0.0 | <0.1 (<0.1) |
| | 2013* | <0.1 (<0.1) | <0.1 (<0.1) | 0.4 (0.3) | 0.2 (<0.1) | 0.1 (<0.1) | 0.7 (0.2) |
| | 2014* | <0.1 (<0.1) | 0.3 (0.2) | 0.4 (0.2) | 0.1 (0.1) | <0.1 (0.1) | 0.8 (0.6) |
| | 2015** | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (<0.1) |
| | 2016 | <0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.0 | <0.1 (<0.1) | <0.1 (<0.1) |
| | Mean | <0.1 (<0.1) | 0.1 (<0.1) | 0.2 (0.1) | 0.1 (<0.1) | <0.1 (<0.1) | 0.4 (0.1) |

*Numbers calculated from ride-alongs with commercial fishermen.

**Numbers calculated from ride-alongs with commercial fishermen and KDFWR sampling.

Table 11. CPUE by size group of channel catfish collected during hoopnet surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | Total |
|---------------|------|-------------|-------------|-------------|-------|------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 27.9 | ≥28.0 | |
| Upper | 2006 | 0.3 (0.1) | 1.1 (0.8) | 1.3 (0.7) | 0.0 | 2.7 (0.6) |
| | 2007 | 0.1 (<0.1) | 0.1 (<0.1) | 0.1 (<0.1) | 0.0 | 0.3 (<0.1) |
| | 2015 | <0.1 (<0.1) | 0.1 (0.1) | 0.1 (<0.1) | 0.0 | 0.2 (0.1) |
| | 2016 | <0.1 (<0.1) | 0.1 (<0.1) | 0.1 (<0.1) | 0.0 | 0.2 (0.1) |
| | Mean | 0.1 (0.1) | 0.4 (0.3) | 0.4 (0.3) | 0.0 | 0.9 (0.6) |
| Trophy permit | 2006 | 0.4 (0.4) | 0.0 | 0.0 | 0.0 | 0.4 (0.4) |
| | 2016 | 0.0 | 0.1 (0.1) | 0.0 | 0.0 | 0.1 (0.1) |
| | Mean | 0.2 (0.2) | 0.1 (0.1) | 0.0 | 0.0 | 0.2 (0.2) |
| Overall | 2006 | 0.3 (0.1) | 1.0 (0.2) | 1.2 (0.8) | 0.0 | 2.4 (0.2) |
| | 2007 | 0.1 (<0.1) | 0.1 (<0.1) | 0.1 (<0.1) | 0.0 | 0.3 (<0.1) |
| | 2015 | <0.1 (<0.1) | 0.1 (0.1) | 0.1 (<0.1) | 0.0 | 0.2 (0.1) |
| | 2016 | <0.1 (<0.1) | 0.1 (0.1) | 0.1 (0.1) | 0.0 | 0.2 (0.1) |
| | Mean | 0.1 (0.1) | 0.3 (0.2) | 0.4 (0.2) | 0.0 | 0.8 (0.3) |

Table 12. CPUE by size group of flathead catfish collected during hoopnet surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|---------|-------------|-------------|-------------|-------------|-------------|-----------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2006 | <0.1 (<0.1) | 0.3 (0.2) | 0.5 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.8 (0.4) |
| | 2007 | 0.0 | <0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2013* | 0.0 | 0.3 (0.1) | 1.7 (0.6) | 0.5 (0.3) | 0.4 (0.1) | 2.9 (0.5) |
| | 2014* | 0.0 | 0.3 (0.1) | 0.4 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.8 (0.3) |
| | 2015 | <0.1 (<0.1) | 0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.4 (0.1) |
| | 2016 | <0.1 (<0.1) | 0.1 (<0.1) | 0.3 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.4 (0.1) |
| | Mean | <0.1 (<0.1) | 0.2 (0.1) | 0.6 (0.2) | 0.1 (0.1) | 0.1 (0.1) | 0.9 (0.4) |
| Trophy permit | 2006 | 0 | 1.8 (0.5) | 3.0 (1.2) | 0 | 0.0 | 4.8 (1.6) |
| | 2013* | 0.0 | 1.0 (0.3) | 0.8 (0.5) | 0.1 (0.1) | <0.1 (<0.1) | 2.0 (1.1) |
| | 2014* | 0.0 | 0.2 (0.1) | 0.5 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.8 (0.1) |
| | 2015* | <0.1 (<0.1) | 0.2 (<0.1) | 0.4 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.7 (0.3) |
| | 2016 | <0.1 (<0.1) | 0.3 (0.1) | 1.3 (0.5) | 0.0 | 0.0 | 1.6 (0.4) |
| | Mean | <0.1 (<0.1) | 0.7 (0.3) | 1.2 (0.5) | 0.1 (<0.1) | <0.1 (<0.1) | 2.0 (0.7) |
| | Overall | 2006 | <0.1 (<0.1) | 0.4 (0.3) | 0.4 (0.1) | 0.1 (<0.1) | 0.0 |
| 2007 | | 0.0 | <0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| 2013* | | 0.0 | 0.5 (0.3) | 1.5 (0.6) | 0.4 (0.3) | 0.3 (0.1) | 2.6 (0.3) |
| 2014* | | 0.0 | 0.2 (0.1) | 0.4 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.8 (0.1) |
| 2015** | | <0.1 (<0.1) | 0.1 (<0.1) | 0.3 (0.1) | 0.1 (0.1) | <0.1 (<0.1) | 0.5 (0.1) |
| 2016 | | <0.1 (<0.1) | 0.1 (0.1) | 0.4 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.5 (0.1) |
| Mean | | <0.1 (<0.1) | 0.2 (0.1) | 0.5 (0.2) | 0.1 (0.1) | 0.1 (<0.1) | 0.9 (0.4) |

*Numbers calculated from ride-alongs with commercial fishermen.

**Numbers calculated from ride-alongs with commercial fishermen and KDFWR sampling.

Table 13. Effort and CPUE (fish/hr) of blue catfish, channel catfish, and flathead catfish collected during electrofishing surveys on the Ohio River in June 2016. Standard errors are in parentheses.

| Section | Pool | No. of transects | Effort (hr) | No. of Blue Catfish | | No. of Channel Catfish | | No. of Flathead | |
|---------------|-----------|------------------|-------------|---------------------|-------------|------------------------|------------|-----------------|------------|
| | | | | No. of Blue Catfish | CPUE | No. of Channel Catfish | CPUE | No. of Flathead | CPUE |
| Upper | Meldhal | 20 | 5.0 | 38 | 7.6 (3.4) | 82 | 16.4 (2.9) | 219 | 43.8 (4.8) |
| | Markland | 20 | 5.0 | 18 | 3.6 (1.8) | 52 | 10.4 (1.7) | 166 | 33.2 (6.8) |
| | Cannelton | 20 | 5.0 | 77 | 15.4 (5.7) | 16 | 3.2 (1.5) | 170 | 34.0 (5.0) |
| | Total | 60 | 15.0 | 133 | | 150 | | 555 | |
| | Mean | | | | | 8.9 (2.4) | | 10.0 (1.4) | |
| Trophy permit | Newburgh | 20 | 5.0 | 54 | 10.8 (3.1) | 8 | 1.6 (0.6) | 108 | 21.6 (3.3) |
| | JT Meyers | 20 | 5.0 | 152 | 30.4 (6.6) | 13 | 2.6 (0.8) | 223 | 44.6 (6.9) |
| | Smithland | 20 | 5.0 | 187 | 37.4 (10.8) | 16 | 3.2 (0.8) | 178 | 35.6 (3.8) |
| | Total | 60 | 15.0 | 393 | | 37 | | 509 | |
| | Mean | | | | 26.2 (4.5) | | 2.5 (0.4) | | 33.9 (3.1) |
| Overall | Total | 120 | 30.0 | 526 | | 187 | | 1064 | |
| | Mean | | | | 17.5 (2.7) | | 6.2 (0.8) | | 35.5 (2.2) |

Table 14. CPUE (fish/hr) of blue catfish, channel catfish, and flathead catfish collected during electrofishing surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Species | | |
|---------------|------|--------------|-----------------|------------------|
| | | Blue catfish | Channel catfish | Flathead catfish |
| Upper | 2009 | 0.9 (0.8) | 2.0 (1.2) | 7.8 (3.8) |
| | 2010 | 11.9 (4.0) | 8.8 (2.7) | 17.1 (3.3) |
| | 2013 | 2.0 (0.9) | 17.0 (3.6) | 46.2 (5.8) |
| | 2014 | 15.5 (4.7) | 9.2 (1.0) | 28.5 (2.8) |
| | 2015 | 10.6 (3.3) | 9.8 (1.5) | 40.9 (5.7) |
| | 2016 | 8.9 (2.4) | 10.0 (1.4) | 37.0 (3.2) |
| | Mean | 8.3 (2.3) | 9.5 (1.9) | 29.6 (6.0) |
| Trophy permit | 2004 | 0.0 | 4.5 (1.6) | 14.5 (4.1) |
| | 2009 | 4.6 (3.2) | 0.8 (0.8) | 48.5 (16.8) |
| | 2013 | 42.7 (14.1) | 61.3 (19.7) | 14.7 (2.9) |
| | 2014 | 23.7 (4.0) | 8.3 (1.4) | 37.9 (4.6) |
| | 2015 | 28.6 (7.1) | 8.9 (2.0) | 33.6 (4.0) |
| | 2016 | 26.2 (4.5) | 2.5 (0.4) | 33.9 (3.1) |
| | Mean | 21.0 (6.5) | 14.4 (9.5) | 30.5 (5.5) |
| Overall | 2004 | 0.0 | 4.5 (1.6) | 14.5 (4.1) |
| | 2009 | 1.6 (0.8) | 1.9 (0.9) | 15.5 (4.1) |
| | 2010 | 11.9 (4.0) | 8.8 (2.7) | 17.1 (3.3) |
| | 2013 | 11.4 (4.8) | 27.2 (3.9) | 38.9 (5.1) |
| | 2014 | 19.3 (3.2) | 8.8 (0.8) | 32.8 (2.6) |
| | 2015 | 19.0 (3.8) | 9.4 (1.2) | 37.6 (3.6) |
| | 2016 | 17.5 (2.7) | 6.2 (0.8) | 35.5 (2.2) |
| | Mean | 11.5 (3.0) | 9.5 (3.1) | 27.4 (4.2) |

Table 15. Length frequency and CPUE (fish/hr) of blue catfish, channel catfish, and flathead catfish collected during electrofishing surveys in June 2016 on the Ohio River. Standard errors are in parentheses.

| Section | Pool | Species | Inch class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total | CPUE | | | |
|---------------|------------------|------------------|------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|------------|------------|-------------|------------|
| | | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | | | | | |
| Upper | Meldahl | Blue catfish | | | | | 1 | | | | | 1 | 1 | 1 | 2 | 1 | 9 | 5 | 1 | 4 | 2 | | 1 | | 1 | | | | 1 | | | | | | 1 | | | 1 | 1 | 1 | 1 | | 2 | | | | | | 38 | 7.6 (3.4) | | | |
| | | Channel catfish | 1 | 1 | 1 | 3 | 12 | 6 | 1 | 5 | 7 | 11 | 16 | 8 | 6 | 3 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 82 | 16.4 (2.9) | | |
| | | Flathead catfish | 1 | 4 | 3 | 5 | 10 | 12 | 9 | 7 | 3 | 12 | 13 | 12 | 13 | 19 | 22 | 9 | 16 | 2 | 7 | 3 | 4 | 12 | 7 | 2 | 4 | 1 | 1 | 1 | | 1 | 1 | 1 | 2 | | | | | | | | | | | | | | | 219 | 43.8 (4.8) | | |
| | Markland | Blue catfish | | | | | | | | | | 2 | 2 | 4 | 1 | 2 | 1 | 2 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 3.6 (1.8) | |
| | | Channel catfish | | | | 1 | 3 | 4 | 4 | 4 | 5 | 4 | 7 | 6 | 3 | 4 | 2 | 1 | 2 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 52 | 10.4 (1.7) | | |
| | | Flathead catfish | 1 | 1 | 9 | 12 | 15 | 7 | 6 | 3 | 6 | 6 | 13 | 10 | 18 | 10 | 5 | 10 | 5 | 4 | 7 | 3 | 4 | 2 | 1 | 1 | 1 | | 2 | 1 | 1 | | | | | | | | 1 | | | | | | 1 | | | | 166 | 33.2 (6.8) | | | |
| | Cannelton | Blue catfish | | | | | | | | | | 3 | 7 | 7 | 7 | 8 | 12 | 9 | 2 | 4 | 1 | 4 | 1 | 2 | 1 | 3 | | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | 77 | 15.4 (5.7) | |
| | | Channel catfish | | | | 1 | 1 | 1 | 1 | 2 | 6 | 2 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 3.2 (1.5) | | |
| | | Flathead catfish | 1 | 1 | 12 | 23 | 4 | 11 | 10 | 12 | 7 | 3 | 10 | 14 | 5 | 10 | 6 | 8 | 3 | 1 | 5 | 5 | 2 | 2 | 1 | 6 | 1 | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | 1 | 170 | 34.0 (5.0) | | |
| Total | Blue catfish | | | | | 1 | | | | 2 | 5 | 12 | 9 | 10 | 11 | 15 | 21 | 8 | 5 | 5 | 6 | 1 | 3 | 1 | 4 | 0 | 3 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 133 | 8.9 (2.4) | | | |
| | Channel catfish | 1 | 1 | 2 | 7 | 17 | 11 | 6 | 12 | 17 | 20 | 22 | 12 | 11 | 5 | 1 | 2 | 1 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 150 | 10.0 (1.4) | | | |
| | Flathead catfish | 1 | 6 | 5 | 26 | 45 | 31 | 27 | 23 | 18 | 25 | 22 | 35 | 37 | 42 | 42 | 20 | 34 | 10 | 12 | 15 | 12 | 18 | 11 | 4 | 11 | 3 | 2 | 4 | 1 | 3 | 1 | 2 | 4 | | | | | | | | | | 1 | | | | 1 | 555 | 37.0 (3.2) | | | |
| Trophy permit | Newburgh | Blue catfish | | | | | | | | | | 1 | 3 | 10 | 6 | 13 | 9 | 3 | 1 | | | 2 | 1 | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | 54 | 10.8 (3.1) | |
| | | Channel catfish | | | | | | 1 | | | 1 | | 3 | 1 | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 1.6 (0.6) | |
| | | Flathead catfish | 3 | 2 | 11 | 4 | 7 | 6 | 3 | 3 | 5 | 3 | 5 | 8 | 7 | 8 | 5 | 13 | 1 | 2 | 1 | 3 | 1 | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 108 | 21.6 (3.3) | |
| | JT Meyers | Blue catfish | | | | 1 | 1 | 1 | | | 1 | 1 | 7 | 12 | 23 | 24 | 22 | 15 | 9 | 6 | 5 | 3 | 2 | 6 | 2 | 4 | 4 | | 1 | | | | | | | | | | | | | | | | | | | | | | | 152 | 30.4 (6.6) |
| | | Channel catfish | | | | 1 | 3 | 2 | | | 1 | 2 | 1 | | | | | | | | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | 2.6 (0.8) | |
| | | Flathead catfish | 1 | 1 | | 12 | 12 | 11 | 14 | 7 | 11 | 7 | 12 | 13 | 8 | 17 | 15 | 13 | 14 | 6 | 2 | 11 | 4 | 7 | 2 | 4 | 1 | 6 | 2 | 1 | | 1 | 1 | 2 | 1 | | | | | | | | | | | | | | | | 223 | 44.6 (6.9) | |
| | Smithland | Blue catfish | 1 | | | 4 | 3 | 2 | 4 | 1 | | 3 | 1 | 2 | 16 | 24 | 30 | 20 | 12 | 16 | 8 | 8 | 6 | 7 | 2 | 2 | 3 | 3 | 1 | 5 | 1 | | | | | | | | | | | | | | | | | | | | 187 | 37.4 (10.8) | |
| | | Channel catfish | 2 | 1 | | 2 | 3 | 1 | | | 1 | 2 | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 3.2 (0.8) | |
| | | Flathead catfish | 2 | 1 | 2 | 5 | 6 | 6 | 5 | 6 | 4 | 13 | 10 | 4 | 7 | 4 | 12 | 8 | 11 | 8 | 8 | 4 | 8 | 6 | 10 | 6 | 4 | 4 | 4 | 2 | 3 | | 1 | 1 | 2 | | | | | | | | | | | | | | | | 178 | 35.6 (3.8) | |
| Total | Blue catfish | 1 | | | 5 | 4 | 3 | 4 | 1 | 1 | 4 | 9 | 17 | 49 | 54 | 65 | 44 | 24 | 23 | 13 | 11 | 10 | 14 | 4 | 10 | 7 | 3 | 2 | 5 | 1 | | | | | | | | | | | | | | | | | | | | 393 | 26.2 (4.5) | | |
| | Channel catfish | 2 | 1 | | 3 | 6 | 4 | | | 3 | 4 | 4 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 | 2.5 (0.4) | | |
| | Flathead catfish | 3 | 5 | 4 | 28 | 22 | 24 | 25 | 16 | 18 | 25 | 25 | 22 | 23 | 28 | 35 | 26 | 38 | 15 | 12 | 16 | 15 | 14 | 14 | 10 | 6 | 10 | 6 | 3 | 3 | 1 | 3 | 3 | 3 | | | | | | | | | | | | | | | | 509 | 33.9 (3.1) | | |
| Overall | Blue catfish | 1 | | | 5 | 5 | 3 | 4 | 3 | 6 | 16 | 18 | 27 | 60 | 69 | 86 | 52 | 29 | 28 | 19 | 12 | 13 | 15 | 8 | 10 | 10 | 4 | 3 | 5 | 1 | | | | | | | | | | | | | | | | | | | | 526 | 17.5 (2.7) | | |
| | Channel catfish | 3 | 2 | 2 | 10 | 23 | 15 | 6 | 12 | 20 | 24 | 26 | 12 | 12 | 6 | 3 | 3 | 2 | 2 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 187 | 6.2 (0.8) | | |
| | Flathead catfish | 4 | 11 | 9 | 54 | 67 | 55 | 52 | 39 | 36 | 50 | 47 | 57 | 60 | 70 | 77 | 46 | 72 | 25 | 24 | 31 | 27 | 32 | 25 | 14 | 17 | 13 | 8 | 7 | 4 | 4 | 4 | 4 | 5 | 7 | | | | | | | | | | | | | | 1064 | 35.5 (2.2) | | | |

Table 16. CPUE by size group of blue catfish collected during electrofishing surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|------|-------------|-------------|-------------|-------------|-----------|-------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2009 | 0.2 (0.2) | 0.4 (0.2) | 0.2 (0.2) | 0.2 (0.2) | 0.0 | 0.9 (0.2) |
| | 2010 | 8.8 (2.3) | 1.0 (0.1) | 1.4 (0.1) | 0.7 (<0.1) | 0.0 | 11.9 (4.0) |
| | 2013 | 1.0 (0.4) | 1.0 (0.6) | 0.0 | 0.0 | 0.0 | 2.0 (0.9) |
| | 2014 | 7.0 (1.3) | 8.1 (4.2) | 0.3 (0.1) | 0.2 (<0.1) | 0.0 | 15.6 (4.7) |
| | 2015 | 0.6 (0.6) | 8.3 (2.4) | 1.8 (0.6) | 0.0 | 0.2 (0.1) | 10.9 (3.3) |
| | 2016 | 0.2 (<0.1) | 6.1 (3.4) | 1.9 (1.4) | 0.1 (0.1) | 0.6 (0.1) | 8.9 (2.4) |
| | Mean | 3.0 (1.6) | 4.2 (1.5) | 0.9 (0.4) | 0.2 (0.1) | 0.1 (0.1) | 8.4 (2.4) |
| Trophy permit | 2004 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2009 | 0.0 | 3.1 (2.7) | 1.5 (0.4) | 0.0 | 0.0 | 4.6 (1.6) |
| | 2013 | 36.7 (11.3) | 4.7 (2.0) | 1.3 (1.3) | 0.0 | 0.0 | 42.7 (14.1) |
| | 2014 | 6.6 (1.2) | 12.5 (2.1) | 4.1 (1.6) | 0.2 (0.1) | 0.3 (0.2) | 23.7 (4.0) |
| | 2015 | 1.0 (0.4) | 21.3 (3.8) | 5.5 (1.1) | 0.5 (0.2) | 0.3 (0.2) | 28.6 (7.1) |
| | 2016 | 1.2 (0.8) | 16.2 (8.7) | 7.9 (2.0) | 0.5 (0.1) | 0.3 (0.1) | 26.2 (4.5) |
| | Mean | 7.6 (5.9) | 9.6 (3.4) | 3.4 (1.2) | 0.2 (0.1) | 0.2 (0.1) | 21.0 (6.5) |
| Overall | 2004 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2009 | 0.1 (<0.1) | 1.0 (0.1) | 0.4 (<0.1) | 0.1 (<0.1) | 0.0 | 1.6 (0.8) |
| | 2010 | 8.8 (2.3) | 1.0 (0.1) | 1.4 (0.1) | 0.7 (<0.1) | 0.0 | 11.9 (4.0) |
| | 2013 | 9.2 (2.5) | 1.8 (0.9) | 0.3 (0.1) | 0.0 | 0.0 | 11.4 (4.8) |
| | 2014 | 6.8 (0.6) | 10.1 (1.2) | 2.1 (0.2) | 0.2 (0.1) | 0.1 (0.1) | 19.3 (3.2) |
| | 2015 | 0.8 (0.4) | 14.3 (3.0) | 3.5 (0.5) | 0.2 (<0.1) | 0.2 (0.1) | 19.0 (3.8) |
| | 2016 | 0.7 (0.4) | 11.1 (2.8) | 4.9 (0.9) | 0.3 (0.1) | 0.5 (0.2) | 17.5 (2.7) |
| | Mean | 3.8 (1.6) | 5.6 (2.3) | 1.8 (0.7) | 0.2 (0.1) | 0.1 (0.1) | 11.5 (3.0) |

Table 17. CPUE by size group of channel catfish collected during electrofishing surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | Total |
|---------------|------|-------------|-------------|-------------|-------|-------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 27.9 | ≥28.0 | |
| Upper | 2009 | 0.6 (0.2) | 1.3 (0.6) | 0.2 (0.2) | 0.0 | 2.0 (0.4) |
| | 2010 | 8.8 (0.4) | 0.0 | 0.0 | 0.0 | 8.8 (2.7) |
| | 2013 | 14.8 (5.3) | 2.0 (0.7) | 0.2 (0.2) | 0.0 | 17.0 (3.6) |
| | 2014 | 6.2 (1.5) | 2.6 (0.9) | 0.4 (0.2) | 0.0 | 9.2 (1.0) |
| | 2015 | 4.8 (1.9) | 4.6 (1.7) | 0.3 (0.3) | 0.0 | 9.8 (1.5) |
| | 2016 | 3.8 (1.6) | 6.0 (1.1) | 0.2 (0.1) | 0.0 | 10.0 (1.4) |
| | Mean | 6.5 (2.0) | 2.8 (0.9) | 0.2 (0.1) | 0.0 | 9.5 (1.9) |
| Trophy permit | 2004 | 0.8 (0.6) | 3.8 (2.4) | 0.0 | 0.0 | 4.5 (1.6) |
| | 2009 | 0.8 (0.8) | 0.0 | 0.0 | 0.0 | 0.8 (0.8) |
| | 2013 | 60.7 (22.6) | 0.6 (0.6) | 0.0 | 0.0 | 61.3 (19.7) |
| | 2014 | 4.7 (1.4) | 3.0 (0.8) | 0.6 (0.2) | 0.0 | 8.3 (1.4) |
| | 2015 | 5.4 (0.9) | 3.1 (1.1) | 0.4 (0.2) | 0.0 | 8.9 (2.0) |
| | 2016 | 1.1 (0.4) | 1.1 (0.4) | 0.3 (0.1) | 0.0 | 2.5 (0.4) |
| | Mean | 12.3 (9.7) | 1.9 (0.6) | 0.2 (0.1) | 0.0 | 14.4 (9.5) |
| Overall | 2004 | 0.8 (0.6) | 3.8 (2.4) | 0.0 | 0.0 | 4.5 (1.6) |
| | 2009 | 0.6 (<0.1) | 1.2 (0.2) | 0.1 (<0.1) | 0.0 | 1.9 (0.9) |
| | 2010 | 8.8 (0.4) | 0.0 | 0.0 | 0.0 | 8.8 (2.7) |
| | 2013 | 25.4 (7.2) | 1.7 (0.3) | 0.2 (0.2) | 0.0 | 27.2 (3.9) |
| | 2014 | 5.5 (0.5) | 2.8 (0.4) | 0.5 (0.2) | 0.0 | 8.8 (0.8) |
| | 2015 | 5.1 (2.4) | 3.9 (0.3) | 0.4(0.1) | 0.0 | 9.4 (1.2) |
| | 2016 | 2.4 (0.6) | 3.5 (1.0) | 0.3 (0.1) | 0.0 | 6.2 (0.8) |
| | Mean | 6.9 (3.3) | 2.4 (0.6) | 0.2 (0.1) | 0.0 | 9.5 (3.1) |

Table 18. CPUE by size group of flathead catfish collected during electrofishing surveys on the Ohio River from 2004 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|------|-------------|-------------|-------------|-------------|------------|------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2009 | 3.0 (0.8) | 3.3 (0.9) | 1.3 (0.4) | 0.0 | 0.2 (0.2) | 7.8 (1.2) |
| | 2010 | 8.8 (1.9) | 6.0 (2.1) | 2.1 (0.5) | 0.2 (<0.1) | 0.0 | 17.1 (3.3) |
| | 2013 | 17.8 (7.4) | 20.4 (4.2) | 7.6 (2.1) | 0.2 (0.2) | 0.2 (0.2) | 46.2 (5.8) |
| | 2014 | 10.8 (2.6) | 14.8 (3.1) | 2.6 (1.1) | 0.3 (0.1) | 0.0 | 28.5 (2.8) |
| | 2015 | 17.2 (4.1) | 16.6 (3.2) | 5.5 (1.9) | 1.0 (0.3) | 0.5 (0.2) | 40.9 (5.7) |
| | 2016 | 12.1 (4.0) | 17.1 (3.3) | 6.5 (1.9) | 0.7 (0.4) | 0.5 (0.2) | 37.0 (3.2) |
| | Mean | 11.6 (2.3) | 13.0 (2.8) | 4.3 (1.1) | 0.4 (0.2) | 0.2 (0.1) | 29.6 (5.0) |
| Trophy permit | 2004 | 9.3 (4.2) | 5.0 (1.1) | 0.3 (0.3) | 0.0 | 0.0 | 14.5 (4.1) |
| | 2009 | 30.8 (12.2) | 9.2 (2.8) | 7.7 (3.1) | 0.0 | 0.8 (0.8) | 48.5 (7.2) |
| | 2013 | 5.3 (3.2) | 6.7 (1.9) | 2.0 (0.5) | 0.7 (0.7) | 0.0 | 14.7 (2.9) |
| | 2014 | 14.0 (3.2) | 17.1 (7.1) | 6.3 (2.6) | 0.4 (0.4) | 0.2 (0.1) | 37.9 (4.6) |
| | 2015 | 14.1 (2.6) | 12.2 (2.6) | 5.7 (2.1) | 0.7 (0.3) | 0.9 (0.2) | 33.6 (4.0) |
| | 2016 | 9.7 (2.0) | 14.8 (2.5) | 7.9 (3.6) | 0.9 (0.5) | 0.7 (0.3) | 33.9 (3.1) |
| | Mean | 13.9 (3.6) | 10.8 (1.9) | 5.0 (1.3) | 0.5 (0.2) | 0.4 (0.2) | 30.5 (5.5) |
| Overall | 2004 | 9.3 (4.2) | 5.0 (1.1) | 0.3 (0.3) | 0.0 | 0.0 | 14.5 (4.1) |
| | 2009 | 8.4 (1.7) | 4.3 (0.2) | 2.6 (0.2) | 0.0 | 0.3 (<0.1) | 15.5 (4.1) |
| | 2010 | 8.8 (1.9) | 6.0 (2.1) | 2.1 (0.5) | 0.2 (<0.1) | 0.0 | 17.1 (3.3) |
| | 2013 | 14.9 (4.5) | 17.2 (1.1) | 6.3 (1.8) | 0.3 (0.1) | 0.2 (0.2) | 38.9 (5.1) |
| | 2014 | 12.3 (2.6) | 15.9 (3.7) | 4.3 (0.2) | 0.3 (0.1) | 0.1 (<0.1) | 32.8 (2.6) |
| | 2015 | 15.8 (2.1) | 14.6 (4.2) | 5.6 (0.9) | 0.9 (0.4) | 0.7 (0.3) | 37.6 (3.6) |
| | 2016 | 10.9 (1.6) | 16.0 (4.2) | 7.2 (1.3) | 0.8 (0.3) | 0.6 (0.3) | 35.5 (2.2) |
| | Mean | 11.5 (1.1) | 11.3 (2.2) | 6.8 (2.5) | 0.4 (0.1) | 0.3 (0.1) | 27.4 (4.2) |

Table 19. Tournament effort and CPUE (fish/boat; standard errors are in parentheses) of blue catfish, channel catfish, and flathead catfish collected from the Ohio River in 2016.

| Section | Pool | No. of tournaments | No. of boats | Blue | | | Channel | | | Flathead | | | Total | | |
|---------------|-----------|--------------------|--------------|---------|----------|-----------|---------|----------|------------|----------|----------|------------|---------|----------|-----------|
| | | | | Catfish | % Trophy | CPUE | Catfish | % Trophy | CPUE | Catfish | % trophy | CPUE | Catfish | % trophy | CPUE |
| Upper | Meldahl | 1 | 40 | 80 | 17.5 | 2.0 (0.3) | 34 | 2.9 | 0.9 (0.2) | 9 | 0.0 | 0.2 (0.1) | 123 | 12.2 | 3.1 (0.1) |
| | Markland | 2 | 320 | 485 | 6.2 | 1.5 (0.1) | 209 | 11.5 | 0.7 (0.1) | 45 | 11.1 | 0.1 (<0.1) | 739 | 8.0 | 2.3 (0.1) |
| | Total | 3 | 360 | 565 | 7.8 | | 243 | 10.3 | | 54 | 9.3 | | 862 | 8.6 | |
| | Mean | | | | | 1.6 (0.2) | | | 0.7 (0.1) | | | 0.2 (0.1) | | | 2.4 (0.1) |
| Trophy permit | Newburgh | 2 | 310 | 321 | 11.2 | 1.0 (0.1) | 71 | 1.4 | 0.2 (0.1) | 38 | 7.9 | 0.1 (<0.1) | 430 | 9.3 | 1.4 (0.1) |
| | JT Meyers | 2 | 145 | 372 | 14.5 | 2.6 (0.2) | 71 | 2.8 | 0.5 (0.1) | 21 | 0.0 | 0.1 (<0.1) | 464 | 12.1 | 3.2 (0.1) |
| | Total | 4 | 455 | 693 | 13.0 | | 142 | 2.1 | | 59 | 5.1 | | 894 | 10.7 | |
| | Mean | | | | | 1.5 (0.2) | | | 0.3 (0.1) | | | 0.1 (0.1) | | | 2.0 (0.1) |
| Overall | Total | 7 | 815 | 1258 | 10.7 | | 385 | 7.3 | | 113 | 7.1 | | 1756 | 9.7 | |
| | Mean | | | | | 1.5 (0.1) | | | 0.5 (<0.1) | | | 0.1 (<0.1) | | | 2.2 (0.1) |

Table 20. CPUE (fish/hr) of blue catfish, channel catfish, and flathead catfish collected during catfish tournament surveys on the Ohio River from 2013 - 2016. Standard errors are in parentheses.

| Section | Year | Species | | |
|---------------|------|--------------|-----------------|------------------|
| | | Blue catfish | Channel catfish | Flathead catfish |
| Upper | 2013 | 1.1 (0.2) | 1.4 (0.3) | 0.3 (0.1) |
| | 2014 | 1.0 (0.1) | 1.0 (0.1) | 0.4 (0.1) |
| | 2015 | 1.4 (0.2) | 0.7 (0.2) | 0.2 (0.1) |
| | 2016 | 1.6 (0.2) | 0.7 (0.1) | 0.2 (0.1) |
| | Mean | 1.3 (0.2) | 1.0 (0.2) | 0.3 (0.1) |
| Trophy permit | 2013 | 1.8 (0.4) | 0.6 (0.1) | 0.1 (<0.1) |
| | 2014 | 2.0 (0.5) | 0.4 (0.1) | 0.2 (0.1) |
| | 2015 | 1.5 (0.1) | 0.3 (0.1) | 0.2 (0.1) |
| | 2016 | 1.5 (0.2) | 0.3 (0.1) | 0.1 (0.1) |
| | Mean | 1.7 (0.2) | 0.4 (0.1) | 0.2 (0.1) |
| Overall | 2013 | 1.4 (0.4) | 1.1 (0.3) | 0.2 (0.1) |
| | 2014 | 1.4 (0.5) | 0.7 (0.1) | 0.3 (0.1) |
| | 2015 | 1.4 (0.1) | 0.5 (0.1) | 0.2 (0.1) |
| | 2016 | 1.5 (0.1) | 0.5 (<0.1) | 0.1 (<0.1) |
| | Mean | 1.4 (0.2) | 0.7 (0.1) | 0.2 (0.1) |

Table 21. Length frequency and CPUE (fish/boat) of blue catfish, channel catfish, and flathead catfish collected during catfish tournaments surveys during 2016 on the Ohio River. Standard error is in parentheses.

| Section | Pool | Species | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Mean | | |
|---------------|------------------|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|-------------|------|----|------|-----------|------|-----------|------------|------------|--|------|--|--|
| | | | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | Total | length (in) | CPUE | | | | | | | | | | | |
| Upper | Meldahl | Blue catfish | | | | | | | | | 2 | 1 | 2 | 3 | 3 | 5 | 7 | 5 | 3 | 5 | 7 | 8 | 9 | 4 | 2 | 4 | 2 | | 1 | 2 | 1 | 1 | | 2 | | 1 | | | | | | | | | | 80 | 30.4 | 2.0 (0.3) | | | | | | | | |
| | | Channel catfish | | | 1 | 1 | 3 | 1 | 2 | 2 | 4 | 4 | 3 | 5 | 3 | 1 | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 34 | 22.5 | 0.9 (0.2) | | | | | | |
| | | Flathead catfish | | | | | | 1 | 1 | 1 | 1 | 2 | | | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 22.7 | 0.2 (0.1) | | | | | |
| | Markland | Blue catfish | | 1 | | 5 | 5 | 8 | 22 | 24 | 36 | 36 | 30 | 24 | 18 | 26 | 50 | 37 | 41 | 23 | 26 | 16 | 14 | 13 | 10 | 5 | 8 | | 2 | 2 | | 1 | 1 | | | | | | | | 1 | | | | | | | 485 | 26.7 | 1.5 (0.1) | | | | | | |
| | | Channel catfish | | | 1 | 6 | 3 | 4 | 9 | 14 | 21 | 20 | 15 | 23 | 23 | 27 | 19 | 11 | 9 | 3 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 209 | 24.1 | 0.7 (0.1) | | | | | |
| | | Flathead catfish | | | 1 | 1 | 1 | 1 | 5 | 4 | 3 | 3 | 5 | 5 | 3 | 2 | 3 | 1 | | 2 | | | | | | 1 | 1 | | | | | | | | | | | 1 | | | | | | | | | | | 45 | 25.8 | 0.1 (<0.1) | | | | | |
| Total | Blue catfish | | 1 | | 5 | 5 | 8 | 22 | 26 | 37 | 38 | 33 | 27 | 23 | 33 | 55 | 40 | 46 | 30 | 34 | 25 | 18 | 15 | 14 | 7 | 8 | 1 | 4 | 3 | 1 | 1 | 3 | | 1 | | | | | | | | | | | | | | 565 | 27.3 | 1.6 (0.2) | | | | | | |
| | Channel catfish | | | 2 | 7 | 6 | 5 | 11 | 16 | 25 | 24 | 18 | 28 | 26 | 28 | 22 | 11 | 10 | 3 | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 243 | 23.9 | 0.7 (0.1) | | | | | | |
| | Flathead catfish | | | 1 | 1 | 2 | 2 | 6 | 5 | 5 | 3 | 5 | 6 | 4 | 2 | 4 | 1 | | 2 | | | | | 1 | 1 | | | 1 | | | | | | | | 1 | | | | | | | | | | | | 54 | 25.3 | 0.2 (0.1) | | | | | | |
| Trophy permit | Newburgh | Blue catfish | 1 | | 1 | 4 | 7 | 4 | 3 | 14 | 10 | 9 | 10 | 15 | 24 | 25 | 19 | 35 | 24 | 26 | 19 | 7 | 19 | 9 | 4 | 6 | 7 | 4 | 3 | 2 | 5 | | 2 | 1 | | | 1 | 1 | | | | | | | | | | 321 | 28.4 | 1.0 (0.1) | | | | | | |
| | | Channel catfish | | | 1 | 1 | 4 | 5 | 2 | 10 | 12 | 10 | 14 | 7 | | 1 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 71 | 21.9 | 0.2 (0.1) | | | | |
| | | Flathead catfish | | | 1 | 1 | | | 2 | 2 | 2 | 1 | 6 | 5 | 4 | | | 4 | | 2 | 1 | | | | | 4 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | 38 | 26.1 | 0.1 (<0.1) | | | | | |
| | JT Meyers | Blue catfish | | | 1 | | 1 | 1 | 6 | 17 | 4 | 10 | 15 | 11 | 33 | 39 | 23 | 30 | 36 | 36 | 21 | 19 | 15 | 13 | 6 | 7 | 9 | 5 | 5 | 4 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 372 | 29.9 | 2.6 (0.2) | | | | | |
| | | Channel catfish | | | 1 | 3 | | 1 | 1 | 4 | 5 | 9 | 7 | 12 | 12 | 5 | 9 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 71 | 23.8 | 0.5 (0.1) | | | | |
| | | Flathead catfish | | | | | | 1 | | | 2 | 3 | 1 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 21 | 25.4 | 0.1 (<0.1) | | | | |
| Total | Blue catfish | | 1 | | 1 | 5 | 7 | 5 | 4 | 20 | 27 | 13 | 20 | 30 | 35 | 58 | 58 | 58 | 54 | 62 | 55 | 28 | 38 | 24 | 17 | 12 | 14 | 13 | 8 | 7 | 9 | 1 | 3 | 2 | | | | | | | | | | | | | | 1 | 693 | 29.2 | 1.5 (0.2) | | | | | |
| | Channel catfish | | | 2 | 4 | 4 | 6 | 3 | 14 | 17 | 19 | 21 | 19 | 12 | 6 | 12 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 142 | 22.8 | 0.3 (0.1) | | | | | |
| | Flathead catfish | | | 1 | 1 | | 1 | 2 | 2 | 4 | 4 | 7 | 9 | 6 | 2 | 5 | 1 | 3 | 2 | | 2 | | | 4 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | 59 | 25.9 | 0.1 (0.1) | | | | | |
| Overall | Total | Blue catfish | 1 | 1 | 1 | 10 | 12 | 13 | 26 | 46 | 64 | 51 | 53 | 57 | 58 | 91 | 113 | 98 | 100 | 92 | 89 | 53 | 56 | 39 | 31 | 19 | 22 | 14 | 12 | 10 | 10 | 2 | 6 | 2 | 1 | 1 | 2 | 1 | | | | | | | | | 1 | 1258 | 28.3 | 1.5 (0.1) | | | | | | |
| | | Channel catfish | | | 4 | 11 | 10 | 11 | 14 | 30 | 42 | 43 | 39 | 47 | 38 | 34 | 34 | 13 | 11 | 3 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 385 | 23.5 | 0.5 (<0.1) | | | | | |
| | | Flathead catfish | | | 1 | 2 | 1 | 3 | 4 | 8 | 9 | 9 | 10 | 14 | 12 | 6 | 7 | 5 | 4 | 2 | 2 | 2 | | 4 | 2 | 1 | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | 113 | 25.6 | 0.1 (<0.1) | | | | | |

Table 22. CPUE by size group of blue catfish collected during catfish tournament surveys on the Ohio River from 2013 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|------|-------------|-------------|-------------|-------------|------------|-----------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2013 | <0.1 (<0.1) | 0.4 (0.1) | 0.4 (0.2) | 0.3 (0.1) | 0.1 (<0.1) | 1.1 (0.2) |
| | 2014 | <0.1 (<0.1) | 0.3 (0.1) | 0.3 (0.1) | 0.2 (0.1) | 0.1 (0.1) | 1.0 (0.1) |
| | 2015 | 0.0 | 0.3 (0.1) | 0.6 (0.3) | 0.4 (0.1) | 0.2 (0.1) | 1.4 (0.2) |
| | 2016 | 0.0 | 0.1 (0.1) | 1.0 (0.3) | 0.3 (0.1) | 0.1 (<0.1) | 1.6 (0.2) |
| | Mean | <0.1 (<0.1) | 0.3 (0.1) | 0.6 (0.2) | 0.3 (0.1) | 0.1 (<0.1) | 1.3 (0.2) |
| Trophy permit | 2013 | <0.1 (<0.1) | 0.1 (0.1) | 0.8 (0.5) | 0.5 (0.4) | 0.3 (0.2) | 1.8 (0.4) |
| | 2014 | <0.1 (<0.1) | 0.2 (0.1) | 0.8 (0.5) | 0.5 (0.3) | 0.3 (0.1) | 2.0 (0.5) |
| | 2015 | 0.0 | 0.2 (0.1) | 0.7 (0.2) | 0.4 (0.1) | 0.2 (0.1) | 1.5 (0.1) |
| | 2016 | 0.0 | 0.1 (<0.1) | 0.8 (0.3) | 0.5 (0.2) | 0.2 (0.1) | 1.5 (0.2) |
| | Mean | <0.1 (<0.1) | 0.2 (<0.1) | 0.8 (0.2) | 0.5 (0.1) | 0.3 (0.1) | 1.7 (0.2) |
| Overall | 2013 | <0.1 (<0.1) | 0.3 (0.1) | 0.6 (0.1) | 0.4 (0.1) | 0.2 (<0.1) | 1.4 (0.4) |
| | 2014 | <0.1 (<0.1) | 0.3 (0.1) | 0.6 (0.1) | 0.4 (0.1) | 0.2 (<0.1) | 1.4 (0.5) |
| | 2015 | 0.0 | 0.3 (<0.1) | 0.6 (0.2) | 0.4 (0.1) | 0.2 (0.1) | 1.4 (0.1) |
| | 2016 | 0.0 | 0.1 (<0.1) | 0.9 (0.3) | 0.4 (0.1) | 0.2 (0.1) | 1.5 (0.1) |
| | Mean | <0.1 (<0.1) | 0.3 (0.1) | 0.7 (0.1) | 0.4 (0.1) | 0.2 (<0.1) | 1.4 (0.2) |

Table 23. CPUE by size group of channel catfish collected during catfish tournament surveys on the Ohio River from 2013 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | Total |
|---------------|------|-------------|-------------|-------------|-------------|------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 27.9 | ≥28.0 | |
| Upper | 2013 | <0.1 (<0.1) | 0.2 (0.1) | 1.0 (0.3) | 0.1 (<0.1) | 1.4 (0.3) |
| | 2014 | <0.1 (<0.1) | 0.2 (0.1) | 0.7 (0.2) | 0.1 (<0.1) | 1.0 (0.1) |
| | 2015 | <0.1 (<0.1) | 0.1 (<0.1) | 0.5 (0.2) | 0.1 (<0.1) | 0.7 (0.2) |
| | 2016 | 0.0 | 0.1 (<0.1) | 0.5 (0.2) | 0.1 (<0.1) | 0.7 (0.1) |
| | Mean | <0.1 (<0.1) | 0.2 (<0.1) | 0.7 (0.2) | 0.1 (<0.1) | 1.0 (0.2) |
| Trophy permit | 2013 | <0.1 (<0.1) | 0.1 (0.1) | 0.4 (0.2) | <0.1 (<0.1) | 0.6 (0.1) |
| | 2014 | <0.1 (<0.1) | 0.1 (<0.1) | 0.3 (0.1) | <0.1 (<0.1) | 0.4 (0.1) |
| | 2015 | 0.0 | 0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | 0.3 (0.1) |
| | 2016 | 0.0 | <0.1 (<0.1) | 0.3 (0.1) | <0.1 (<0.1) | 0.3 (0.1) |
| | Mean | <0.1 (<0.1) | 0.1 (<0.1) | 0.3 (0.1) | <0.1 (<0.1) | 0.4 (0.1) |
| Overall | 2013 | <0.1 (<0.1) | 0.2 (<0.1) | 0.8 (0.2) | 0.1 (<0.1) | 1.1 (0.3) |
| | 2014 | <0.1 (<0.1) | 0.2 (0.1) | 0.5 (0.1) | <0.1 (<0.1) | 0.7 (0.1) |
| | 2015 | <0.1 (<0.1) | 0.1 (<0.1) | 0.4 (0.1) | <0.1 (<0.1) | 0.5 (0.1) |
| | 2016 | 0.0 | 0.1 (<0.1) | 0.4 (0.1) | <0.1 (<0.1) | 0.5 (<0.1) |
| | Mean | <0.1 (<0.1) | 0.2 (<0.1) | 0.5 (0.1) | <0.1 (<0.1) | 0.7 (0.1) |

Table 24. CPUE by size group of flathead catfish collected during catfish tournament surveys on the Ohio River from 2013 - 2016. Standard errors are in parentheses.

| Section | Year | Size group | | | | | Total |
|---------------|------|-------------|-------------|-------------|-------------|-------------|------------|
| | | <12.0 | 12.0 - 19.9 | 20.0 - 29.9 | 30.0 - 34.9 | ≥35.0 | |
| Upper | 2013 | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.3 (0.1) |
| | 2014 | 0.0 | 0.1 (<0.1) | 0.3 (0.1) | 0.1 (<0.1) | <0.1 (<0.1) | 0.4 (0.1) |
| | 2015 | <0.1 (<0.1) | 0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2016 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | Mean | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.3 (0.1) |
| Trophy permit | 2013 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |
| | 2014 | 0.0 | <0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2015 | 0.0 | <0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2016 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (0.1) |
| | Mean | 0.0 | <0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| Overall | 2013 | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2014 | 0.0 | 0.1 (<0.1) | 0.2 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.3 (0.1) |
| | 2015 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |
| | 2016 | 0.0 | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) |
| | Mean | <0.1 (<0.1) | <0.1 (<0.1) | 0.1 (<0.1) | <0.1 (<0.1) | <0.1 (<0.1) | 0.2 (0.1) |

Table 25. Relative weight (Wr) of blue catfish, channel catfish, and flathead catfish collected from the Ohio River using trotlines, hoop nets, electrofishing and catfish tournaments from 2013 - 2016.

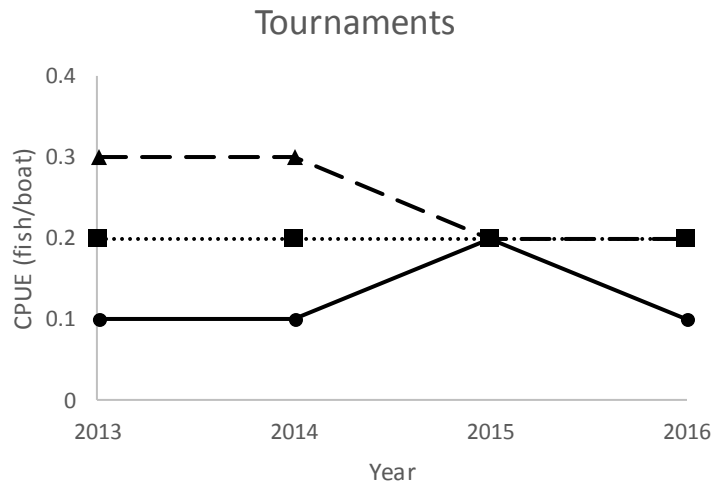
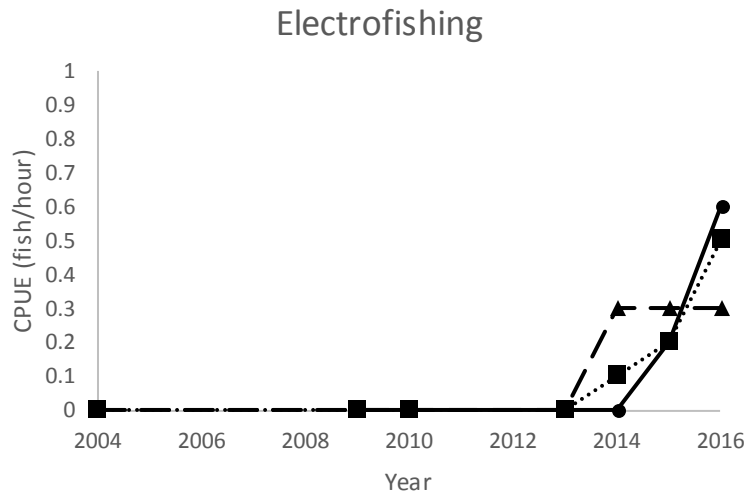
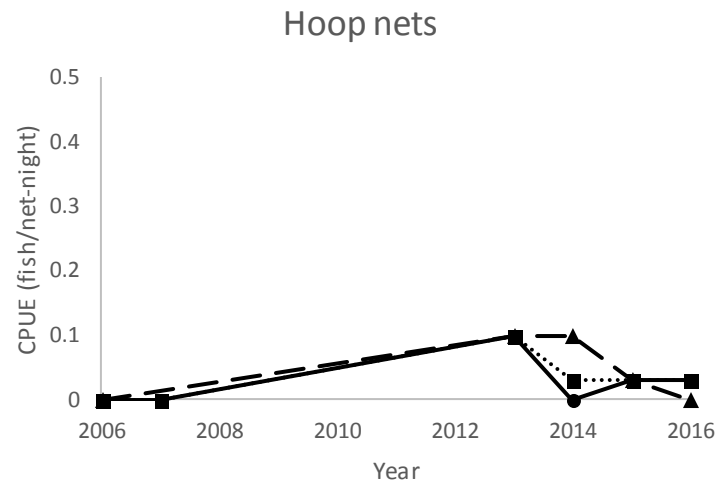
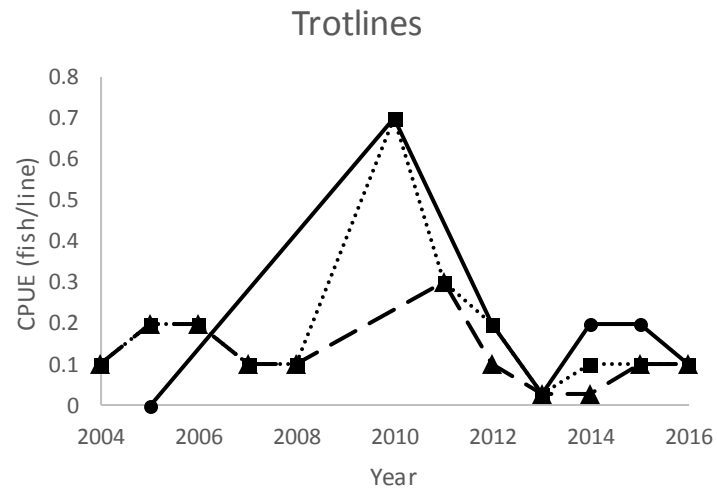
| Year | Section | | | | | | | | |
|------|--------------|-----------------|------------------|---------------|-----------------|------------------|--------------|-----------------|------------------|
| | Upper | | | Trophy permit | | | Overall | | |
| | Blue catfish | Channel catfish | Flathead catfish | Blue catfish | Channel catfish | Flathead catfish | Blue catfish | Channel catfish | Flathead catfish |
| 2013 | 118 | 100 | 97 | 108 | 99 | 101 | 112 | 101 | 99 |
| 2014 | 102 | 93 | 91 | 106 | 102 | 95 | 105 | 97 | 92 |
| 2015 | 106 | 99 | 95 | 110 | 101 | 100 | 109 | 100 | 98 |
| 2016 | 107 | 98 | 100 | 107 | 96 | 111 | 107 | 97 | 106 |
| Mean | 108 | 98 | 96 | 108 | 100 | 102 | 108 | 99 | 99 |

Table 26. Mean length (in) at age of capture based on otoliths taken from blue catfish, channel catfish, and flathead catfish from the Ohio River in spring and summer of 2012 and 2013.

| Species | Sex | Age | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|------|------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| Blue catfish | Male | | | | 17.8 | | 23.3 | | 25.3 | 27.0 | 26.3 | | | 28.6 | 32.2 | 34.1 | 36.3 | 38.5 | | | 43.1 | | | | | | | | | | | | |
| | Female | | | | | | 21.3 | 24.3 | 26.0 | | | 30.1 | 29.6 | | 32.4 | | 36.1 | | | | | | | | | | | | | | | | |
| | All | | 11.3 | 15.2 | 18.3 | | 22.3 | 24.1 | 25.7 | 26.6 | 26.3 | 30.1 | 29.6 | 29.4 | 32.8 | 34.1 | 36.2 | 38.5 | | | | 43.1 | | | | | | | | | | | |
| Channel catfish | Male | | | | | | 19.6 | 19.4 | 21.5 | 20.3 | 20.2 | 21.0 | 23.4 | 23.2 | | | | | | | | | | | | | | | | | | | |
| | Female | | | | | 17.0 | 16.9 | 19.6 | 19.6 | 22.3 | 21.1 | 20.6 | 22.4 | | 22.8 | | | 19.5 | | | | | | | | | | | | | | | |
| | All | | | | | 16.7 | 18.2 | 19.5 | 20.4 | 21.1 | 20.7 | 20.8 | 22.9 | 23.2 | 23.1 | | 25.7 | 19.5 | | | | | | | | | | | | | | | |
| Flathead catfish | Male | 10.8 | 12.6 | 13.8 | 18.1 | 18.1 | 22.3 | 20.8 | 26.8 | 24.5 | 27.3 | 29.6 | 31.3 | 28.4 | 28.8 | 30.7 | 38.3 | 34.4 | 34.4 | 34.5 | 25.5 | 35.8 | | | 37.3 | 35.9 | 37.5 | 42.2 | | | 28.7 | 36.4 | 41.0 |
| | Female | 8.8 | 10.3 | 13.0 | 15.2 | 18.8 | 19.3 | 21.7 | 19.5 | 26.6 | 25.2 | 27.0 | 23.8 | 26.1 | 26.9 | 33.8 | 28.8 | 28.5 | 28.8 | 31.8 | 27.5 | 31.5 | 37.8 | | | | 31.4 | 30.5 | | 24.8 | | | |
| | All | 7.7 | 11.8 | 13.1 | 15.4 | 18.2 | 19.9 | 20.6 | 23.4 | 25.3 | 26.5 | 27.7 | 29.1 | 26.3 | 28.1 | 32.8 | 31.2 | 33.8 | 32.2 | 32.1 | 28.2 | 34.0 | 32.7 | 35.3 | 33.6 | 35.9 | 38.2 | 24.8 | | | 29.2 | 36.4 | 41.0 |

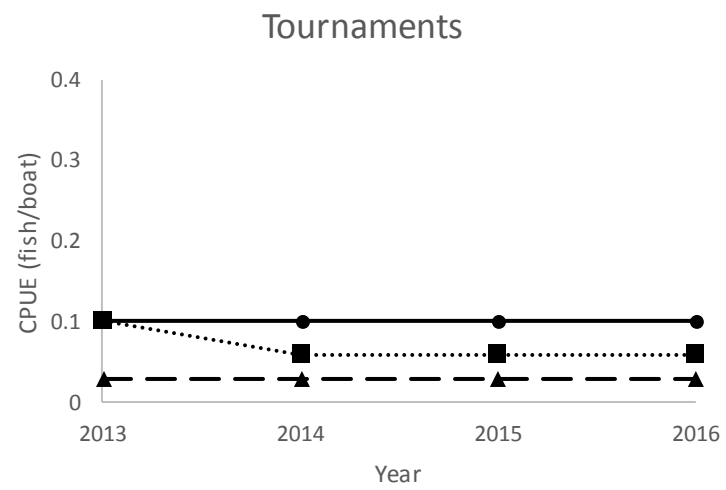
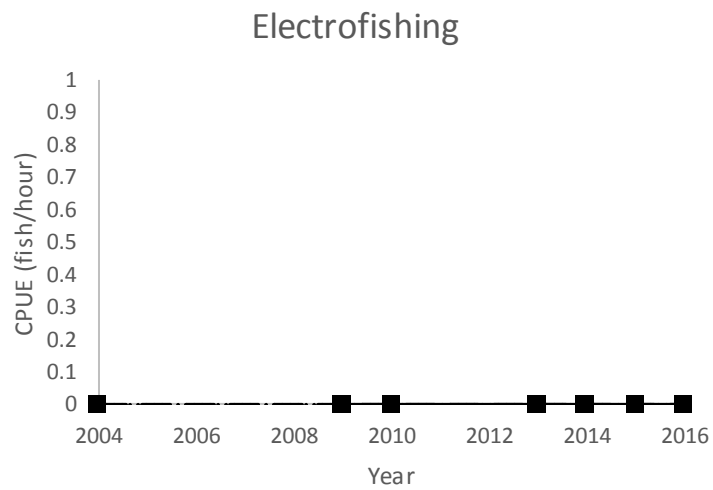
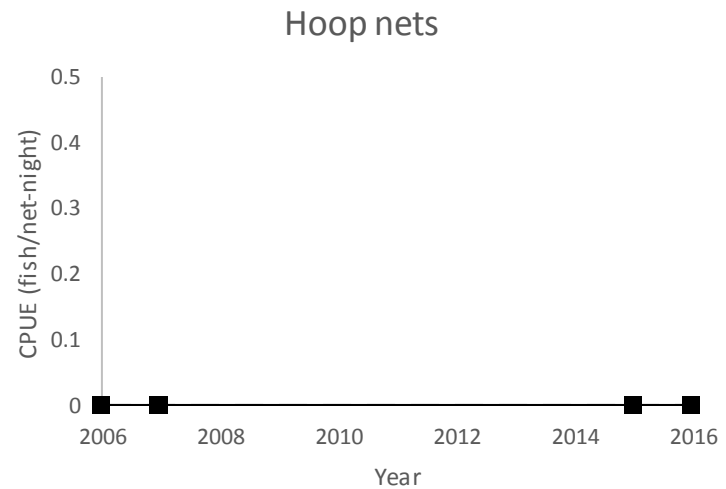
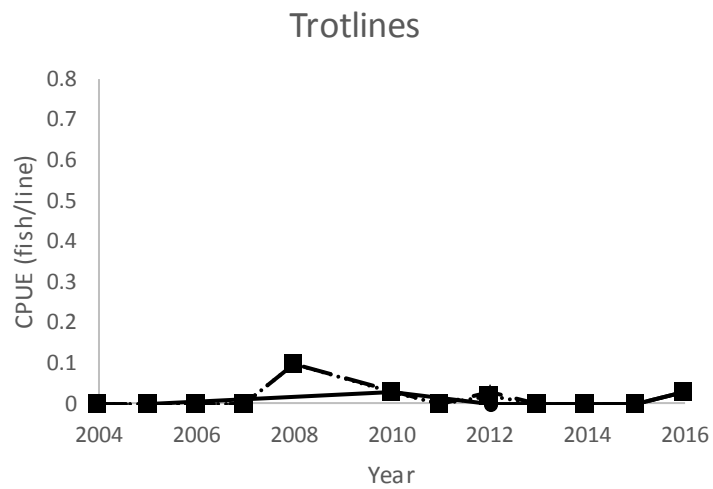
Table 27. Ranges of total annual mortality rates of blue catfish, channel catfish, and flathead catfish collected from the Ohio River using trotlines, hoopnets, and electrofishing from 2013 - 2016.

| Section | Year | Blue catfish | | Channel catfish | | Flathead | |
|---------------|------|--------------|------|-----------------|------|----------|------|
| | | Low | High | Low | High | Low | High |
| Upper | 2013 | 3.8 | 14.7 | 19.8 | 24.2 | 9.1 | 18.8 |
| | 2014 | 7.7 | 29.1 | 22.8 | 28.3 | 9.5 | 20.1 |
| | 2015 | 5.1 | 22.1 | 14.6 | 21.7 | 14.8 | 17.0 |
| | 2016 | 13.8 | 14.2 | 18.0 | 18.0 | 12.8 | 18.0 |
| | Mean | 7.6 | 20.0 | 18.8 | 23.1 | 11.6 | 18.5 |
| Trophy permit | 2013 | 14.1 | 22.0 | 14.2 | 52.8 | 15.4 | 17.8 |
| | 2014 | 12.6 | 21.5 | 10.9 | 26.6 | 12.4 | 17.5 |
| | 2015 | 7.9 | 17.9 | 9.2 | 15.3 | 12.7 | 14.7 |
| | 2016 | 17.0 | 18.6 | 15.9 | 15.9 | 14.5 | 14.9 |
| | Mean | 12.9 | 20.0 | 12.6 | 27.7 | 13.8 | 16.2 |
| Overall | 2013 | 13.8 | 18.7 | 16.8 | 32.2 | 10.3 | 18.8 |
| | 2014 | 10.5 | 24.7 | 21.7 | 26.8 | 11.5 | 18.7 |
| | 2015 | 6.7 | 20.0 | 14.6 | 20.6 | 13.6 | 15.9 |
| | 2016 | 16.0 | 17.4 | 16.8 | 16.8 | 14.5 | 16.0 |
| | Mean | 11.8 | 20.0 | 17.5 | 24.1 | 12.5 | 17.4 |



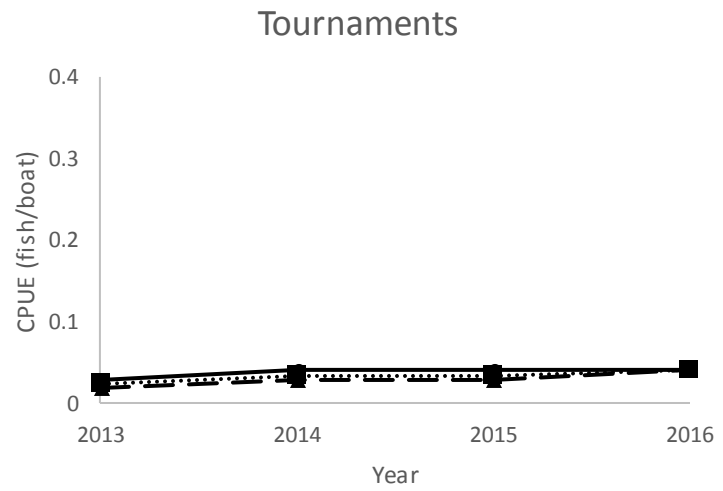
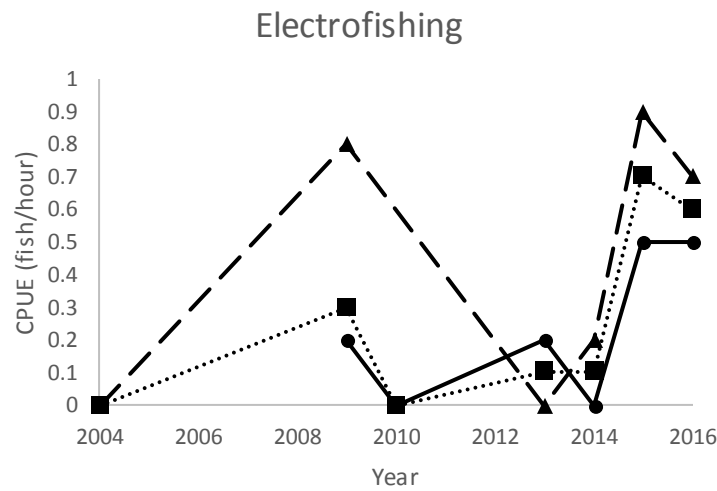
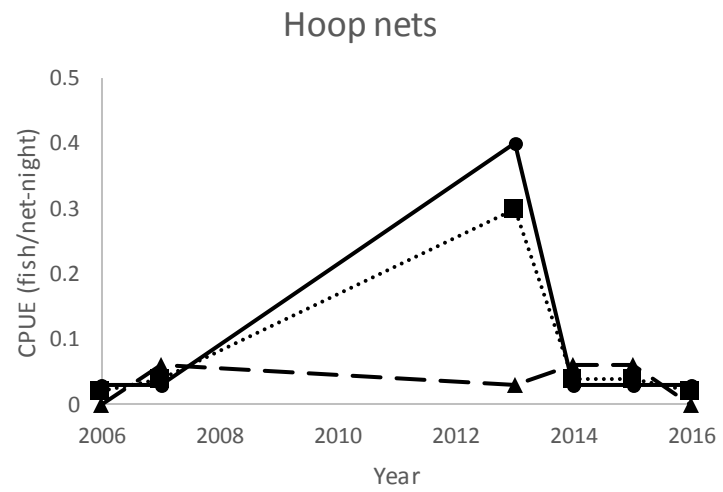
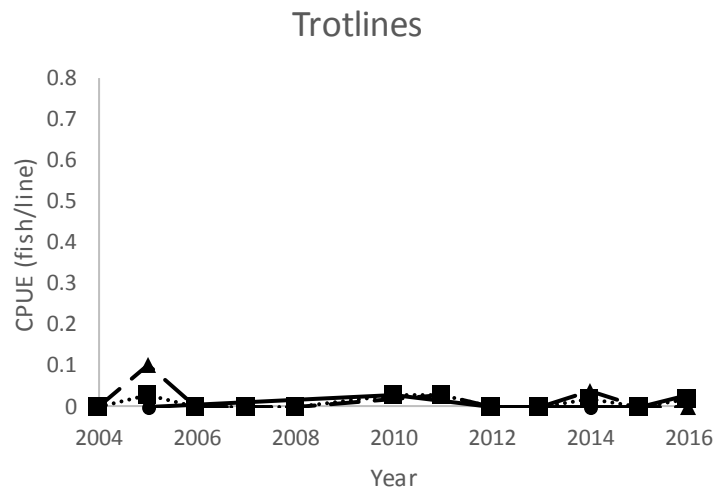
Upper
 Trophy permit
 Total

Figure 1. CPUE of trophy blue catfish (≥ 35.0 in) using trotlines, hoop nets, electrofishing, and catfish tournaments on the Ohio River from 2004-2016.



—●— Upper —▲— Trophy permit ...■... Total

Figure 2. CPUE of trophy channel catfish (≥ 28.0 in) using trotlines, hoop nets, electrofishing, and catfish tournaments on the Ohio River from 2004-2016.



● Upper ▲ Trophy permit ■ Total

Figure 3. CPUE of trophy flathead catfish (≥ 35.0 in) using trotlines, hoop nets, electrofishing, and catfish tournaments on the Ohio River from 2004-2016.

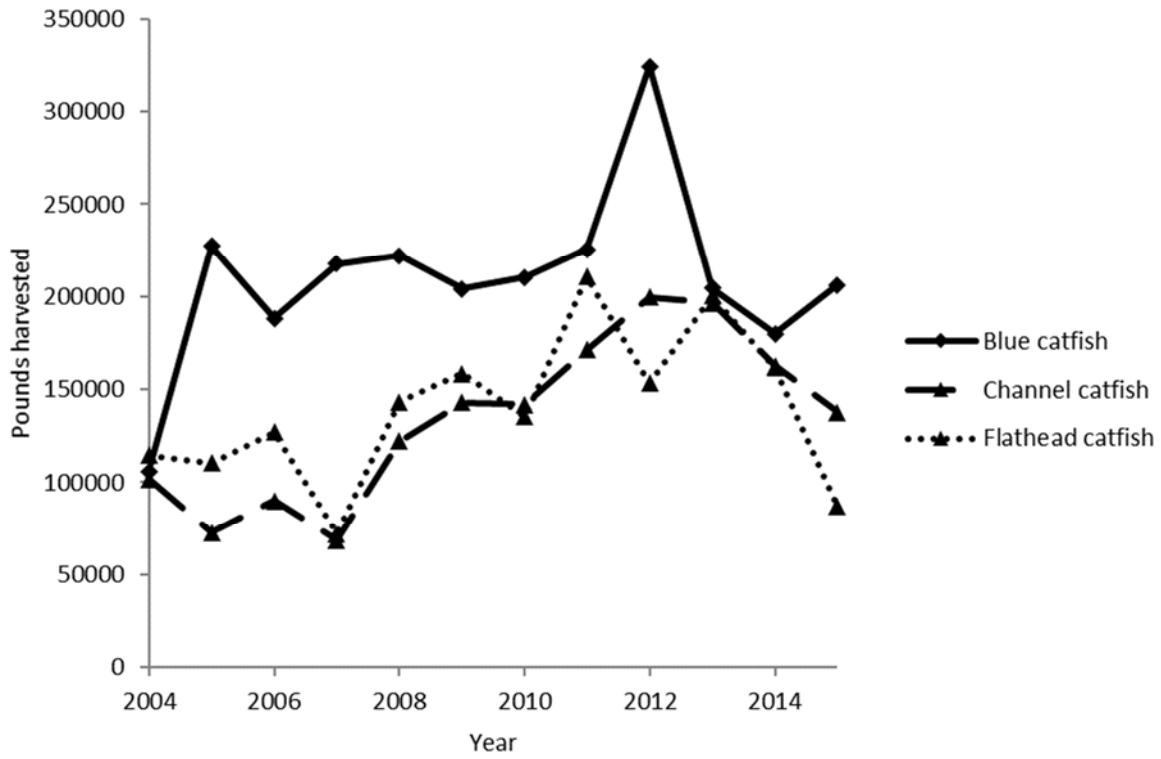


Figure 4. Total pounds of blue catfish, channel catfish, and flathead catfish harvested by commercial fishermen from the Ohio River from 2004 – 2015.

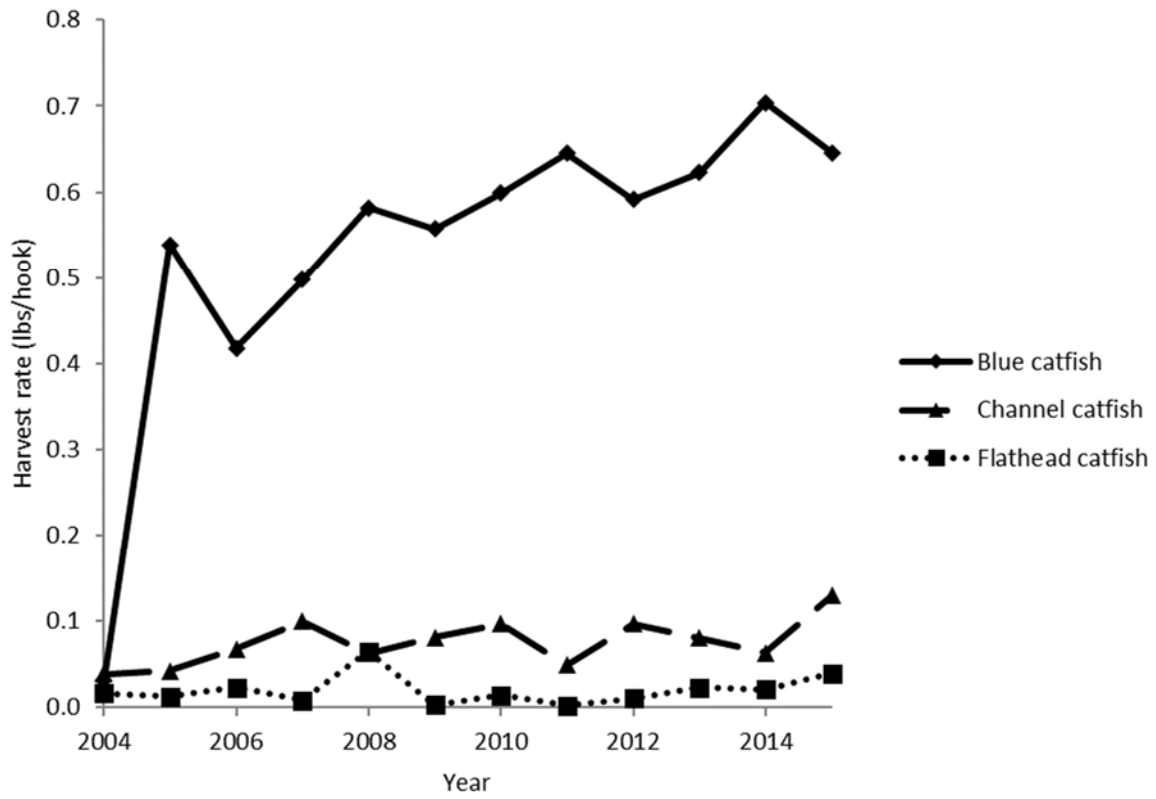


Figure 5. Harvest rate (lbs/hook) of blue catfish, channel catfish, and flathead catfish harvested by commercial fishermen from the Ohio River from 2004 – 2015.