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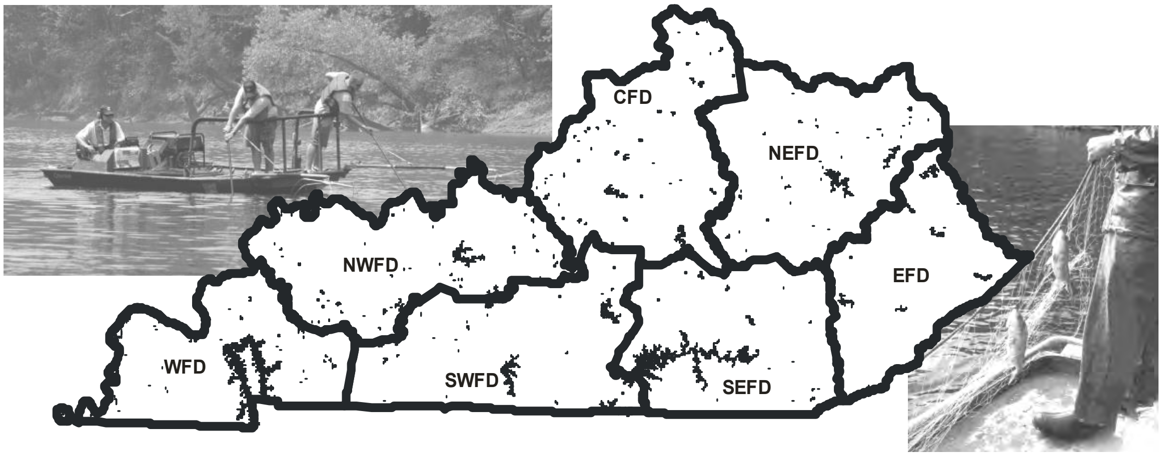
ANNUAL PERFORMANCE REPORT

District Fisheries Management

Projects A & B



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WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Sampling conditions for each survey event are listed in Table 1.

Kentucky Lake

During the spring, 1,424 black bass were collected by diurnal electrofishing (120 PPS, DC current). During this sampling period, 1,363 largemouth bass (136.3 fish/hr) were collected from Blood River, Jonathan Creek, Big Bear, and Sugar Bay (Table 2). The catch rates (fish/hr) for largemouth bass between embayments varied (98.0 to 175.6 fish/hr). This variation could be due to changing weather conditions during the sampling period. The main similarity between embayments was that each one yielded a high catch rate of largemouth bass (< 8.0 in).

The spring bass data was used to complete the lake specific assessment (Table 3). The lake specific assessment suggests that the largemouth bass population rated "Good". The growth rate parameter was determined with age data collected in the fall, but back-calculated to spring growth. Growth to age 3 declined by almost a half an inch since 2012 and may be best explained by the higher density of intermediate-size bass in the population during 2016. Growth will be reassessed in 2019. The catch rate of age-1 largemouth bass in the sample was very high, and received a rating of "excellent".

The size structure parameters used to assess the fishery by standards set in the Kentucky Lake Fish Management Plan (KLFMP) showed a major increase of smaller (<8.0 in) bass (Table 4). The catch rate of intermediate-size bass (12.0-14.9 in) which was (14.1fish/hr) was below the plan recommendation. The catch rate of harvestable-size bass (≥15.0 in) was also down from previous years' data, and below the plan recommendation. The catch rate of trophy-size largemouth bass (≥20.0 in) improved over the previous year, but was below the KLFMP recommendation.

Proportional Size Distributions (PSD) values were calculated for black bass collected from each embayment sampled during the spring (Table 5). The average PSD and RSD_{15} values for largemouth bass were 43 and 23, respectively. These average values were used in the KLFMP assessment. The PSD value was below the assessment preferred range (55-75; Table 4). The RSD_{15} value was 23, which falls inside the targeted range (RSD_{15} of 20-40). Both of these values were influenced heavily by the unusually high catch of largemouth bass (<8.0 in).

During October, 341 black bass were collected by diurnal electrofishing (120 PPS, DC current) from two embayments; Blood River and Big Bear. Largemouth bass comprised 80% (50.2 fish/hr) of this sample (Table 6). During the 2016 fall sample, the largemouth bass catch rate was 76.4 fish/hr. In the 2017 sample there was a below average catch (28.9 fish/hour) of the age 0-year class (Table 7).

Length and weight data were recorded from all bass collected during the fall sample to calculate relative weight values. The mean relative weight for harvestable-size largemouth bass was 88 (Table 8). This value was down from the 2016 estimated relative weight value of 98, though the 30-year average is 96. The relative weight of largemouth bass is one parameter that is being watched as an indicator of the increasing population of Asian carp in the lake. As Asian carp numbers continue to increase, they could impact the productivity of the lake and hence the food chain. The relative weight score of 88 is concerning, as it is the lowest score ever observed in Kentucky Lake.

Length-weight equations for black bass species at Kentucky Lake are:

Largemouth bass $\text{Log}_{10}\text{ (weight)} = -3.36695 + 3.01733 \text{ x } \text{Log}_{10}\text{ (length)}$
Smallmouth bass $\text{Log}_{10}\text{ (weight)} = -3.38276 + 3.02400 \text{ x } \text{Log}_{10}\text{ (length)}$

Otoliths were collected from largemouth bass during fall sampling in 2017. Otoliths were used to age bass so that the catch rates of age classes and growth could be evaluated. The catch rate of age-0 largemouth bass during the fall sample was 28.9 fish/hr (Table 7). The 2017 year class appears to be slightly below average, with good growth. The mean length of the age-0 largemouth bass was 5.9 in at time of capture in the fall. The high catch rate of age-1 largemouth bass observed in the spring was not evident in the fall sampling (9.1 fish/hr) (Table 9).

In response to questions about potential harvest restrictions, targeted electrofishing for bluegill and redear sunfish (120 pps, 6-8 amps) was conducted in Blood River and Ledbetter Creek during May 2017 (Table 10). Otoliths were removed from a subsample of fish to reveal growth patterns and age distributions. Bluegill were observed up to age-7, although growth slowed considerably after age-3 (Table 11). Redear sunfish were observed up to age-11 (Table 12). Growth up to age-3 is fast (8.5 in), but slows greatly after that point.

Otoliths were also removed from a subsample of bluegill and redear sunfish collected during fall trapnetting for crappie in October and November at Blood River, Jonathan Creek, and Ledbetter Bay. Although growth rates were very similar in both species, a wider range of age classes was observed from spring samples (Tables 11 and 12).

Trap nets were fished for crappie in Blood River and Jonathan Creek embayments for 78 net-nights (nn) during October and November. In addition, Ledbetter Bay was sampled for 40 nn. This is the second time Ledbetter Bay has been sampled for crappie. The combined sampling effort yielded 1,165 crappie (9.9 fish/nn), of which 2.7 fish/nn (27%) were white crappie and 7.2 fish/nn (73%) were black crappie (Table 13). The Blood River and Jonathan Creek data is listed as “sub-total” on this table. The total catch rate was lower this year as compared to previous years. The weak spawn of 2016 as predicted by larval surveys was supported by a very low catch of age 1 crappie in the trapnets (Table 14).

The number of crappie ≥8.0 in and ≥10.0 in collected in trap nets was 10.6 and 2.4 fish/nn, respectively (Table 14). The KLFMP objective for crappie is to maintain a catch rate of at least 10.0 fish/nn for crappie ≥8.0 in, and 4.0 fish/nn for crappie ≥10.0 in. The first objective was met, but trapnets failed to collect >4.0 fish/nn >10.0 in. Based on creel survey results we would have expected higher catch rates of keeper-size fish.

Crappie at Kentucky Lake had below average growth rates in 2017. The growth management objective in the KLFMP is for age-2 crappie collected in the fall to reach 9.5 inches in length. The average length of the age-2 crappie collected this year was 8.9 in (Table 14). This is likely due to high densities of intermediate-sized crappie, but could also be due to lower numbers of prey such as shad.

Another management objective in the KLFMP is to maintain a catch rate of age-1 crappie of at least 11.0 fish/nn (Table 14). The catch rate for this age group of crappie was 1.5 fish/nn. This is the lowest catch rate ever recorded at Kentucky Lake and indicates a very poor spawn in 2016.

These parameters are also used as part of the calculation for ranking the crappie fishery at Kentucky Lake. Overall, the crappie population at Kentucky Lake rated "poor" this year (Table 15). This rating is assumed not to be an accurate portrayal of the crappie population since the catch rates observed in the creel survey were exceptional.

The fall trap netting data was used to calculate proportional size distributions and length-weight equations for crappie. PSD and RSD_{10} values are reported in Table 16. The PSD values are up considerably, and reflect a higher number of intermediate-size crappie in the population from a good year class in 2015. However, RSD_{10} values were down reflecting the poor catch of keeper size crappie in the trapnets. Length-weight equations for white and black crappie are listed below. Growth is similar to last year’s growth.

White crappie	$\text{Log}_{10}\,(\text{weight}) = -3.85398 + 3.51686 \times \text{Log}_{10}\,(\text{length})$
Black crappie	$\text{Log}_{10}\,(\text{weight}) = -3.47727 + 3.17408 \times \text{Log}_{10}\,(\text{length})$

Tables 17 and 18 list the back-calculated lengths at age for white and black crappie, respectively. The age frequencies for white and black crappie collected are listed in Tables 19 and 20, respectively.

During the spring of 2017, icthyoplankton sampling was conducted in the Jonathan Creek embayment of Kentucky Lake. Samples were conducted using a rectangular neuston net with a 100-micron mesh size, towed 50 feet behind a boat, at a speed of 1.5 mph. Tow duration was either 5 or 3 minutes depending on an a priori assessment of the expected concentration of icthyoplankton and leptodora to prevent clogging. A General Oceanics flowmeter was attached inside the mouth of the net to record the volume of water sampled during each run. Sampling was begun just after dusk and always followed the same site order. Each sampling event started closest to the main lake site and then progressed farther into the embayment (Appendix A).

Samples were preserved immediately in 10% formalin or 95% ethanol and stored in mason jars. All larval fish were sorted and identified to the lowest practical taxon using "A Practical Key to Identify Families, Genera, and Species of Fish Larvae Commonly Collected in Tennessee Reservoirs" (Sammons, 1999); "Preliminary Guide to the Identification of Larval Fishes in the Tennessee River" (TVA, 1976); and "Early Development of Four Cyprinids Native to the Yangtze River, China" (Chapman, and Wang, 2006) (Bolu Yi, et al. 1988). Once identified, fish were counted and measured for total length. In cases of more than 100 individuals in a sample, a random subsample of at least 30 individuals was measured and used to extrapolate the lengths of the fish from the entire sample. Larval crappies were not identified to species due to overlapping myomere counts between both species and their hybrids (Spier and Ackerson, 2004).

The geometric mean and median of the 6 sample sites were used to evaluate overall densities during each week. The standard error and coefficients of variation of the mean and geometric mean were used to evaluate sample accuracy (Table 21). In 2015 the peak weekly density of crappie occurred on May 12th and was 70.50 crappie/1000m^3. In 2016 the peak weekly density of crappie occurred on May 19th and was only 3.88 crappie/1000m^3. In 2017 the peak weekly density of crappie occurred on May 19th and was 31.99 crappie/1000 m^3. Based on these results, the spawn of crappie in Jonathan Creek in 2017 appears to have been somewhat better than 2016, but not as good as 2015. This will still need to be verified with trap netting in 2018.

In order to determine the hatch dates of crappies more precisely, based on growth rates, all crappie that were 8–11 mm in total length were assumed to represent a one-week cohort (Table 22). Just like last year, crappie in the 8–11 mm range appeared to be fully recruited to the gear, and were well represented in the sample. It is possible that crappie shorter than 8 mm were not located in the pelagic sample sites yet, and that crappie over 11 mm were more likely to avoid capture. This length range was also chosen because an 8 mm crappie would grow to 11.8 mm in one week (our sample interval), based on a growth rate of 0.65 mm per day after swim up. This was our estimated daily growth rate from daily otolith ring counts of Jonathan Creek crappie collected later in the year (next section)

In addition to weekly cohorts, we also estimated daily cohorts of hatched crappie. All crappie that were captured outside of the 8–11 mm length range were excluded from the hatch date analysis to minimize the effects of gear bias and the longer exposure to natural mortality of older fish (Table 21). A hatch date was then back-calculated for each individual fish using the assumed growth rate (0.66 mm/day) and the total length of each fish. A total length at hatch (4mm) was factored into the regression for hatch date. This technique has been employed in other systems (Mitzner 1991). An incubation period of 95 hours (based on temperature) was also factored into the regression so that the day when fertilization occurred could be estimated.

The estimated hatching densities indicated that the spawn in Jonathan Creek lasted <u>at least</u> 44 days and extended at least until the end of May (Table 23). Because of our limited larval sampling window, we cannot be sure that crappie did not spawn before or after our sampling window. The literature reports most crappie spawns to be relatively short (1-2 months; Mitzner 1991 and Travnichek, et. al.1996). No strong peaks in successful spawning activity were observed. 2017 was a strange year with regard to elevation. The lake was up to summer pool (359.0) by 23-April and some spawning activity was occuring, but the lake was then rapidly lowered 2 feet in anticipation of a flood event. The highest numbers of crappie spawning occurred when the lake was rising rapidly (May-3) and during the flood event when the lake reached 363.1. A previous study evaluating the factors which affect crappie recruitment in Kentucky Lake found that higher discharge during the spawn and pre-spawn were correlated with good year classes of white crappie. However, black crappie were more likely to be successful during years with relatively low discharge during the spawn and pre-spawn (Martin, 2012). Unfortunately, we cannot tell from larval data which species had the stronger spawn, but it will be interesting to see whether the class of 2017 for each species will be well represented in our trap net samples in 2018. Similar to last year's survey we found much higher densities of larval crappie farther into the embayment (Table 21; Appendix A).

The catfish population was sampled at Kentucky Lake during June by using low pulse (15 PPS) electrofishing along the main lake river channel. A chase boat was utilized to help collect catfish around the electrofishing boat. One dipper was used in each boat. A total of 137 catfish were collected during the 56 electrofishing runs made (Table 24). Each run lasted 300 seconds, for a total sample time of 4.6 hours over a four-day period. Of the samples, blue catfish had the highest catch rate at 23.9 fish/hr, and made up 81% of the catfish collected. The catch rate was much lower than observed in previous years. Relative weight values are listed in Table 25. The relative weight values are all high, suggesting the fish are healthy.

Otoliths were collected during sampling in 2014. That data was used to extrapolate with this year's data to calculate age frequencies. Age frequency data for blue catfish is presented in Table 26. A high catch rate of age-3 blue catfish collected in 2016 did equate to a higher catch rate of age 4 in 2017.

A new catfish surveying technique was also evaluated in 2017. The goal of the new technique was to use camera technology to increase the sample size while reducing the number of staff needed for the sample. On two of the sample dates, we recorded our electrofishing runs using an aerial drone equipped with a 4K video camera. The video was then reviewed and the lengths of collected catfish were measured digitally using image analysis software (ImageJ) The digitally derived lengths were then compared with actual measured lengths to determine the efficacy of the method. Video observations were also analyzed to determine species ID as well as capture efficiency rates. Although we were able to determine fish length and determine sampling efficiency, we were unable to visually identify catfish to species using the video footage. This technique may be revisited as camera technology improves.

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Lake Barkley

Black bass were collected by diurnal electrofishing (120 PPS, DC current) during the spring at sampling sites historically used on Lake Barkley. A total of 663 black bass were collected at a rate of 69.8 fish/hr (Table 27). Spotted and smallmouth bass accounted for about 4% of the total black bass sampled. The catch rates improved slightly over last year, but were still below the long term average. At best, it was felt that sampling yielded only fair results. Although sampling during some years (2011, 2012, 2016) was believed to be affected by weather conditions, the lack of a strong spawn between 2009 and 2016 has likely reduced the overall numbers of bass in Lake Barkley. This might explain the drop in intermediate-size bass during the most recent study. The largemouth bass catch rate was 67.2 fish/hr which falls below the ten-year average of 92.1 fish/hr (Table 28).

The overall PSD and RSD_{15} values for largemouth bass at Lake Barkley, along with values for individual embayments are listed in Table 29. The PSD value (76) is slightly above the objective goal (PSD of 55-75) established in the Barkley Lake Fish Management Plan (BLFMP). This higher value indicates a bass fishery slightly skewed toward larger fish. The RSD_{15} (56) was also higher than the set goal (20-40). Again, the higher the value the more the population is skewed toward larger fish. The spring catch of small ($\leq$8.0 in) largemouth bass improved this year due to the spawn of 2016, but the catch rate of (8.0-11.9 in) largemouth bass remains lower than average (Table 27). The catch rate of larger ($\geq$15.0 in) largemouth bass was average.

The lake specific assessment score for Lake Barkley was “good” (Table 30). The score was “good” for several years prior to 2010. Flood conditions in 2010, 2011, and 2013 as well as drought conditions in 2012 likely influenced sampling resulting in spurious lower ratings for these years. The fishery showed improvement in these ratings in 2017, but the low catch rate of (12.0-14.9 in) largemouth bass still negatively affected the score. The annual mortality of largemouth bass older than a year was 28% as determined using catch-curve regression of fall caught largemouth (Table 30).

During 2015 largemouth bass age and growth data was collected in the fall instead of the spring. This statewide change in sampling procedure was made to simplify the reading of otoliths by eliminating the need to add an unseen annulus onto the outer edge. Age and growth data collected in the fall of 2015 were coupled with spring 2017 data to yield an estimate of the age distribution for largemouth bass which was historically comparable with previous spring samples. This was accomplished by back calculating the lengths of fall captured largemouth bass to their most recent annulus. These back calculated lengths were assumed to be equivalent to lengths of spring caught bass and were used to create a modified age-length key.

Catch rates for spring-caught fish by age-class are shown in Table 31. Ages ranged from 0-11 and the dominant age-class was age-1. Slightly higher catch rates of age-5 and age-7 bass were also observed.

Largemouth bass were sampled in October to collect length-weight data for condition factors, and to determine the strength of the 2017 year-class. A total of 271 bass were collected, with 88% being largemouth bass (Table 32). Largemouth bass had a catch rate of 53.1 fish/hr. These catch rates were much lower than previous years. Sampling conditions likely affected these rates as it was unseasonably warm and excessive rainfall greatly affected water clarity. Relative weights were determined for all bass, but very few spotted and smallmouth bass were collected (Table 33). The relative weight for harvestable-size ($\geq$15.0 in) largemouth bass was 97. The length-weight equation for largemouth bass at Lake Barkley is:

$$\text{Log}_{10}\text{ (weight)} = -3.56676 + 3.24024 \text{ x } \text{Log}_{10}\text{ (length)}$$

Mean length of the age-0 cohort of largemouth bass was 4.8 in (Table 34). It has been suggested that bass which reach at least 5.0 in by the fall will have a better chance of survival during their first winter. This year’s catch rate of age-0 largemouth bass (25.1 fish/hr) was below average.

In response to questions about potential harvest restrictions, targeted electrofishing for bluegill and redear sunfish (120 pps, 6-8 amps) was conducted at Devil’s Elbow and Ford’s Bay during May 2017. Otoliths were removed from a subsample of fish to reveal growth patterns and age distributions. Bluegill were observed up to age-3 and reached an average of 6.9 in (Table 35). Redear sunfish were observed up to age-9 and reached an average length of 12.3 in at that age (Table 36). Redear sunfish growth up to age-3 is fast (9.3 in), but slows greatly after that point.

Otoliths were also removed from a subsample of bluegill and redear sunfish collected during fall trapnetting for crappie in October and November at Little River, Donaldson Creek, Crooked Creek, and Eddy Bay. Growth rates and age ranges were similar between both spring and fall samples (Tables 35 and 36).

Trap nets were fished for crappie in Little River and Donaldson Creek embayments for 79 net-nights (nn) during October and November. A total of 858 crappie were collected at a rate of 11.0 fish/nn (Table 37). Additionally, Crooked Creek (LBL) (40 nn) and Eddy Creek (30 nn) were sampled for total of 70 net nights. Both Crooked Creek and Eddy Creek provided a good sample (10.6 fish/nn), and will be sampled again in the future if possible.

White crappie and black crappie each accounted for 50% of the total catch, and were collected at a rate of 4.2 fish/nn (Table 37). Donaldson Creek contained higher proportions of black crappie than Little River, Crooked Creek, and Eddy Creek (Table 37). For historical comparisons, only data from Little River and Donaldson Creek were used in the standardized population parameters of Lake Barkley crappie in Table 38. The catch rate of harvestable-size ($\geq$10.0 in) crappie was slightly lower than the ten-year average at 1.7 fish/nn. The catch rate of quality-size ($\geq$8.0 in) crappie was 2.4 fish/nn, which is below the management objective (4.0 fish/nn) set in the BLFMP. The catch rate of age-1 crappie (1.7 fish/nn) was well below the management objective (5.0 fish/nn).

The length-weight equations of white and black crappie from Lake Barkley are:

White crappie $\text{Log}_{10}\,(\text{weight}) = -3.60596 + 3.29961 \times \text{Log}_{10}\,(\text{length})$
Black crappie $\text{Log}_{10}\,(\text{weight}) = -3.62045 + 3.36207 \times \text{Log}_{10}\,(\text{length})$

Otoliths from 355 crappie were used for age and growth analysis. Ages ranged from 0-7 years for white crappie and 0-4 years for black crappie (Tables 40 and 41). Growth continues to be good as crappie reached 10.0 in between age 2 and 3. The average lengths of age 2+ white crappie and black crappie at capture were 11.2 in and 9.9 in, respectively (Table 38). Crappie collected in trap nets were used to determine stock densities. The PSD (65) and RSD$_{10}$ (22) of white crappie were identical to the 2016 sample (Table 39). The PSD (47) and RSD$_{10}$ (11) values of black crappie were also identical to last year, and suggests a balanced size distribution of black crappie.

Length at age results for both species are given in Tables 42 and 43. Age frequencies were estimated by combining catch data with age data. The catch of white crappie was dominated by age-0 fish suggesting an average year class in 2017 and a weak year class in 2016 (Table 42). Very few white crappie older than age-2 were collected which was unexpected due to the strong spawn in 2014. Black crappie ages in Little River and Donaldson Creek were also dominated by age 0 fish, suggesting at least an average spawn in 2017 and a weak 2016 spawn (Table 43).

Assessment of the crappie population yielded a rating of "Fair" at Lake Barkley in 2017 (Table 44). The catch of age-1 crappie was down from 2016 data, however, catches of age-0 were above average. The growth rate rankings improved slightly. As time goes on and the year class of 2014 succumbs to fishing and natural mortality, we expect the population of crappie to drop in response to the poor year class of 2016.

The catfish population was sampled at Lake Barkley during June by using low pulse (15 PPS) boat electrofishing with one dipper along the main lake river channel. A chase boat with one dipper was also utilized to help collect catfish around the electrofishing boat for a total of two dippers. A total of 1177 catfish were collected during the 68 electrofishing runs made (Table 45). Each run lasted 300 seconds, for a total sample time of 5.7 hours over a four-day period. Of the sample, blue catfish had the highest catch rate at 183.3 fish/hr, and made up 88% of the catfish collected. Flathead catfish and channel catfish are likely underrepresented using this method as these fish were often observed, but were much harder to approach and dip than blue catfish. Relative weight values were near the ideal values of 100 and are listed in Table 46. The aerial drone sampling technique was also utilized at Lake Barkley. See the Kentucky Lake catfish section for methods.

Age data from catfish collected in 2014 was used to calculate an age frequency for catfish collected during 2016. Age frequency data is presented in Tables 47 and 48 for blue catfish and channel catfish, respectively. These tables should be used with caution as some larger size classes were unrepresented in 2014, and were therefore excluded from this age frequency data. Of the blue catfish, almost 82% of the sample consisted of age 1-3 fish.

Kentucky Lake Creel Survey

A random, non-uniform probability, roving creel survey was conducted on the Kentucky portion (51,000 a) of Kentucky Lake from 16 February to 30 November 2017. The Kentucky portion of the lake was divided into ten creel areas (Appendix B). The survey was conducted five days per week, six hours per day. One hour each day was randomly chosen to conduct an angler count. The remaining five hours was dedicated to creeling anglers actively fishing. The overall temporal sampling scheme was twenty days per month, consisting of six weekend days and fourteen weekdays. Varying time period probabilities were assigned to each month. Higher geographic probabilities, resulting in more frequent interviews, were assigned to the Blood River and Jonathan Creek areas from March through May, and October and November, than were assigned to the other six areas. Equal probabilities were assigned to all areas from June to September. An angler attitude questionnaire concerning fishing on Kentucky Lake was conducted by the creel clerk throughout the survey period (Appendix C).

During the 2017 creel, the typical angler was a male (91%) resident (58%) who was casting (48%) or still fishing (20%) from a boat (92%; Table 49). Of the crappie anglers, 51% used a spider rig (defined as 3 or more poles per angler) for fishing. The average fishing trip for all anglers was 4.9 hours. There was a decline in the number of trips of (173,145). This is the lowest number of trips ever recorded in a Kentucky Lake creel survey, but only represents an 8% decrease since 2015. Despite a low number of trips, anglers caught an above average number of fish (1,370,520). Length frequencies of all harvested or released fish are given in Table 50.

Table 51 provides fish catch and harvest statistics for the 2017 creel survey. Crappie anglers accounted for 33% of fishing trips to Kentucky Lake in 2017 (33% in 2015, 24% in 2011; Table 51). Estimated catch and harvest rates for crappie were well above average. Crappie anglers caught (2.41 fish/hr) which is well above the long-term average of (1.12 fish/hr). However, of the crappie caught, 68% were under harvestable size (Table 52). This higher proportion of sublegal-size crappie corresponds to fall trap netting data that suggest good year classes in 2014 and 2015. 68% of the crappie were caught in February and April (Table 53). As part of our efforts to evaluate harvest by method, crappie anglers were recorded as using the following methods: casting, still fishing (1-2 poles), spider rigging (3 poles), spider rigging (4-5 poles), spider rigging (>5 poles). During this survey, 51% of crappie anglers used 3 or more poles. The percentage of crappie anglers using (>5 poles) increased to 26% in 2017 compared to only 15% of crappie anglers in 2015 (Table 54).

Black bass anglers accounted for 42% of all fishing trips to Kentucky Lake during 2017 (Table 51). There were 72,325 black bass fishing trips in the 2017 creel, which is slightly below the long-term average for Kentucky Lake. During older surveys, any bass that was currently in the livewell was recorded as harvested. However, during recent surveys, anglers with bass in the livewell were asked if they intended to release them at the end of the day. In all cases, tournament anglers indicated that they intended to release their fish after the weigh-in. Additionally some non-tournament anglers simply chose to keep fish in the livewell for photographic or “mock tournament” purposes, but indicated that they would release them at the end of the day. As a comparison with previous surveys, bass kept in livewells by anglers were reported as harvested, even though they would be released at the end of the day. The harvest rate, which included tournament bass and “mock tournament” bass, was estimated to be 0.07 bass per hour for anglers actually targeting bass (Table 55). However, when tournament and “mock tournament” harvested bass were removed from the actual harvest, the harvest rate dropped to 0.009 bass/hr. Largemouth bass accounted for 95% of the harvested black bass (Table 56).

About 6% of all trips were taken to catch panfish during 2017 (Table 51). This value is low compared to recent surveys. In 2011, almost 21% of the trips taken targeted panfish. Likewise, catch and harvest rates were slightly below the long-term average. Almost 68% of the panfish were harvested during May (Table 57). Bluegill and redear sunfish accounted for 99% of the panfish harvested. Of the bluegill, only 52% of the fish caught were harvested, while 87% of the redear sunfish caught were harvested (Table 58).

Catfish anglers accounted for 8% of all fishing trips on Kentucky Lake in 2017 (Table 51). The number of trips for catfish was slightly below the long-term average, but was an increase from recent years. The catfish fishery remains highly harvest oriented. Almost 88% of the catfish caught were harvested (Table 59). Higher numbers of catfish caught were reported in May (Table 59). These were likely anglers targeting channel catfish in the embayments. The total catch of channel catfish was more than double the catch of blue catfish (Table 60).

Only about 2% of the anglers fishing Kentucky Lake during 2017 sought *Morones* (Table 51). This group includes; white bass, yellow bass, striped bass and hybrids. However, it is likely that most anglers were fishing for white or yellow bass and incidentally caught some of these other species. Approximately 80% of the *Morones* caught were yellow bass, but white bass made up 40% of the *Morones* harvest. Almost 84% of yellow bass were released after being caught (Table 61). There were no reports of anglers targeting Morones in April, however an above average number of Morones were caught incidentally during that month (Table 61).

Kentucky Lake Winter Creel Survey

A random uniform probability roving creel survey was conducted in Jonathan Creek, Blood River, and Big Bear embayments (32,217 acres) on Kentucky Lake from 01 December 2017 through 30 February 2018. The primary objective of the survey was to assess the wintertime crappie fishery. The survey was conducted 15 days per month, six hours per day. One hour each day was randomly chosen to conduct an angler count. The remaining five hours was dedicated to creeling anglers actively fishing. The overall temporal sampling scheme was 15 days per month, consisting of five weekend days and 10 weekdays. Varying time period probabilities were assigned to each month. Equal probabilities were assigned to all three areas. An angler attitude questionnaire concerning fishing on Kentucky Lake was conducted by the creel clerk throughout the survey period (Appendix C).

During the winter creel, the typical angler was a male (98%) resident (94%) who was crappie fishing with >5 poles (67%) from a boat (96%) (Table 63). These results suggest that the wintertime crappie fishery draws much fewer non-resident anglers than was observed throughout the warmer months. Of the crappie anglers, 90% used a spider rig (defined as 3 or more poles per angler) for fishing. The average fishing trip for all anglers was 3.9 hours. Length frequencies of all harvested or released fish are given in Table 64.

Table 65 provides fish catch and harvest statistics for the 2017-2018 winter creel survey. Crappie anglers accounted for 33% of fishing trips to Kentucky Lake in 2017 (33% in 2015, 24% in 2011; Table 51). However, the winter creel showed that crappie anglers accounted for a much higher percentage of the fishing trips (82%; Table 65.) Wintertime crappie anglers caught (2.04 fish/hr) which was slightly lower than the rate observed in the warmer months. Of the crappie caught, 36% were under harvestable size (Table 66). The catch rates for crappie were highest during December (Table 67.) Extremely cold temperatures throughout most of January probably contributed to the low effort during that month. As part of our efforts to evaluate harvest by method, crappie anglers were recorded as using the following methods: casting, still fishing (1-2 poles), spider rigging (3 poles), spider rigging (4-5 poles), spider rigging (>5 poles). During this survey, 90% of crappie anglers used 3 or more poles. This percentage is much higher than that observed in warmer months (51%).

Black bass anglers accounted for 17.6% of all fishing trips to Kentucky Lake during the 2017-2018 winter creel (Table 65). During older surveys, any bass that was currently in the livewell was recorded as harvested. However, during recent surveys, anglers with bass in the livewell were asked if they intended to release them at the end of the day. In all cases, tournament anglers indicated that they intended to release their fish after the weigh-in. Additionally some non-tournament anglers simply chose to keep fish in the livewell for photographic or “mock tournament” purposes, but indicated that they would release them at the end of the day. As a comparison with previous surveys, bass kept in livewells by anglers were reported as harvested, even though they would be released at the end of the day. Throughout the entire winter survey, no angler reported any harvest of black basses (Tables 68 and 69).

About 6% of all trips were taken to catch panfish during 2017 (Table 51). However, in the 2017-2018 winter creel, there were no panfish anglers observed (Table 65). Some bluegill were caught incidentally in December, but it seems clear that the wintertime panfish fishery is very small (Tables 70 and 71).

Catfish anglers accounted for 8% of all fishing trips on Kentucky Lake in 2017 (Table 51). However, as with panfish, there were no catfish anglers observed during the 2017-2018 winter creel. Some channel and flathead catfish were incidentally caught in very low numbers (Tables 72 and 73).

Only about 2% of the anglers fishing Kentucky Lake during 2017 sought *Morones* (Table 51). This group includes; white bass, yellow bass, striped bass and hybrids. During the 2017-2018 winter creel, less than 1% of anglers indicated that they were targeting *Morones* (Table 65). The majority of the effort came during the month of December (Table 74). Approximately 37% of the *Morones* caught were yellow bass, but white bass were the only *Morones* harvested (Table 75). Harvest of yellow bass remains low despite the removal of harvest restrictions.

Lake Beshear

Largemouth bass were collected by diurnal electrofishing (120 PPS, DC current) during April at Lake Beshear. One-hundred and eighty-two largemouth bass were collected at a rate of 72.8 fish/hr (Table 76). The catch rate of harvestable-size (≥12.0 in) largemouth bass was 43.6 fish/hr (Table 77). This year's sample falls slightly below the objective in the Lake Beshear Fish Management Plan (LBFMP) to maintain a catch rate of at least 45.0 fish/hr for harvestable-sized largemouth bass. The catch of age-1 fish was low this year (6.4 fish/hr), but low recruitment is typical in Lake Beshear. Other objectives are to maintain high catch rates of bass ≥15.0 and ≥20.0 in. Ideally, these catch rates should be greater than 30.0 and 3.0 fish/hr, respectively. The catch rates for these size classes of bass were above the management objectives. Lake Beshear continues to have a quality bass fishery with high numbers of bass ≥15.0 in. The fishery rated as "good" in 2017 (Table 78).

Largemouth bass were collected by diurnal electrofishing (120 PPS, DC current) in October (Table 76). The catch rate (58.0 fish/hr) was lower than reported during similar sampling the past two years. Sampling conditions were reported to be good, although water temperatures were slightly above normal. There is no obvious reason why the catch would have been lower. Relative weight data suggests that the larger bass (≥15.0 in) are healthy with regard to their length-weight ratio. The average relative weight value was 92 for these larger bass and 87 for all sizes of bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$\mathrm{Log}_{10}\,(\mathrm{weight}) = -3.53848 + 3.17297 \text{ x } \mathrm{Log}_{10}\,(\mathrm{length})$$

Otoliths were removed from a subsample of largemouth bass ≤10.0 in to determine the mean fall length of the age-0 cohort, and determine their catch rate. The catch rate for age-0 largemouth bass was 38.0 fish/hr (Table 79). The average length of an age-0 bass was 4.1 in.

Lake Pennyrile

Electrofishing for all species of sportfish in Lake Pennyrile was conducted on 1 May 2017. One-hundred and eleven largemouth bass were captured at a rate of 111.0 fish/hr (Table 80). This catch rate is slightly below the 10-year average of 113.0 fish/hr. The majority of largemouth bass are still below 15.0 in. Only 5 (4%) bass over 15.0 in were captured in this year's sample. While 10 (9%) were 12.0 in or larger. The catch rate of fish ≥15.0 in (5.0 fish/hr) is above the 10-year average (Table 81). The catch rate of largemouth bass 8.0-11.9 in was (67.0 fish/hr) which falls below the management objective of 80.0 fish/hr. A high catch rate of intermediate largemouth bass is desirable in order to maintain good numbers of large sunfish in this system.

The catch rate of bluegill ≥8.0 in was 19.0 fish/hr (Table 82). The catch rate for large-size (≥8.0 in) redear was above average (18.4 fish/hr). Over the past three years, the catch rate of large bluegill and redear sunfish has been above the 10-year average. The most probable explanation for these high catch rates is that there are too few large piscivorous predators and too little angler harvest to limit the abundance of large sunfish in the system.

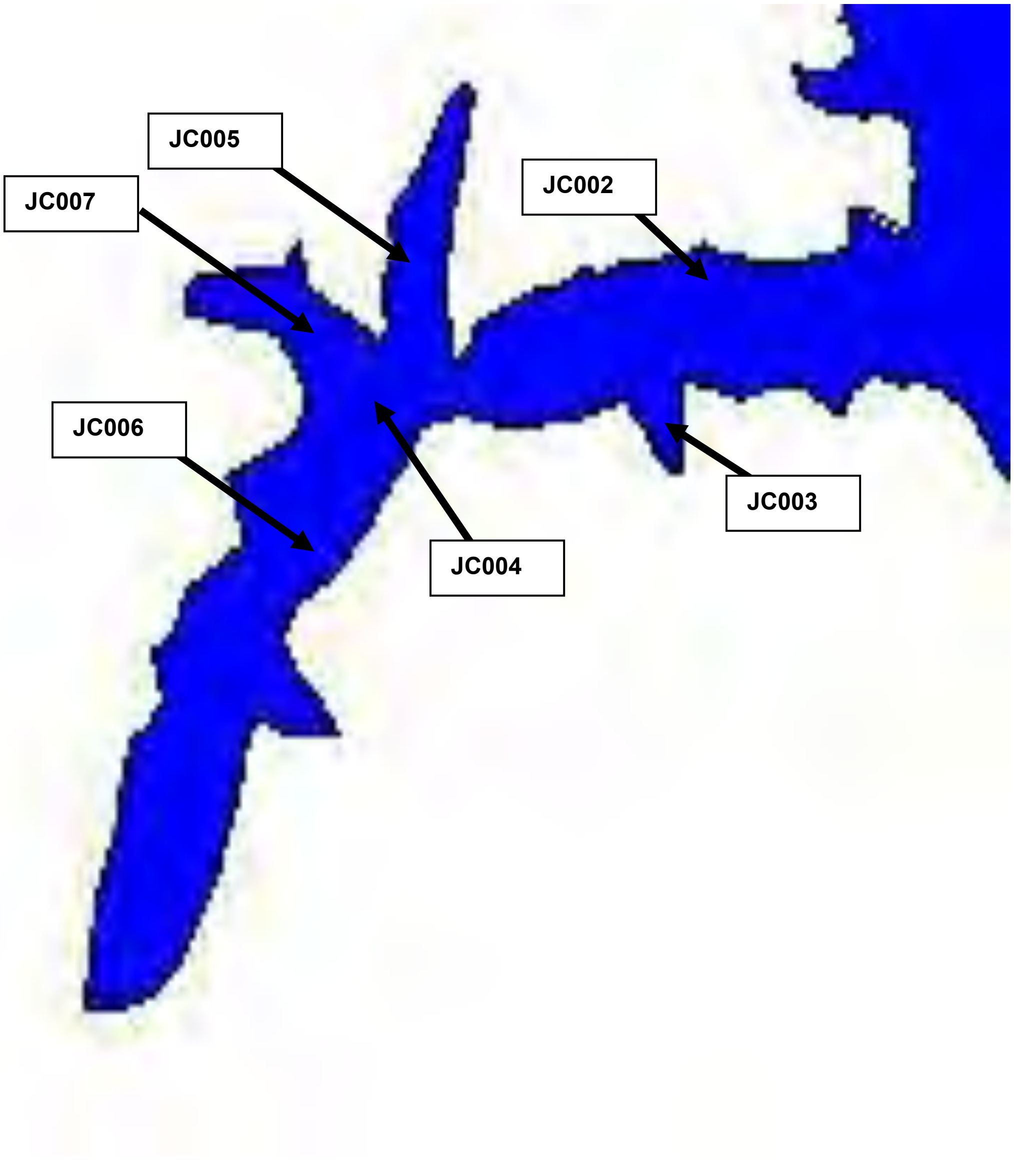
PSD and RSD values for largemouth bass, bluegill and redear sunfish are listed in Table 83. The PSD value for largemouth bass suggests a population skewed toward small bass. The largemouth fishery is likely stunted. PSD's and RSD's are above average for bluegill and redear, and skewed toward more adult fish.

An accurate lake specific assessment for Pennyrile largemouth bass has not been possible in recent years without good age and growth estimates. In 2011 a small sample of bass were aged. In 2011, the largemouth bass population was rated as "fair" (Table 84). In more recent years, assessments have been completed using the age data from 2011. Due to the shift in management focus towards trophy sunfish, it is unlikely that largemouth bass populations will ever be rated highly.

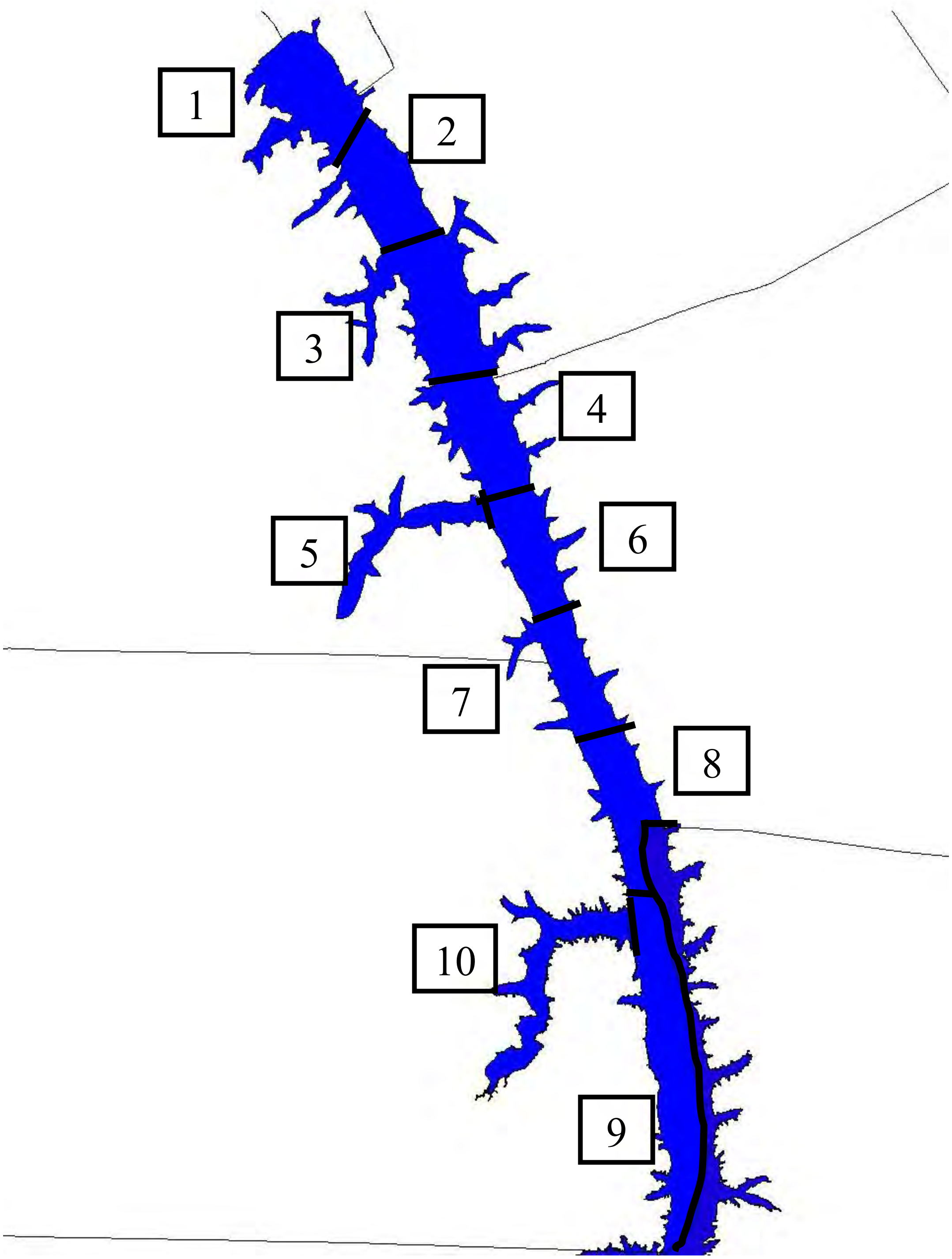
Ballard County Wildlife Management Area Lakes

During April of 2017, several Ballard County Wildlife Management Area lakes (Little Turner, Big Turner, Shelby, and Castor) were sampled with electrofishing (3-900 second runs at each lake). These lakes are old oxbows of the Ohio River which are primarily managed for waterfowl. The fisheries in these systems fluctuate greatly due to the nearly annual connection with the river during flood events. Big Turner showed the most potential as a largemouth bass fishery (33.3 fish/hr) (Table 85). Each of the lakes shows potential for good panfishing, despite low numbers of bluegill >6.0 in.

Appendix A. 2017 Larval fish sample sites in Jonathan Creek embayment, Kentucky Lake



Appendix B. Kentucky Lake creel survey areas, 2017.



Appendix C. KENTUCKY LAKE ANGLER ATTITUDE SURVEY 2017

1. Have you been surveyed this year? Yes - stop survey No – continue

2. Name ____ (**Optional**) and Zip Code ______________________

3. How many times do you fish Kentucky Lake each year?

First time here 3.2% 1 to 4 10.5% 5-10 16.6% More than 10 69.6%

4. Which species of fish do you fish for at Kentucky Lake (**check all that applies**)?
Redear 15.7% Bluegill 28.4% Black Bass 62.2% Crappie 61.4% Catfish 21.4% White bass 8.1% Yellow bass 4.0%
Stripers 0.2% Sauger 1.0% Anything 1.4%

5. Which one species do you fish for most at Kentucky Lake (**check only one**)?
Redear 0.4% Bluegill 5.9% Black Bass 46.4% Crappie 34.8% Catfish 8.4% White bass 1.8%
Anything 1.4% Yellow bass .9%

Answer the following questions for each species you fish for – (see question 4)

Redear Anglers

6. In general, what level of satisfaction or dissatisfaction do you have with redear fishing at Kentucky Lake?
Very satisfied 11.6% Somewhat satisfied 41.9% Neutral 23.3% Somewhat dissatisfied 17.4%
Very dissatisfied 1.2% No opinion 4.7%

6a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?
Number of fish 100.0% Size of fish 0.0% Not happy with regulations 0.0% Don't know how to catch them 0.0%

Bluegill Anglers

7. In general, what level of satisfaction or dissatisfaction do you have with the bluegill fishing at Kentucky Lake
Very satisfied 46.2% Somewhat satisfied 31.4% Neutral 10.3% Somewhat dissatisfied 7.7%
Very dissatisfied 0.6% No opinion3.8%

7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction?
Number of fish 83.3% Size of fish 16.7% Not happy with regulations 0.0%

Black Bass Anglers

8. In general, what level of satisfaction or dissatisfaction do you have with the black bass fishing at Kentucky Lake?
Very satisfied 37.4% Somewhat satisfied 41.9% Neutral 9.8% Somewhat dissatisfied 8.1%
Very dissatisfied 1.4% No opinion 1.4%

8a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?
Number of fish 81.3% Size of fish 9.4% Not happy with regulations 0.0% Too many tournaments 6.3%
Too much pressure 3.1%

Crappie Anglers

9. In general, what level of satisfaction or dissatisfaction do you have with crappie fishing at Kentucky Lake?
Very satisfied 51.0% Somewhat satisfied 29.7% Neutral 9.8% Somewhat dissatisfied 5.8%
Very dissatisfied 1.7% No opinion 2.0%

9a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction?
Number of fish 76.0% Size of fish 24.0% Not happy with regulations 0.0%

Catfish Anglers

10. In general, what level of satisfaction or dissatisfaction do you have with the catfish fishing at Kentucky Lake?
Very satisfied 58.2% Somewhat satisfied 27.9% Neutral 5.7% Somewhat dissatisfied 4.1%
Very dissatisfied 1.6% No opinion 2.5%

10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction?
Number of fish 100.0% Size of fish 0.0% Not happy with regulations 0.0% Too much commercial fishing 0.0%

White Bass Anglers

11. In general, what level of satisfaction or dissatisfaction do you have with the white bass fishing at Kentucky Lake?
Very satisfied 38.6% Somewhat satisfied 36.4% Neutral 15.9% Somewhat dissatisfied 0.0% Very dissatisfied 2.3% No opinion 6.8%

11a. If you responded with somewhat or very dissatisfied in question (11) – what is the single most important reason for your dissatisfaction?
Number of fish 100.0% Size of fish 0.0% Not happy with regulations 0.0%

All Anglers

12. Are you satisfied with the current size and creel limits on all sport fish at Kentucky Lake? Yes 87.5% No 12.5%
12a. If you responded "No" to Question 11, which species are you dissatisfied with and what size and creel limits would you prefer? Creel Limit (CL), Length Limit (LL), Slot Limit (SL)

Crappie - 10 CL, 15 CL, 25 CL, 30 per boat CL, 09" LL, 10.5" LL,11" LL, 12" LL

Bass – Largemouth 13" LL, Largemouth 16", 12" LL, 14" LL, 16-10" SL, smallmouth no harvest >18", smallmouth 18",

Largemouth and Smallmouth no harvest >18" or <15"

Bluegill – 30 CL, 8" LL

Redear sunfish – 11 LL

13. Are you aware that the Kentucky Department of Fish and Wildlife creates and maintains shallow water stakebeds marked with white poles, and deepwater brushpiles marked with white buoys as fish attractors in Kentucky Lake?
Yes 79.7% No 20.3%

13a. When you fish Kentucky Lake, how regularly do you fish around Department placed fish attractors?
Always 2.6% Frequently 25.1% Occasionally 38.7% Rarely 17.4% Never 16.3%

13b. If you answered "Rarely" or "Never", what is the single most important reason you don't fish around Department placed fish attractors?
Over fished 15.4% No boat 1.3% No success 6.7% Don't know their location 30.9% Wrong water depth 10.1%
Fishes own stuff 24.2% Boat too big 0.7% Get snagged 2.0% Don't fish structure 0.7% Don't crappie fish 2.0%

14. If you fish for crappie, do you spider rig (three or more poles per angler at the same time) as your primary method of crappie fishing?
Yes 23.5% No 39.5% Don't Fish 36.9%

14a. If "Yes", how many poles do you use? 3 14.8% 4 41.4% 5 5.5% 6 18.0% >6 20.3%

15. Do you support or oppose a pole limit while fishing for crappie? Support 35.1% Oppose 17.5% No Opinion 47.4%

15a. If you support a pole limit, what should be the pole limit per person?
1 8.4% 2 15.8% 3 37.4% 4 24.1% 5 2.0% 6 8.9% >6 3.4%

16. If you fish for catfish, do you fish with multiple poles at the same time? Yes 8.0% No 15.6% Don't Fish 76.4%

16a. If "Yes", how many poles do you use? 2 50.0% 3 27.3% 4 18.2% 5 2.3% 6 2.3% >6 0.0%

17. Do you support or oppose a pole limit while fishing for catfish? Support 5.2% Oppose 12.9% No Opinion 81.8%

17a. If you support a pole limit, what should be the pole limit per person?
1 26.7% 2 30.0% 3 23.3% 4 13.3% 5 3.3% 6 3.3% >6 0.0%

18. Currently there is no statewide daily creel limit for bluegill, would you support or oppose a bluegill daily creel limit?
Support 10.5% Oppose 22.1% No Opinion 67.4%

18a. If you support a creel limit, what number do you consider appropriate for a daily limit of bluegill?
10 3.3% 12 1.7% 15 6.7% 20 28.3% 25 8.3% 30 40.0% 35 1.7% 40 5.0% 50 5.0%

19. If you fish for bluegill, what do you consider to be a keeper size (inches) fish?
6 18.6% 7 9.6% 8 4.5% 9 0.9% 10 0.2%

19a. Which do you consider to be more important: Catching more keeper size bluegill, or more trophy size (>10in) bluegill?
More keepers 82.2% More trophy size 14.2% No Opinion 3.6%

20. If you fish for redear sunfish, what do you consider to be a keeper size (inches) fish?
6 7.8% 7 3.0% 8 10.1% 9 3.5% 10 4.8%

20a. Which do you consider to be more important: Catching more keeper size redear, or more trophy size (>10in) redear?
More keepers 66.7% More trophy size 30.5% No Opinion 2.9%

21. Currently, sunfish (bluegill, longear, and redear **<**6 inches) are allowed to be used as bait. How often do you use sunfish as bait?
Always 0.3% Frequently 1.4% Occasionally 3.0% Rarely 3.5% Never 91.8%

22. Are you aware that Asian carps are generally considered to be an excellent fish to eat? Yes 63.5% No 36.5%

Table 1. 2017 yearly summary of sampling conditions by waterbody, species sampled, and date.

Water body	Location	Species	Date	Effort	Gear	Weather	Water temp. °F	Water level	Secchi (in)	Water conditions	Pertinent sampling comments
Kentucky	Jonathan	crappie	3/31/2017	6 tows	neustonic tow net	after dusk	58.7			calm/stable	good sample
Kentucky	Jonathan	crappie	4/7/2017	6 tows	neustonic tow net	after dusk	61.0	355.7		calm/stable	good sample
Kentucky	Jonathan	crappie	4/14/2017	6 tows	neustonic tow net	after dusk	70.2	357.8		calm/stable	good sample
Kentucky	Jonathan	crappie	4/23/2017	6 tows	neustonic tow net	after dusk	64.0	359.1		calm/stable	good sample
Kentucky	Jonathan	crappie	4/27/2017	6 tows	neustonic tow net	after dusk	67.1	359.4		elevation falling	good sample
Kentucky	Jonathan	crappie	5/5/2017	6 tows	neustonic tow net	after dusk	65.6	358.1		elevation rising fast	good sample
Kentucky	Jonathan	crappie	5/12/2017	6 tows	neustonic tow net	after dusk	70.0	363.0		calm/stable	good sample
Kentucky	Jonathan	crappie	5/19/2017	6 tows	neustonic tow net	after dusk	75.1	360.4		calm/stable	good sample
Kentucky	Jonathan	crappie	5/26/2017	6 tows	neustonic tow net	after dusk	73.9	358.1		calm/stable	good sample
Kentucky	Jonathan	crappie	6/2/2017	6 tows	neustonic tow net	after dusk	80.9	359.3		calm/stable	good sample
Kentucky	Jonathan	crappie	6/9/2017	6 tows	neustonic tow net	after dusk	79.8	360.2		calm/stable	good sample
Pennyrile		sportfish	5/1/2017	1 hr	electrofishing	cloudy/breezy	68.7	normal	42	stable	good sample
Barkley	Little River	black bass	4/25/2017	2.5hr	electrofishing	sunny	65.9	359.3	26	calm	poor sample, biased towards large females
Barkley	Eddy Creek	black bass	4/26/2017	2.5 hr	electrofishing	overcast	65.0	359.4	30	choppy	fair sample
Barkley	Donaldson	black bass	5/2/2017	2.0hr	electrofishing	sunny/windy	60.3	357.0	32	calm	fair sample
Barkley	Nickel Branch	black bass	5/8/2017	2.5 hr	electrofishing	sunny/calm	64.0	361.0	32	elevation rising fast	fair sample
Barkley	Devils elbow east	sunfish	5/11/2017	.5 hr	electrofishing	sunny/light wind	68	363.5	32	water high	fish concentrated in flooded habitat
Barkley	Fords Bay	sunfish	5/9/2017	.75 hr	electrofishing	sunny	64.6		36	lake rising	abandoned bass sample
Barkley	Little River	sunfish/shad	9/27/2017	1.5 hr	electrofishing	sunny	82	355.2		discharge 9,000	ignore catch rates/ AG data collected
Barkley	Devils elbow	catfish	6/8/2017	1.4 hr	low pulse	sunny/calm	74.0	360.2	20	calm	discharge 40,000
Barkley	Nickel	catfish	6/13/2017	1.5 hr	low pulse	partly cloudy	81.0	359.4	34	calm	discharge 27,000
Barkley	Eddyville ferry	catfish	6/15/2017	1.4 hr	low pulse	cloudy	79.8	359.3	26	slightly choppy	good sample
Barkley	Cravens	catfish	6/16/2017	1.58 hr	low pulse	overcast	78.4	359.2	32	calm	discharge 8,600, but rose throughout
Barkley	Eddy Creek	black bass	10/9/2017	2.0 hr	electrofishing	misting	72.0	355.0	24	calm	first time drivers/83 degree air temp
Barkley	Little River	black bass	10/12/2017	2.5 hr	electrofishing	overcast	67.5	355.2	14	calm	elevation falling hard, muddy water
Lake Beshear		black bass	4/18/2017	2.5 hr	electrofishing	overcast	67.0	normal	40	calm	good sample
Ballard WMA	L.&B. Turner, Shelby, Castor	sportfish	4/19/2017	3 hr	electrofishing	sunny	69.0	normal		calm	fair sample
Kentucky	Blood River	black bass	4/21/2017	3.0 hr	electrofishing	overcast/windy	69.0	358.4	28	choppy	fair sample
Kentucky	Sugar Bay	black bass	4/24/2017	2.5 hr	electrofishing	sunny/calm	64.0	358.9	37	calm	good sample
Kentucky	Jonathan	black bass	4/27/2017	2.5 hr	electrofishing	overcast/breezy	66.0	358.2	35	choppy	good sample
Kentucky	Big Bear	black bass	5/3/2017	2.0 hr	electrofishing	cloudy/breezy	64.5	357.5	24	choppy	fair sample
Kentucky	Blood River	sunfish	5/10/2017	1.3 hr	electrofishing	sunny	68.0	363.4		calm/high	poor sample
Kentucky	Ledbetter	sunfish	5/11/2017	0.8 hr	electrofishing	sunny	70.0	363.6	34	calm/high	poor sample
Kentucky	Patterson Landing	catfish	6/6/2017	.8 hr	low pulse	sunny/windy	78.9	359.7		calm	poor sample

Table 1 (cont).

Water body	Location	Species	Date	Effort	Gear	Weather	Water temp. °F	Water level	Secchi (in)	Water conditions	Pertinent sampling comments
Kentucky	Fenton	catfish	6/9/2017	2.1 hr	low pulse	sunny/calm	77.0	360.2	47	calm	fair sample
Kentucky	Little Bear	catfish	6/12/2017	1.0 hr	low pulse	sunny/breezy	79.0	359.4		choopy	poor sample
Kentucky	Patterson Landing	catfish	6/14/2017	.9 hr	low pulse	sunny/windy	80.0	359.1		choppy	poor sample
Lower TN River	Haddox Ferry	all species	9/7/2017	1.8 hr	electrofishing	sunny	74.0	300.2	40	calm	good sample
Lower TN River	Kentucky TW	all species	9/11/2017	1.0 hr	electrofishing						
Mississippi River	Columbus Belmont	all species	9/8/2017	1.5 hr	electrofishing	cloudy/breezy	74.0	17'			fair sample
Mississippi River	Wickliffe	all species	9/18/2017	1.5 hr	electrofishing	sunny	77.0	12'			fair sample
Kentucky	Blood River	sunfish	9/25/2017	1.8 hr	electrofishing	sunny/calm	82.0	355.2		calm	poor sample
Lake Beshear		black bass	10/5/2017	2.0 hr	electrofishing	partly cloudy	73.0	normal		calm	good sample
Kentucky	Big Bear	black bass	10/11/2017	3 hr	electrofishing	cloudy	71.0	355.6	27	cam	good sample
Kentucky	Blood River	black bass	10/13/2017	2.5 hr	electrofishing	sunny/calm	67.0	355.4	21	calm	good sample
Barkley	Crooked Creek	crappie	10/16 - 10/20	40 nn	trapnet	sunny	68.0	355.0	21	elevation falling	fair sample
Barkley	Donaldson	crappie	10/23 - 10/27	39 nn	trapnet	sunny	62.0	354.0	19	lake falling	fair sample
Kentucky	Ledbetter	crappie	10/17 - 10/20	40 nn	trapnet	variable	68.8	355.8		variable	poor sample
Barkley	Little River	crappie	10/30-11/03	40 nn	trapnet	sunny	52.0	354.0	6	high discharge	fair sample, high discharge and turbidity
Kentucky	Jonathan	crappie	10/24 - 10/27	40 nn	trapnet	variable	64.0	355.1	23	variable	breezy, fair sample
Barkley	Eddy Creek	crappie	10/30 - 11/03	30 nn	trapnet	sunny	52.0	354.0	25	calm, high discharge	poor sample
Kentucky	Blood River	crappie	10/31 - 11/3	38	trapnet	variable	52.0	354.8	21	variable	overcast, fair sample
Ohio River	Birdsville	all species	9/5/2017	2 hr	electrofishing	overcast	77.0		13	muddy	fair sample
Ohio River	Smithland	all species	9/6/2017	1.5 hr	electrofishing	sunny	76.0		13	muddy	fair sample, rocks exposed
Cumb. River	Tiline	all species	9/20/2017	1.5 hr	electrofishing	partly cloudy	76.0		27	normal	good sample
Cumb. River	Barkley TW	all species	9/11/2017	1.0 hr	electrofishing						CSI staff

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 10.0 hours (20- 30-minute runs) of diurnal electrofishing at Kentucky Lake during April-May 2017.

	Inch class																					
Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Blood River																						
Smallmouth bass	1	1	1	5	1		1	1		2	2			1					1	17	5.7	4.3
Largemouth bass	1	5	21	55	54	29	23	5	8	4	11	20	24	16	9	2	3	1	3	294	98.0	11.9
Jonathan Creek																						
Smallmouth bass			1	1	1															3	1.2	1.2
Spotted bass				1																1	0.4	0.4
Largemouth bass	5	20	43	63	48	28	10	13	11	15	21	13	10	9	6	4	6			325	130.0	27.0
Big Bear																						
Smallmouth bass			3	3	1	1		1	1			1								11	5.5	2.2
Largemouth bass		3	31	56	75	36	25	6	3	9	4	15	16	12	11	2	1			305	152.5	24.5
Sugar Bay																						
Smallmouth bass		3	7	8	7		1		1					1						28	11.2	3.3
Spotted bass						1														1	0.4	0.4
Largemouth bass		1	25	88	118	99	40	11	10	8	7	16	4	4	3	2	2		1	439	175.6	20.8
Total																						
Smallmouth bass	1	4	12	17	10	1	2	2	2	2	2	1		2					1	59	5.9	1.7
Spotted bass				1		1														2	0.2	0.1
Largemouth bass	1	14	97	242	310	212	116	32	34	32	37	72	57	42	32	12	10	7	4	1363	136.3	11.8

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Table 3. Lake specific assessment for largemouth bass collected at Kentucky Lake from 2008-2017. This table includes the parameter estimates and the individual scores as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and % annual mortality (A). Only data collected from Blood River, Big Bear, Jonathan Bay and Sugar Bay were used for historical comparison.

Year	Mean length age-3 at capture	CPUE age-1	Length group 12.0-14.9 in CPUE	 ≥15.0 in CPUE	 ≥20.0 in CPUE	Total score	Assessment rating	Z	A
2017^A	13.2	95.8	14.1	16.4	1.1				
Score	2	4	2	3	2	13	G		
2016	13.2	4.0	25.9	19.1	0.8			0.410	33.7
Score	2	1	4	3	1	11	F		
2015^A	13.9	10.2	22.0	15.6	1.2			0.408	33.5
Score	4	1	3	2	2	12	G		
2014^A	13.9	32.6	15.0	15.7	0.9			0.452	36.3
Score	4	2	1	2	1	10	F		
2013*^{A}	13.9	40.2	9.6	15.8	0.8			0.446	35.9
Score	4	2	1	2	1	10	F		
2012*	13.9	35.6	26.9	17.5	0.8			0.588	44.5
Score	4	2	2	2	1	11	F		
2011*	12.9	7.4	34.0	8.6	0.9				
Score	3	1	2	1	1	8	F		
2010*	13.8	34.4	42.9	12.4	1.3				
Score	4	2	3	1	1	11	F		
2009^A	13.8	27.9	24.3	13.5	1.4			0.429	34.9
Score	4	2	2	1	1	10	F		
2008^A	13.8	73.1	19.1	24.2	1.9			0.575	43.7
Score	4	4	2	3	2	15	G		
Average	13.6	36.1	23.4	15.9	1.1	11.1		0.472	37.5

Data from 1985 to 2007 is listed in previous annual reports.

Assessment quartiles were updated in 2015, previous years' APR's will list rating based on old assessment ranges.

^{A} age and growth data was not collected this year, therefore used previous age data set estimates.

2010*, 2011* and 2013* samples were hampered by high water levels during flooding, sample was later than normal; overall a poor sample and not all embayments were sampled.

2012* sample was hampered by low water levels during drought.

Rating
5-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

(Kentucky Bass Database.xls)

Table 4. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Kentucky Lake during May 2008-2017.

	Mean length			Length group													
	age-3 at	Age-1		<8.0 in		12.0-14.9 in		≥15.0 in		≥18.0 in		≥20.0 in		Total			
Year	capture (in)	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	PSD	RSD$_{15}$
2017	13.2	95.8	10.6	66.4	7.1	14.1	1.7	16.4	1.7	3.3	0.7	1.1	0.3	136.3	11.8	44	23
2016	13.2	4.0	0.7	11.8	2.0	25.9	2.4	19.1	2.4	2.9	0.7	0.8	0.3	63.2	5.7	88	37
2015	13.9	10.2	1.1	3.9	0.7	22.4	2.1	14.1	1.3	5.3	0.6	1.1	0.3	60.4	4.2	65	25
2014	13.9	32.6	6.2	26.4	5.5	15.0	1.4	15.7	1.7	4.2	0.6	0.9	0.3	78.1	7.1	59	30
2013	13.9	40.2	7.0	30.5	6.4	9.6	1.3	15.8	1.6	3.3	0.5	0.8	0.3	78.2	7.1	53	33
2012	13.9	35.6	5.3	25.6	4.0	26.9	3.5	17.5	2.2	2.7	0.6	0.8	0.3	86.2	6.7	73	29
2011	12.4	7.4	1.6	5.1	1.1	34.0	5.4	8.6	2.0	3.7	1.0	0.9	0.6	61.1	7.7	76	15
2010	13.8	34.4	5.9	29.7	5.5	42.9	3.6	12.4	1.6	3.7	1.0	1.3	0.4	121.6	11.0	60	14
2009	13.8	27.9	5.0	29.5	5.3	24.3	2.2	13.5	1.2	4.2	0.6	1.4	0.3	112.6	10.3	46	16
2008	13.8	73.1	8.6	51.7	7.2	19.1	2.3	24.2	3.1	6.0	1.0	1.9	0.4	134.8	11.1	52	29
Average	13.6	36.1		28.1		23.4		15.7		3.9		1.1		93.2		61.6	25.1
KLFMP	≥ 12.0 in	≥ 30				≥ 21		≥ 18				≥ 2				55-75	20-40

(Kentucky Bass Database.xls)

Data for 1985-2007 is listed in previous annual reports; KLFMP - Kentucky Lake Fish Management Plan objective goal.

Table 5. PSD and RSD$_{15}$ values calculated for largemouth bass collected during diurnal electrofishing at Kentucky Lake during May 2017; 95% confidence limits are shown in parentheses.

Area	No. ≥8.0 in	PSD	RSD$_{15}$
Blood River	158	59 (+/-7)	37 (+/-7)
Jonathan Creek	194	49 (+/-7)	25 (+/-6)
Big Bear	140	50 (+/-8)	30 (+/-8)
Sugar Bay	207	23 (+/-6)	8 (+/-4)
Total	699	43 (+/-4)	23 (+/-3)

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Table 6. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 5.5 hours (11- 30-minute runs) of diurnal electrofishing at Kentucky Lake during October 2017.

	Inch class																					
Area / Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std err
Blood River																						
Smallmouth bass		4	10	13	5		1	2			1		2							38	15.2	5.5
Spotted bass												1								1	0.4	0.4
Largemouth bass		3	13	26	31	10	11	26	13	3	1	3	10	5	2		1	1	1	160	64.0	8.3
Big Bear																						
Smallmouth bass		1	6	8	2			4	1	1		1	1							25	8.3	2.3
Spotted bass								1												1	0.3	0.3
Largemouth bass	1		7	9	17	6	7	16	11	4	4	5	5	9	6	5	4			116	38.7	7.3
TOTAL																						
Smallmouth bass		5	16	21	7		1	6	1	1	1	1	3							63	11.5	2.9
Spotted bass								1				1								2	0.4	0.2
Largemouth bass	1	3	20	35	48	16	18	42	24	7	5	8	15	14	8	5	5	1	1	276	50.2	6.5

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Table 7. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Kentucky Lake.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2017	5.9	0.1	28.9	5.2	18.2	3.6		
2016	6.4	0.1	58.4	7.4	47.9	5.3	95.8	10.6
2015	4.6	0.1	32.6	8.6	9.1	1.5	4.0	0.7
2014	4.1	0.1	20.2	7.9	3.8	1.0	10.2	1.1
2013	5.7	0.1	31.3	5.2	21.5	4.1	32.6	6.2
2012	6.4	0.1	63.0	13.9	55.9	12.5	40.2	7.0
2011	5.7	0.1	75.9	8.3	54.1	6.4	35.6	5.3
2010	5.7	0.1	24.3	4.9	17.4	2.6	7.4	1.6
2009	5.0	0.1	30.9	5.4	16.7	2.8	34.4	5.9
2008	5.8	0.1	33.8	6.9	27.2	4.8	27.9	5.0
Average	5.5		39.9		27.2		32.0	

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths removed from a subsample of LMB <8.0 in and extrapolated to the entire catch of the fall sample. Since 2010, bass up to 10.0 in have been collected for analysis.

[B] Data from diurnal electrofishing samples collected the following spring (April/May).

*2010, 2011 and 2013 spring data was poor due to high water levels.

*2012 spring data was poor due to low water levels.

Data from 1990 to 2007 is listed in previous year reports.

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Table 8. Number of bass and relative weight (Wr) for each length group of black bass collected at Kentucky Lake during October 2017.

		Length group									Total		
		8.0-11.9 in			12.0-14.9 in			≥15.0 in					
Species	Area	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err
Largemouth bass	Blood River	53	90	1	14	85	2	10	85	4	77	88	1
	Big Bear	38	87	1	14	84	3	24	91	3	76	88	1
	Total	91	89	1	28	84	2	34	89	2	153	88	1

		Length group									Total		
		7.0-10.9 in			11.0-13.9 in			≥14.0 in					
Species	Area	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err
Spotted bass	Total	1	98		1	97					2	98	0
Smallmouth bass	Total	8	84	2	3	83	1	3	87	4	14	84	1

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Table 9. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Kentucky Lake in October 2017.

	Inch class																						
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	Std err
0	1	3	20	35	48	15	16	21												159	57.6	28.9	5.2
1						1	2	21	22	3	1									50	18.1	9.1	1.3
2									2	1	1	1	1	1						7	2.5	1.3	0.1
3										1	1	4	4	4	1					15	5.4	2.7	0.4
4										1	1	2	4	5	3	2	1			19	6.9	3.5	0.5
5											1	1	6	4	4	3	3			22	8.0	4.0	0.8
6																	1			1	0.4	0.2	0.1
7																		1		1	0.4	0.2	0.2
8																			1	1	0.4	0.2	0.1
9																	1			1	0.4	0.2	0.1
Total	1	3	20	35	48	16	18	42	24	6	5	8	15	14	8	5	6	1	1	276	100		
%	0	1	7	13	17	6	7	15	9	2	2	3	5	5	3	2	2	0	0	100			

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Table 10. Electrofishing for redear sunfish and bluegill to determine relative abundance and CPUE (fish/hr) during 2.0 hours (8 - 900-second runs) at Kentucky Lake during May 2017.

	Inch class													
Area / Species	1	2	3	4	5	6	7	8	9	10	11	Total	CPUE	Std err
Blood River														
Bluegill	3	26	27	45	29	10						140	112.0	39.1
Redear			3	2	13	10	2	5	2	2	6	45	36.0	14.0
Ledbetter														
Bluegill		3	4	23	41	39	9					119	158.7	48.7
Redear						1	3		1	3	8	16	21.3	1.3
TOTAL														
Bluegill	3	29	31	68	70	49	9					259	129.5	29.6
Redear			3	2	13	11	5	5	3	5	14	61	30.5	8.8

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Table 11. Mean back-calculated length (in) at each annulus of bluegill including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Kentucky Lake (Blood River and Ledbetter Bay) in spring 2017. A separate otolith collection was also conducted in fall 2017 using fish collected while trapnetting (Blood River, Ledbetter, and Jonathan Creek)

		SPRING SAMPLE						
		Age						
Year class	N	1	2	3	4	5	6	7
2016	26	2.8						
2015	14	3.2	4.8					
2014	40	3.6	6.0	7.1				
2013	10	3.0	5.0	6.0	6.5			
2012	1	2.6	4.6	5.2	5.6	6.0		
2011	2	2.6	4.3	5.5	6.1	6.5	6.8	
2010	1	3.2	4.7	5.4	6.0	6.4	6.8	7.2
Mean	94	3.2	5.5	6.8	6.4	6.3	6.8	7.2
Smallest		1.6	4.1	5.2	5.6	6.0	6.5	7.2
Largest		4.8	6.9	8.4	7.5	6.7	7.1	7.2
Std err		0.1	0.1	0.1	0.2	0.1	0.2	
Low 95% CI		3.1	5.3	6.5	6.1	6.1	6.5	
High 95% CI		3.4	5.7	7.0	6.6	6.6	7.1	

* Intercept = 0.
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		FALL SAMPLE			
		Age			
Year class	N	1	2	3	4
2016	24	2.6			
2015	15	3.2	4.9		
2014	15	2.9	4.9	6.0	
2013	3	2.2	3.8	5.4	5.9
Mean	57	2.9	4.8	5.9	5.9
Smallest		1.5	3.3	4.7	5.5
Largest		3.8	5.8	6.7	6.2
Std err		0.1	0.1	0.1	0.2
Low 95% CI		2.7	4.6	5.6	5.5
High 95% CI		3.0	5.0	6.1	6.4

* Intercept = 0.
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Table 12. Mean back-calculated length (in) at each annulus of redear sunfish including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Kentucky Lake (Blood River and Ledbetter Bay) in spring 2017. A separate otolith collection was also conducted in fall 2017 using fish collected while trapnetting (Blood River, Ledbetter, and Jonathan Creek)

		SPRING SAMPLE										
		Age										
Year class	N	1	2	3	4	5	6	7	8	9	10	11
2016	5	3.7										
2015	39	4.5	7.0									
2014	7	5.0	8.3	9.7								
2013	2	4.3	7.0	8.8	9.7							
2012	11	4.4	7.7	9.4	10.4	11.0						
2011	1	2.8	5.6	7.0	7.7	8.2	8.5					
2010	5	4.0	6.6	8.4	9.2	9.8	10.4	10.8				
2009	1	4.2	6.3	8.1	9.2	9.9	10.4	10.9	11.2			
2008	1	3.3	4.6	6.1	6.9	8.9	9.9	10.5	11.3	12.0		
2007	5	3.3	5.2	6.3	7.1	7.8	8.4	8.9	9.4	9.8	10.2	
2006	1	2.3	4.0	5.1	6.3	7.3	7.9	8.6	9.5	10.2	10.8	11.3
Mean	94	4.3	7.0	8.5	9.1	9.7	9.3	9.9	9.9	10.2	10.3	11.3
Smallest		2.3	4.0	5.1	6.3	6.7	7.2	7.5	7.9	8.3	8.5	11.3
Largest		6.8	9.3	10.4	11.0	11.5	11.2	11.7	11.3	12.0	11.6	11.3
Std err		0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	
Low 95% CI		4.1	6.6	7.9	8.5	9.1	8.6	8.6	9.0	9.2	9.3	
High 95% CI		4.5	7.3	9.0	9.7	10.4	10.0	10.0	10.8	11.2	11.4	

* Intercept = 0.
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		FALL SAMPLE								
		Age								
Year class	N	1	2	3	4	5	6	7	8	9
2016	2	3.9								
2015	27	3.8	6.8							
2014	6	3.4	6.0	7.8						
2012	3	3.3	5.6	7.2	8.0	8.8				
2008	2	2.2	4.5	5.7	6.3	6.7	7.3	7.7	8	8.5
Mean	40	3.7	6.5	7.3	7.3	8.0	7.3	7.7	8.0	8.5
Smallest		2.2	4.4	5.5	6.2	6.6	7.3	7.7	8.0	8.3
Largest		5.2	10.0	9.6	9.4	10.3	7.4	7.7	8.0	8.6
Std err		0.1	0.2	0.4	0.6	0.7	0.1			0.1
Low 95% CI		3.4	6.1	6.5	6.2	6.7	7.2			8.2
High 95% CI		3.9	6.9	8.1	8.4	9.2	7.5			8.8

* Intercept = 0.
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Table 13. Species composition, relative abundance, and CPUE (fish/nn) of crappie collected by trap nets fished during 117 net-nights of effort at three embayments of Kentucky Lake during October-November 2017. The Sub-Total is used for historical comparison and excludes the data for an embayment which historically had not been sampled.

		Inch class															
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Std err
Blood River	White crappie	6	5	7	4			3	15	14	2	1	1		58	1.6	0.4
	Black crappie	14	11	3	1	5	17	66	87	37	6	1	1		249	6.7	1.4
Jonathan Cr.	White crappie		4	10	2	2	9	39	114	55	5	3	3	3	249	6.2	1.0
	Black crappie	12	9	2	13	25	117	194	118	39	6	3	1		539	13.5	2.0
Sub-Total	**White crappie**	**6**	**9**	**17**	**6**	**2**	**9**	**42**	**129**	**69**	**7**	**4**	**4**	**3**	**307**	**4.0**	**0.2**
	Black crappie	**26**	**20**	**5**	**14**	**30**	**134**	**260**	**205**	**76**	**12**	**4**	**2**		**788**	**10.2**	**0.8**
Ledbetter	White crappie	3	1	1	2			2	1		1	2	1		14	0.4	0.1
	Black crappie	10	15	7	1	1	5	5	7	2	2	1			56	1.4	0.3
TOTAL	**White crappie**	**9**	**10**	**18**	**8**	**2**	**9**	**44**	**130**	**69**	**8**	**6**	**5**	**3**	**321**	**2.7**	**0.4**
	Black crappie	**36**	**35**	**12**	**15**	**31**	**139**	**265**	**212**	**78**	**14**	**5**	**2**		**844**	**7.2**	**0.9**

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Table 14. Crappie population parameters used to manage the population at Kentucky Lake, with values determined from fall trap netting at Blood River and Jonathan Creek.

	Total CPUE (fish/nn) excluding age-0			CPUE (f/nn) age-0			Mean length (in) age-2 at capture			CPUE (fish/nn) ≥8.0 in			CPUE (fish/nn) age-1			CPUE (fish/nn) ≥10.0 in		
Year	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
2017	3.6	9.6	13.1	0.4	0.7	1.1	9.6	8.2	8.9	3.4	7.3	10.6	0.3	1.2	1.5	1.1	1.2	2.4
2016	1.7	6.3	8.0	0.2	0.7	0.9	10.0	9.3	9.7	1.4	3.8	5.3	0.8	2.1	2.9	0.5	0.9	1.4
2015	7.7	15.0	22.7	2.2	2.1	4.3	9.7	8.8	9.2	4.4	4.9	9.3	4.1	5.8	9.9	1.2	0.5	1.7
2014	3.6	6.7	10.3	1.7	1.2	2.9	10.3	8.8	9.7	1.7	2.3	3.9	2.4	4.3	6.7	1.2	1.1	2.3
2013	2.5	7.4	9.9	2.5	3.1	5.5	10.4	8.8	9.4	2.4	6.3	8.7	0.5	1.8	2.3	1.7	2.9	4.6
2012^{A}	4.2	8.7	12.9	0.0	0.2	0.2	10.5	9.6	10.0	3.4	7.0	10.4	2.8	2.5	5.3	1.4	3.1	4.5
2011	3.2	15.6	18.8	2.3	1.1	3.4	10.5	9.6	10.0	2.0	10.3	12.3	2.3	6.7	9.0	0.9	2.5	3.4
2010^{A}	5.2	13.5	18.7	9.1	3.7	12.8	11.5	10.4	10.6	2.7	5.7	8.4	4.1	9.0	13.0	1.9	3.3	5.2
2009	2.0	14.2	16.2	1.4	2.0	3.4	11.5	10.4	10.6	1.6	12.0	13.6	1.8	3.0	4.9	0.3	10.1	10.4
2008^{A}	0.4	14.9	15.3	0.4	1.4	1.8	11.2	10.2	10.7	0.4	13.0	13.3	0.2	6.2	6.3	0.2	8.3	8.5
Average	3.4	11.2	14.6	2.0	1.6	3.6	10.5	9.4	9.9	2.3	7.2	9.6	1.9	4.2	6.2	1.0	3.4	4.4
KLFMP			≥ 20			≥ 8			≥ 9.5 in			≥ 10			≥ 11			≥ 4

^{A} Indicates year where age and growth data was not collected. Age and growth data from the previous year was used to calculate the appropriate value.

Data from 1985 to 2007 is listed in previous annual reports.
KLFMP - Kentucky Lake Fish Management Plan objective goal.

Kentucky Lake Crappie Database

Table 15. Lake specific assessment for crappie collected at Kentucky Lake (Blood River and Jonathan Creek) from 2008-2017. This table includes the individual scores for each parameter, as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	CPUE age-1	CPUE age-0	CPUE ≥8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Z	A
2017	13.1	1.5	1.1	10.6	8.9			0.805	55.3
Score	1	1	1	3	1	7	P		
2016	8.0	2.9	0.9	5.3	9.7			1.072	65.8
Score	1	1	1	1	2	6	P		
2015	22.7	9.9	4.3	9.3	9.2			0.925	60.3
Score	4	3	3	3	1	14	G		
2014	10.5	6.7	2.9	3.9	9.7			0.910	59.7
Score	1	1	2	1	2	7	P		
2013	9.9	2.3	5.5	8.7	9.4			0.657	48.2
Score	1	1	3	2	1	8	P		
2012	13.0	5.3	0.5	10.4	10.0			1.028	64.2
Score	1	1	1	3	3	9	F		
2011	18.8	9.0	3.4	12.3	10.0			0.916	60.0
Score	3	2	2	3	3	13	F		
2010	18.7	13.0	12.8	8.4	10.6			0.556	42.6
Score	3	3	4	2	4	16	F		
2009	16.2	4.9	3.4	13.6	10.6			0.758	53.1
Score	2	1	1	4	4	12	F		
2008	15.3	6.3	1.8	13.3	10.7			0.440	35.6
Score	2	1	1	4	4	12	F		
Average	14.6	6.2	3.7	9.6	9.9	10.4		0.807	54.48

Rating
1 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

Assessment Quartiles updated in 2015. Assessment on this table are based on new ranges.
Kentucky Lake Crappie Database

Table 16. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected with trap nets (117 net-nights) at Kentucky Lake (Blood River, Jonathan Creek and Ledbetter Bay) during October and November 2017. 95% confidence intervals are shown in parentheses.

Location	Species	N	PSD	RSD_{10}
Blood River	White crappie	40	90 (± 18)	45 (± 16)
	Black crappie	221	90 (± 4)	20 (± 5)
Jonathan Creek	White crappie	235	94 (± 3)	29 (± 6)
	Black crappie	516	70 (± 4)	9 (± 3)
Sub Total	**White crappie**	**275**	**93 (± 3)**	**32 (± 6)**
	Black crappie	**737**	**76 (± 3)**	**12 (± 3)**
Ledbetter	White crappie	9	78 (± 29)	44 (± 34)
	Black crappie	24	71 (± 19)	21 (± 17)
Total	**White crappie**	**284**	**93 (± 3)**	**32 (± 5)**
	Black crappie	**761**	**76 (± 3)**	**13 (± 2)**

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Table 17. Mean back-calculated length (in) at each annulus of white crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Kentucky Lake (Blood River, Jonathan Creek and Ledbetter Bay) in fall 2017.

		Age								
Year class	N	1	2	3	4	5	6	7	8	8
2016	11	4.2								
2015	35	4.5	7.6							
2014	23	4.0	7.0	9.4						
2013	7	3.9	7.4	9.6	11.5					
2011	3	3.6	7.5	9.5	11.1	12.5	13.3			
2010	3	3.7	7.1	9.1	10.4	11.7	12.5	13.0		
2009	1	3.5	6.7	8.9	10.0	10.9	11.7	12.5	13.4	
2008	1	2.7	6.0	8.3	9.7	10.3	10.9	11.6	12.4	13.2
Mean	84	4.2	7.3	9.4	11.0	11.7	12.5	12.6	12.9	13.2
Smallest		2.7	5.8	7.7	8.9	10.3	10.9	11.6	12.4	13.2
Largest		7.2	9.4	11.6	13.1	13.1	14.0	14.0	13.4	13.2
Std err		0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.5	
Low 95% CI		4.0	7.1	9.1	10.4	11.0	11.7	11.8	11.9	
High 95% CI		4.3	7.5	9.7	11.6	12.4	13.3	13.4	13.9	

* Intercept = 0.

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Table 18. Mean back-calculated length (in) at each annulus of black crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Kentucky Lake (Blood River, Jonathan Creek and Ledbetter Bay) in fall 2017.

		Age							
Year class	N	1	2	3	4	5	6	7	8
2016	39	4							
2015	37	4.3	6.7						
2014	26	3.8	6.9	8.7					
2013	32	3.8	6.7	8.5	9.7				
2011	2	3.4	6.3	8.9	10.0	11.0	11.8		
2010	1	4.4	7.1	9.3	10.3	11.0	11.9	12.4	
2009	1	3.9	6.4	8.2	9.5	10.7	11.1	11.9	12.3
Mean	138	4.0	6.7	8.6	9.8	10.9	11.7	12.1	12.3
Smallest		2.6	5.0	6.7	7.8	10.0	10.8	11.9	12.3
Largest		7.7	9.9	11.8	12.9	12.0	12.9	12.4	12.3
Std err		0.1	0.1	0.1	0.1	0.4	0.5	0.3	
Low 95% CI		3.8	6.5	8.4	9.5	10.4	10.8	11.6	
High 95% CI		4.1	6.9	8.8	10.0	11.7	12.5	12.6	

* Intercept = 0.

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Table 19. Age frequency and CPUE (fish/nn) of white crappie collected in trap nets fished for 77 net-nights in Kentucky Lake (Blood River and Jonathan Creek) during October and November 2017.

	Inch class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	%	CPUE	Std err
0		9	17	6										32	11	0.4	0.1
1					2	5	8	7						22	7	0.3	0.3
2						4	34	79	39	1				157	52	2.0	0.2
3								43	27	5				75	25	1.0	0.02
4									3	1	2	1		7	2	0.1	0.01
6											1	1	1	3	1	0.04	0.02
7											1		2	3	1	0.04	0.01
8												1		1	0	0.01	0.01
9												1		1	0	0.01	0.01
Total		9	17	6	2	9	42	129	69	7	4	4	3	301		3.91	
%		3	6	2	1	3	14	43	23	2	1	1	1				

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Table 20. Age frequency and CPUE (fish/nn) of black crappie collected in trap nets fished for 77 net-nights in Kentucky Lake (Blood River and Jonathan Creek) during October and November 2017.

	Inch class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std err
0	26	21	3	2									52	7	0.7	0.1
1			2	12	21	28	15	10					88	11	1.1	0.2
2					9	99	153	51	7	1			320	41	4.2	0.6
3						7	61	92	18	1	2		181	23	2.4	0.3
4							31	51	51	9		1	143	18	1.9	0.2
6										1		1	2	0.3	0.03	0.01
7											1		1	0.1	0.01	0.01
8											1		1	0.1	0.01	0.01
Total	26	21	5	14	30	134	260	204	76	12	4	2	788		10.0	
%	3	3	1	2	4	17	33	26	10	2	1	0				

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Table 21. Length frequency, CPUE (fish/1000M³), median catch, and geometric mean catch (standard error given in parentheses) of each 0.5 mm class of crappie collected during nocturnal neuston tow net sampling (66 tows) at 6 sample sites in the Jonathan Creek embayment of Kentucky Lake from 31 March-9 June 2017. See Appendix A for sample site locations.

		mm class																
Date	Location	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	CPUE	Median	Geometric Mean
3/31/2017	JC002															0	0.0	0.0
	JC003															0		
	JC004															0		
	JC006															0		
	JC007																	
	JC005															0		
4/7/2017	JC002															0	0.0	0.0
	JC003																	
	JC004															0		
	JC006															0		
	JC007															0		
	JC005															0		
4/14/2017	JC002															0	0.0	0.0
	JC003															0		
	JC004																	
	JC006															0		
	JC007															0		
	JC005															0		
4/23/2017	JC002															0	0.0	0.0
	JC003															0		
	JC004																	
	JC006															0		
	JC007															0		
	JC005															0		
4/27/2017	JC002					5	5									11	9.2	5.56 (4.22)
	JC003															0		
	JC004						4	4										
	JC006					25	4									28		
	JC007															0		
	JC005					4										4		
5/5/2017	JC002															0	4.6	3.66 (2.52)
	JC003															0		
	JC004								3	10								
	JC006															0		
	JC007							4		4		4				11		
	JC005					4				4						7		
5/12/2017	JC002															0	1.0	1.64 (.71)
	JC003															0		
	JC004					4												
	JC006															0		
	JC007							3								3		
	JC005															0		
5/19/2017	JC002					4										4	41.6	31.99 (20.31)
	JC003			4	4	4										12		
	JC004			3	13	50		17			3	3		3		92		
	JC006		4	7	4	56	18	37	4							128		
	JC007					22	4	26		4						55		
	JC005					8	11	8										
5/26/2017	JC002															0	49.1	28.6 (25.27)
	JC003						5	5		5						15		
	JC004					14		28		18		14		9		83		
	JC006			3	6	20	6	42	6	28	3	28	8	11		161		
	JC007							4	7		11	15	4	11		51		
	JC005					11	4	7	4			11		4		41		
6/2/2017	JC002															0	1.0	2.36 (2.95)
	JC003															0		
	JC004					7		10								17		
	JC006							4.2			4					8		
	JC007															0		
	JC005															0		
6/9/2017	JC002															0	1.0	1.85 (1.28)
	JC003															0		
	JC004									4						4		
	JC006											7				7		
	JC007															0		
	JC005															0		

Table 22. Geometric mean catch rates for pelagic larval fish captured in neuston tow nets from 31 March-9 June 2017 (six tows per sample night). Standard errors given in parentheses. Temperature (degrees Fahrenheit) and water elevation (feet above sea level) also provided.

	Geometric Mean (Standard Error)					
	Pomoxis spp.		Clupeidae	Atherinidae		
Day	8.0-11.0mm	Total Catch	Total Catch	Total Catch	Temp	Elevation
3/31/2017	0.0	0.0	1.92 (1.47)	0.0	60.3	355.7
4/7/2017	0.0	0.0	0.0	0.0	61.8	355.7
4/14/2017	0.0	0.0	0.0	0.0	66.4	357.9
4/23/2017	0.0	0.0	97.97 (50.42)	0.0	67.5	358.9
4/27/2017	1.7	5.56 (4.22)	277.70 (209.2)	1.44 (1.31)	66.8	358.2
5/5/2017	3.1	3.66 (2.52	472.79 (121.57)	1.42 (1.22)	67.7	358.4
5/12/2017	1.3	1.64 (.71)	614.56 (127.7)	2.97 (1.04)	70	363.1
5/19/2017	8.2	31.99 (20.31)	4186.5 (2964.4)	7.43 (16.02)	74.71	360.4
5/26/2017	22.7	28.6 (25.27)	4540.8 (1326.3)	2.84 (4.79)	74.16	358.9
6/2/2017	2.2	2.36 (2.95)	3591.79 (3045.54)	40.96 (73.39)	77.54	359.2
6/9/2017	1.9	1.85 (1.28)	4338.3 (1667.43)	85.87 (32.45)	78.66	360.2

Table 23. Estimated hatch dates in Jonathan Creek, derived using larval fish lengths back calculated using a growth rate derived from the daily ring counts of juveniles in 2016 and 2015. "# hatch" represents the time when crappie actually hatched on the nest. "#spawned" represents the time when crappie eggs were fertilized. Elevation and discharge at Kentucky Dam also provided. Temperature readings taken at Hancock Biological Station in main channel. Environmental variables were provided by TVA and Murray State University.

	Jonathan Creek				
	Back calculated estimate	Back calculated estimate	Environmental variables		
	# hatch / 1000m^3	# spaw ned / 1000m^3	Elevation	Discharge (cfs)	Temp. F
9-Apr	0.0	1.3	356.7	20,779	61.9
10-Apr	0.0	0.0	357.1	20,123	62.6
11-Apr	0.0	1.3	357.3	20,505	63.2
12-Apr	1.3	0.0	357.8	15,202	64.0
13-Apr	0.0	0.0	357.9	13,050	64.9
14-Apr	1.3	0.0	357.9	26,167	66.4
15-Apr	0.0	0.0	358.1	33,982	65.2
16-Apr	0.0	1.3	358.3	16,336	65.6
17-Apr	0.0	2.5	358.4	12,327	66.6
18-Apr	0.0	1.3	358.6	13,040	66.8
19-Apr	1.3	1.3	358.7	19,113	67.1
20-Apr	2.5	0.0	358.6	25,675	67.8
21-Apr	1.3	0.0	358.4	45,590	68.4
22-Apr	1.3	0.0	358.3	53,170	
23-Apr	0.0	0.0	358.9	61,290	
24-Apr	0.0	0.0	358.9	85,474	67.0
25-Apr	0.0	0.0	358.8	157,489	66.8
26-Apr	0.0	1.3	358.9	165,048	66.9
27-Apr	0.0	0.0	358.2	173,803	66.8
28-Apr	0.0	1.3	357.6	184,075	67.1
29-Apr	1.3	0.0	357.0	176,377	68.1
30-Apr	0.0	2.6	356.8	169,119	69.3
1-May	1.3	1.3	356.7	162,286	68.9
2-May	0.0	1.3	357.1	137,527	68.2
3-May	2.6	7.3	357.5	112,295	68.7
4-May	1.3	0.0	358.1	77,979	68.7
5-May	1.3	4.4	358.4	57,583	67.7
6-May	7.3	1.9	359.8	41,990	66.9
7-May	0.0	8.5	360.3	41,073	67.5
8-May	4.4	3.9	361.5	38,353	67.8
9-May	1.9	2.5	362.6	14,444	
10-May	8.5	8.1	363.4	15,472	
11-May	3.9	0.0	363.3	36,753	
12-May	2.5	0.0	363.1	68,648	*70.0
13-May	8.1	0.0	362.9	74,988	
14-May	0.0	1.3	362.7	73,347	
15-May	0.0	0.0	362.2	72,295	72.3
16-May	0.0	0.0	361.8	75,480	73.0
17-May	1.3	2.0	361.3	77,723	73.6
18-May	0.0	0.0	360.9	75,141	73.9
19-May	0.0	0.0	360.4	68,297	74.7
20-May	2.0	0.0	360.1	61,811	75.1
21-May	0.0	1.4	359.7	60,503	75.2
22-May	0.0	1.3	359.6	59,538	75.4
23-May	0.0	0.0	359.4	59,242	75.3
24-May	1.4	0.0	358.8	54,853	74.7
25-May	1.3	0.0	359	64,531	74.1

* represents temperature readings taken during the larval sampling events

Table 24. Length frequency and CPUE (fish/hr) of channel, blue, and flathead catfish collected from Kentucky Lake in June 2017 using low pulse (15 PPS) electrofishing along the main river channel. A chase boat was used. A total of 4.83 hours of sampling consisting of 58- 300-second runs.

	Inch class																														
Species	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	33	35	36	41	44	Total	CPUE	Std err
Blue catfish		3	2	3	7	7	5	7	12	10	7	8	10	4	5	4	4	1	2	2		3	1	1		1	1	1	111	23.9	5.6
Channel catfish	1		1		2	3																							7	1.5	0.5
Flathead catfish	2	1			3	1	1			1	1			4	1				1			1		1	1				19	4.1	1.1

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Table 25. Relative weight (W_r) of each length group of blue, channel, and flathead catfish collected from Kentucky Lake during June 2017. Fish were collected using low pulse (15 PPS) electrofishing.

Species	Length group											
Blue catfish	12.0-19.9 in			20.0-29.9 in			>30.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	55	117	2	40	115	2	7	126	3	102	117	1
	Length group											
Channel catfish	11.0-15.9 in			16.0-23.9 in			>24.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	6	107	2							6	107	2
	Length group											
Flathead catfish	12.0-19.9 in			20.0-29.9 in			>30.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	7	91	5	5	94	5	2	114	3	14	95	4

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Table 26. Age frequency and CPUE (fish/hr) of blue catfish collected from low pulse (15 PPS) electrofishing at Kentucky Lake in June 2017.

	Inch class																							
Age	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	33	36	Total	%	CPUE	Std err
2	3	2																			5	5	1.04	0.7
3			3	6	1	1															11	11	2.28	0.7
4				1	6	4	7	12	10												40	39	8.28	2.1
5										4	3	5		1							13	13	2.69	0.8
6										3	5	5		4							17	17	3.52	1.1
7													4		4						8	8	1.66	1.0
8																4					4	4	0.83	0.4
10																	1		1	1	3	3	0.62	0.4
12																			1		1	1	0.21	0.1
Total	3	2	3	7	7	5	7	12	10	7	8	10	4	5	4	4	1	0	2	1	102			
%	3	2	3	7	7	5	7	12	10	7	8	10	4	5	4	4	1	0	2	1				

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Table 27. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 9.5 hours (19- 30-minute runs) of diurnal electrofishing at Lake Barkley from 25 April to 8 May 2017.

		Inch class																					Std
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	err
Lower																							
Donaldson Cr.	Smallmouth bass																	2			2	2.0	2.0
	Spotted bass						1							1							2	2.0	2.0
	Largemouth bass	1		2	2	6	8	5	2	3	2	1	4	2	7	8	6	1	1		61	61.0	11.0
Fords	Smallmouth bass				2	2			1						1						6	6.0	6.0
	Spotted bass											1									1	1.0	1.0
	Largemouth bass		5	9	13	7	7	6	4	2		1		1	6	5	3	3	3		75	75.0	1.0
Middle																							
Little River	Smallmouth bass									1											1	0.4	0.4
	Spotted bass											1									1	0.4	0.4
	Largemouth bass			4	5	7	2	1	1		3	3	13	13	20	19	9	6	2	3	111	44.4	8.9
Eddy Cr.	Smallmouth bass			1											3	1					5	2.0	1.6
	Spotted bass																				0	0.0	0.0
	Largemouth bass		1	12	12	7	5	2	3	5	8	7	18	18	29	18	7	12	1	1	166	66.4	12.6
Upper																							
Nickell Cr.	Smallmouth bass			2	2			1													5	5.0	3.0
	Spotted bass																				0	0.0	0.0
	Largemouth bass			4	15	8	7	5	2	6	5	4	6	13	3	6	1		2		87	87.0	9.0
Willow	Smallmouth bass			2																	2	1.3	0.7
	Largemouth bass		1	7	25	27	17	7	4	7	8	5	4	7	6	4	6		2	1	138	92.0	20.5
Total	Smallmouth bass			5	4	2		1	1	1					4	1		2			21	2.2	0.8
	Spotted bass						1					2		1							4	0.4	0.3
	Largemouth bass	1	7	38	72	62	46	26	16	23	26	21	45	54	71	60	32	22	11	5	638	67.2	6.2

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Table 28. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during late April/early May since 2008.

				Length group											
	Mean length age-3 at capture	Age-1		<8.0 in		8.0-11.9 in		12.0 -14.9 in		≥15.0 in		≥20.0 in		Total	
Year		CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2017		26.5	5.1	19.0	3.8	11.7	2.5	9.7	1.3	26.8	3.5	1.7	0.5	67.2	6.2
2016		10.8	1.8	6.6	1.2	6.0	1.2	14.9	2.3	22.2	3.2	1.0	0.4	49.7	4.9
2015*	13.4	10.3	1.3	8.5	1.3	15.1	2.1	29.7	4.0	26.3	3.0	1.7	0.4	79.6	7.1
2014		22.2	3.7	21.4	3.6	13.5	1.7	22.8	2.5	23.5	4.1	1.4	0.3	81.2	7.5
2013		18.2	2.7	14.6	2.3	16.2	2.4	22.9	3.2	19.3	2.1	0.7	0.3	73.0	7.9
2012	13.0	10.0	1.7	8.7	1.8	13.1	2.0	32.4	5.4	24.1	5.0	1.5	0.5	78.4	10.6
2011	Did not sample due to flooding														
2010		17.1	1.8	15.5	1.5	34.3	3.4	28.4	2.4	18.9	1.9	2.2	0.5	97.1	5.4
2009		69.2	7.4	63.9	7.5	42.5	3.5	38.8	2.7	34.0	3.4	2.4	0.4	179.3	10.2
2008		28.8	3.0	24.1	3.5	25.8	3.9	32.6	3.9	41.2	4.5	3.0	0.5	123.7	6.3
Average	13.2	23.7		20.3		19.8		25.8		26.3		1.7		92.1	

(Revised_Barkley_Bass_Database.xlsx)

Data is available since 1985 in previous annual reports

* back-calculated fall age data used in 2015

Table 29. PSD and RSD_{15} values calculated for largemouth bass collected during 9.5 hours (19- 30-minutes runs) of spring diurnal electrofishing at each area of Lake Barkley from 25 April to 8 May 2017. 95% confidence intervals are shown in parentheses.

Area	No. $\geq$8.0 in	PSD	RSD_{15}
Donaldson	50	64 (+/-13)	50 (+/-14)
Fords	41	54 (+/-13)	51 (+/-15)
Little River	95	96 (+/-4)	76 (+/-8)
Eddy Creek	134	89(+/-6)	64 (+/-8)
Nickell	60	67 (+/-14)	42 (+/-12)
Willow	78	55 (+/-11)	33 (+/-10)
Total	458	76 (+/-4)	56 (+/-5)

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Table 30. Lake specific assessment for largemouth bass collected at Lake Barkley from 2008-2017. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final two columns list the instantaneous mortality rate (Z) and the annual mortality (A).

			Length group						
	Mean length		12.0-14.9 in	>15.0 in	>20.0 in				
Year	age-3 at capture	CPUE age-1	CPUE	CPUE	CPUE	Total score	Assessment rating	Z	A
2017	13.4	26.51	9.68	26.84	1.68			0.322	27.5
Score	4	3	1	3	2	13	G		
2016	13.4	10.8	14.9	22.2	1.7			0.402	33.1
Score	4	1	1	2	1	9	F		
2015**	13.4	10.3	29.7	26.3	1.7			0.472	38.0
Score	4	1	2	2	1	10	F		
2014	13.0	22.2	22.8	23.5	1.4			0.649	47.8
Score	3	2	1	2	1	9	F		
2013	13.0	18.2	22.9	19.3	0.7			0.282	25.0
Score	3	1	1	1	1	7	P		
2012	13.0	10.0	32.4	24.1	1.5			0.431	35.0
Score	3	1	2	2	1	9	F		
2011	*	*	*	*	*				
2010^{A}	12.7	17.1	28.4	18.9	2.2			0.400	33.0
Score	2	1	1	1	2	7	P		
2009^{A}	12.7	69.2	38.8	34.0	2.4			0.422	34.0
Score	2	4	2	3	3	14	G		
2008^{A}	12.7	28.8	32.6	41.2	3.0			0.339	29.0
Score	2	3	2	4	3	14	G		
Average	13.0	23.7	25.8	26.3	1.8	10.2		0.4	33.6

Older data is listed in previous annual reports.

(Revised _Barkley_bass_Database.xlsx)

* data not available ** used back calculated lengths from fall

^{A} age and growth data was not collected. Previous year data used for age estimates.

Rating
5-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

Table 31. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Lake Barkley in spring 2017. Age-1 data was calculated with a subsample of 2017 spring aged fish; however, 2015 back calculated fall age and growth data were used for the remaining calculations of age-frequency.

	Inch class																					
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	Std err
1	1	7	38	72	62	46													226	11	26.5	4.6
2							26	16	21	13									76	22	8.0	1.7
3									2	11	16	26							55	24	5.8	0.7
4										2	4	13	14	15					48	13	5.1	0.6
5											2	6	22	36	10				76	12	8.0	1.0
6													7	10		16			33	5	3.5	0.4
7													11	10	40	16	11	6	94	10	9.9	1.3
8																	6		6	1	0.6	0.2
9																		6	6	1	0.6	0.2
11															10		6		16	2	1.7	0.3
Total	1	7	38	72	62	46	26	16	23	26	22	45	54	71	60	32	23	12	636	100	67.16	6.2
%	0	1	8	14	12	9	5	3	5	5	4	9	11	14	12	6	5	2	100			

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Table 32. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.5 hours of diurnal electrofishing (9- 30-minute runs) for black bass in each area of Lake Barkley October 9 and 12, 2017.

	Inch class																						
Area / Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Little River																							
Smallmouth bass		2	6	4			1		2					1							16	6.4	2.0
Spotted bass							1		1					2							4	1.6	1.0
Largemouth bass		16	30	23	13	4		3	5	5	5	1	6	7	4	5	2	2			131	52.4	12.0
Eddy Creek																							
Smallmouth bass			7	1	2	1		1													12	6.0	1.6
Largemouth bass	1	6	14	8	1	3	1	16	14	3	8	9	6	4	5	3		5		1	108	54.0	12.8
Total																							
Smallmouth bass		9	7	6	1		1	1	2					1							28	6.2	1.3
Spotted bass							1		1					2							4	0.9	0.6
Largemouth bass	1	22	44	31	14	7	1	19	19	8	13	10	12	11	9	8	2	7	1		239	53.1	8.2

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Table 33. Number of fish and the relative weight (W_r) values for each length group of largemouth collected at Lake Barkley during 4.5 hours (9- 30-minute runs) of diurnal electrofishing in October 2017.

		Length group								
		8.0-11.9 in			12.0-14.9 in			≥15.0 in		
Species	Area	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err
Largemouth bass	Little River	13	91	3	12	95	3	20	96	2
	Eddy Creek	34	93	1	23	95	2	18	98	2
	Total	47	92	1	35	95	2	38	97	1

		Length group								
		7.0-10.9 in			11.0-13.9 in			≥14.0 in		
Species	Area	No.	Wr	Std err	No.	Wr	Std err	No.	Wr	Std err
Smallmouth bass	Little River	4	88	1				1	90	0
	Eddy Creek									
	Total	4	88	1				1	90	0

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Table 34. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Barkley.

	Age-0[A]		Age-0[A]		Age-0 ≥5.0 in[A]		Age-1[B]	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2017	4.8	0.1	25.1	4.8	10.2	3.0		
2016	5.5	0.9	22.7	4.5	14.9	3.1	26.5	5.0
2015	4.7	0.1	46.4	6.5	16.6	6.5	10.8	1.8
2014	4.8	0.1	24.8	4.4	11.0	1.9	10.3	2.0
2013	5.8	0.1	55.0	8.7	43.3	6.0	22.2	3.7
2012	6.1	0.1	40.6	6.9	35.7	5.7	22.2	2.7
2011	5.5	0.1	18.6	2.7	13.4	2.4	10.0	1.7
2010	6.5	0.1	46.0	7.8	42.0	6.9	*	
2009	5.6	0.1	37.6	4.8	29.2	3.4	17.1	1.8
2008	6.2	0.1	55.6	6.7	50.2	6.3	69.2	7.4
Average	5.6		37.2		26.6		23.5	

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths, removed from a subsample of LMB <12.0 in.

[B] Data collected during the following spring (April/May) diurnal electrofishing sample.

[*] Data not collected in spring of 2011 due to flood conditions.

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Table 35. Mean back-calculated length (in) at each annulus of bluegill including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley (Devil's Elbow and Fords Bay) in spring 2017. A separate otolith collection was also conducted in fall 2017 using fish collected while trapnetting (Little River, Donaldson Creek, and Crooked Creek)

SPRING SAMPLE

		Age		
Year class	N	1	2	3
2016	28	3.5		
2015	9	4.2	6.2	
2014	8	3.8	6.0	6.9
Mean	45	3.7	6.1	6.9
Smallest		2.5	5.1	6.3
Largest		5.2	7.2	7.5
Std err		0.1	0.1	0.1
Low 95% CI		3.5	5.8	6.6
High 95% CI		3.9	6.4	7.1

* Intercept = 0.
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FALL SAMPLE

		Age		
Year class	N	1	2	3
2016	21	3.5		
2015	13	3.8	5.9	
2014	9	3.6	5.9	6.8
Mean	43	3.6	5.9	6.8
Smallest		2.2	5.0	6.4
Largest		4.8	6.8	7.4
Std err		0.1	0.1	0.1
Low 95% CI		3.4	5.7	6.6
High 95% CI		3.8	6.1	7.1

* Intercept = 0.
wfdbgagb.d17

Table 36. Mean back-calculated length (in) at each annulus of redear sunfish including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley (Devil's Elbow and Ford's Bay) in spring 2017. A separate otolith collection was also conducted in fall 2017 using fish collected while trapnetting (Little River, Donaldson Creek, and Crooked Creek).

SPRING SAMPLE

		Age								
Year class	N	1	2	3	4	5	6	7	8	9
2016	27	4.7								
2015	26	5.0	7.9							
2014	17	4.4	7.8	9.8						
2013	4	4.0	7.5	9.5	10.6					
2012	4	5.0	7.8	9.7	10.6	11.1				
2011	5	4.5	8.0	9.5	10.5	11.3	11.9			
2010	4	4.4	7.3	9.0	10.0	10.7	11.4	11.8		
2009	5	4.6	6.5	7.9	9.2	10.1	10.9	11.5	12.1	
2008	2	3.5	6.4	7.8	8.5	9.2	9.9	10.9	11.7	12.3
Mean	94	4.6	7.7	9.3	10.0	10.6	11.2	11.5	12.0	12.3
Smallest		2.3	4.5	6.7	7.5	8.3	9.2	10.5	11.4	12.1
Largest		6.8	9.5	10.8	11.6	11.9	12.4	12.5	12.5	12.5
Std err		0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Low 95% CI		4.4	7.4	9.0	9.6	10.3	11.2	11.2	11.7	11.9
High 95% CI		4.8	7.9	9.6	10.4	11.0	11.9	11.9	12.3	12.7

* Intercept = 0.
wfdreagb.d17

FALL SAMPLE

		Age									
Year class	N	1	2	3	4	5	6	7	8	9	10
2016	20	4.7									
2015	19	3.6	6.9								
2014	15	3.9	7.1	9.2							
2010	2	4.6	7.3	8.8	9.5	10.2	10.7	11			
2009	1	3.6	5.7	6.4	8.2	8.8	9.4	10	10.7		
2007	1	4.4	6.5	7.7	8.2	8.9	9.4	10	10.6	11	11.4
Mean	58	4.1	6.9	8.9	8.8	9.5	10.0	10.5	10.6	11.0	11.4
Smallest		2.2	4.1	5.2	8.2	8.8	9.4	10.0	10.6	11.0	11.4
Largest		7.4	9.6	10.5	9.8	10.5	10.7	11.1	10.7	11.0	11.4
Std err		0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.0		
Low 95% CI		3.8	6.5	8.3	8.1	8.7	9.3	9.9	10.6		
High 95% CI		4.4	7.4	9.5	9.6	10.3	10.8	11.1	10.7		

* Intercept = 0.
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Table 37. Length frequency and CPUE (fish/nn) of each inch class of white and black crappie collected by trap nets (148 net-nights) at Lake Barkley from 18 October-5 November 2017. Sub-Total is shown for comparisons with historical data which included only Little River and Donaldson Creek.

		Inch class																
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	Std err
Little River	White crappie	8	20	12	6		6	11	15	31	20	2	1	1		133	3.4	0.4
	Black crappie	10	24	3		9	8	14	6	6	2					82	2.1	0.3
Donaldson Creek	White crappie	167	68	10	3		1	2	6	8	6	6		1		278	7.2	1.4
	Black crappie	242	40	5	1	5	25	22	10	12	2	1				365	9.4	2.7
Sub-Total	**White crappie**	**175**	**88**	**22**	**9**		**7**	**13**	**21**	**39**	**26**	**8**	**1**	**2**		**411**	**5.3**	**0.8**
	Black crappie	**252**	**64**	**8**	**1**	**14**	**33**	**36**	**16**	**18**	**4**	**1**				**447**	**5.7**	**1.4**
Crooked Creek	White crappie	42	40	24	12	1		5	3	10	17	2			1	157	3.9	0.7
	Black crappie	83	9	3	2	9	10	9	6	6						137	3.4	0.5
Eddy Creek	White crappie	14	10	9	10			2	4	1	3	5	1			59	2.0	0.5
	Black crappie	8	11	1	1	1	6	6	2	2	1					39	1.3	0.2
TOTAL	**White crappie**	**231**	**138**	**55**	**31**	**1**	**7**	**20**	**28**	**50**	**46**	**15**	**2**	**2**	**1**	**627**	**4.2**	**0.5**
	Black crappie	**343**	**84**	**12**	**4**	**24**	**49**	**51**	**24**	**26**	**5**	**1**				**623**	**4.2**	**0.8**

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Table 38. Crappie population parameters used to manage the population at Lake Barkley for 2008-2017, with values determined from fall trap netting. To allow for historical comparisons, only data from Little River and Donaldson Creeks are presented.

	Total CPUE (fish/nn) excluding age-0			CPUE (fish/nn) age-2			Mean length (in) age-2 at capture			CPUE (fish/nn) ≥8.0 in			CPUE (fish/nn) age-1			CPUE (fish/nn) ≥10.0 in		
Year	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
2017	1.5	1.6	3.1	0.6	0.4	1.0	11.2	9.9	10.7	1.4	1.0	2.4	0.7	1.1	1.7	1.0	0.3	1.3
2016	6.2	3.5	9.7	2.0	0.6	2.6	10.6	9.5	10.3	3.6	1.3	4.9	4.1	2.6	6.7	1.4	0.4	1.8
2015	11.4	3.1	14.4	0.3	1.6	1.9	11.6	9.9	10.5	3.2	1.9	5.1	10.8	1.4	12.2	0.9	0.9	1.8
2014	1.5	2.1	3.5	0.1	0.0	0.1	11.8	9.6	11.4	1.3	0.6	1.9	1.1	1.9	3.0	0.7	0.1	0.8
2013	2.2	0.8	3.0	0.8	0.4	1.2	11.1	10.6	10.9	2.2	0.8	3.0	0.3	0.0	0.4	1.9	0.6	2.5
2012	4.1	2.6	6.7	2.9	1.5	4.4	10.9	10.0	10.5	4.0	2.2	6.3	1.1	0.9	2.0	2.8	0.9	3.7
2011[A]	4.6	2.8	7.4	0.3	0.2	0.5	11.6	10.5	11.1	3.0	0.7	3.6	4.2	2.6	6.8	0.8	0.2	1.0
2010	4.1	3.1	7.2	0.3	0.4	0.7	11.6	10.5	11.0	3.1	2.1	5.2	3.5	2.5	6.1	1.3	0.5	1.8
2009[A]	1.3	1.0	2.3	0.2	0.2	0.4	11.3	11.3	11.3	1.7	0.9	2.6	1.1	0.7	1.7	0.7	0.3	1.0
2008	1.1	1.7	2.8	0.2	0.2	0.4	11.3	11.3	11.3	1.7	1.1	2.7	0.6	1.4	2.0	0.7	0.4	1.0
Average	3.8	2.2	6.0	0.8	0.6	1.3	11.3	10.3	10.9	2.5	1.3	3.8	2.8	1.5	4.3	1.2	0.4	1.7

[A] Indicates year where age and growth data was not collected. Age and growth data from the previous year was used to calculate the appropriate value.

Data from 1985 to 2007 is listed in previous annual reports.

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Table 39. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected by trap-nets (148 net-nights) at Lake Barkley during the weeks of 18 October and 5 November 2017. Sub-Total uses only data collected from Little River and Donaldson Creek. Numbers in parentheses represent 95% confidence intervals.

Location	Species	N	PSD	RSD_{10}
Little River	White crappie	93	87 (+/-7)	59(+/-10)
	Black crappie	45	62 (+/-15)	18 (+/-11)
Donaldson	White crappie	33	88 (+/-11)	64 (+/-16)
	Black crappie	78	60 (+/-11)	19 (+/-9)
Sub-Total	**White crappie**	**126**	**87 (+/-6)**	**60 (+/-8)**
	Black crappie	**123**	**61 (+/-9)**	**19 (+/-7)**
Crooked Creek	White crappie	26	74 (+/-14)	59 (+/-13)
	Black crappie	19	50 (+/-15)	14 (+/-11)
Eddy Creek	White crappie	38	62 (+/-20)	38 (+/-10)
	Black crappie	42	58 (+/-22)	16 (+/-16)
Total	**White crappie**	**190**	**65 (+/-4)**	**22 (+/-2)**
	Black crappie	**184**	**47 (+/-5)**	**11 (+/-3)**

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Table 40. Mean back-calculated length (in) at each annulus of white crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley (Little River, Donaldson Creek, Crooked Creek, and Eddy Creek) during the weeks of 18 October and 5 November 2017. Additional otoliths were collected at a fishing tournament on 10 November 2017.

		Age						
Year class	N	1	2	3	4	5	6	7
2016	54	4.9						
2015	58	5.1	9.2					
2014	27	5.0	8.3	10.8				
2013	3	4.3	7.6	9.1	9.7			
2011	2	3.6	7.4	9.6	10.7	12.0	12.9	
2010	5	5.1	7.4	9.3	10.5	11.3	12.0	12.7
Mean	149	5.0	8.8	10.4	10.3	11.5	12.3	12.7
Smallest		2.5	4.5	5.5	6.0	7.8	8.4	8.8
Largest		8.9	11.1	12.5	12.5	13.4	14.4	14.3
Std err		0.1	0.1	0.2	0.7	0.7	0.7	1.0
Low 95% CI		4.8	8.5	9.9	9.0	10.1	10.8	10.7
High 95% CI		5.1	9.0	10.9	11.6	12.8	13.8	14.7

* Intercept = 0.

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Table 41. Mean back-calculated length (in) at each annulus of black crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley (Little River, Donaldson Creek, Crooked Creek, and Eddy Creek) during the weeks of 18 October and 5 November 2017. Additional otoliths were collected at a crappie tournament 10 November 2017.

		Age			
Year class	N	1	2	3	4
2016	96	4.7			
2015	37	4.7	8.0		
2014	10	4.2	7.1	9.2	
2013	3	4.0	7.1	8.6	10.0
Mean	146	4.6	7.8	9.1	10.0
Smallest		2.5	4.6	7.4	9.3
Largest		8.7	9.8	10.1	11.1
Std err		0.1	0.2	0.2	0.6
Low 95% CI		4.5	7.4	8.6	8.9
High 95% CI		4.8	8.1	9.5	11.1

* Intercept = 0.

wfdtnagb.d17

Table 42. Age frequency and CPUE (fish/nn) of white crappie collected during 148 net-nights at Lake Barkley (Little River, Donaldson Creek, Crooked Creek, and Eddy Bay) during the weeks of 18 October and 5 November 2017. Little River and Donaldson Creek also shown separately for historical comparison.

Little River and Donaldson Creek

	Inch class																	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	%	CPUE	Std err
0	175	88	22	9											294	71	3.7	0.8
1						6	12	17	17	1					53	13	0.7	0.1
2							1	4	19	19	3				46	11	0.6	0.1
3									3	6	4	1			14	3	0.2	<0.1
4						1				1					2	0	0.0	<0.1
7								1					2		3	1	0.0	<0.1
Total	175	88	22	9	0	7	13	22	39	27	7	1	2	0	412		5.3	
%	42	21	5	2	0	2	3	5	9	7	2	0	0	0				

Lake Barkley Total

	Inch class																	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	%	CPUE	Std err
0	231	138	55	31	1										456	52	3.1	0.5
1						6	18	22	22	1					69	8	0.5	<0.1
2							2	5	24	33	6				70	8	0.5	<0.1
3									4	11	8	1			24	3	0.2	<0.1
4						1				1	1				3	0	<0.1	<0.1
6											1			1	2	0	<0.1	<0.1
7								1				1	2		4	0	<0.1	<0.1
Total	231	138	55	31	1	7	20	28	50	46	16	2	2	1	628		13.6	1.0
%	26	22	9	5	0	1	3	4	8	7	3	0	0	0				

wfdtpnb1.d17 and wfdtnagb.d17

Table 43. Age frequency and CPUE (fish/nn) of black crappie collected during 148 net-nights at Lake Barkley (Little River, Donaldson Creek, Crooked Creek, and Eddy Bay) during weeks of 18 October and 5 November 2017. Little River and Donaldson Creek also shown separately for historical comparison.

Little River and Donaldson Creek

	Inch class													
Age	2	3	4	5	6	7	8	9	10	11	Total	%	CPUE	Std err
0	252	64	8	1							325	73	4.1	1.3
1				1	14	32	32	6	1		86	19	1.1	0.2
2						1	3	9	12	2	27	6	0.3	0.1
3							1	1	4	1	7	2	0.1	<0.1
4									1		1	0	<0.1	<0.1
Total	252	64	8	2	14	33	36	16	18	3	446		5.6	
%	57	14	2	0	3	7	8	4	4	1				

Lake Barkley Total

	Inch class													
Age	2	3	4	5	6	7	8	9	10	11	Total	%	CPUE	Std err
0	343	84	12	2							441	71	3.0	0.7
1				2	24	47	45	9	2	1	130	21	0.9	0.1
2						2	4	14	17	2	39	6	0.3	<0.1
3							1	1	5	2	9	1	0.1	<0.1
4									2	1	3	0	<0.1	<0.1
Total	343	84	12	4	24	49	50	24	26	6	622		4.2	0.4
%	55	14	287	1	4	8	8	4	4	1				

wfdtpnb1.d17and wfdtnagb.d17

Table 44. Lake specific assessment for crappie collected at Lake Barkley (Little River and Donaldson Creek) from 2008-2017. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	CPUE age-1	CPUE age-0	CPUE ≥8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Z	A
2017	3.1	1.7	7.9	2.4	10.7			0.9486	0.6
Score	1	2	4	1	3	11	F		
2016	9.7	6.7	1.5	4.9	10.3			1.472	77.0
Score	4	4	1	3	2	14	G		
2015	14.5	12.2	5.0	5.1	10.5			0.680	49.3
Score	4	4	3	3	3	17	G		
2014	3.5	3.0	9.2	1.9	11.2			0.418	34.2
Score	1	2	4	1	4	12	F		
2013	3.0	0.4	2.8	3.0	10.9			0.788	54.5
Score	1	1	2	2	4	10	F		
2012	6.7	2.0	0.4	6.3	10.5			0.857	57.6
Score	2	2	1	4	3	12	F		
2011	7.4	6.8	10.0	3.6	10.9			1.188	69.5
Score	3	4	4	2	4	17	G		
2010	7.2	6.3	23.3	5.2	10.9			1.209	70.1
Score	3	4	4	3	4	18	E		
2009	2.3	1.7	5.3	2.6	11.3			1.330	73.5
Score	1	1	3	2	4	11	F		
2008	2.8	2.0	4.9	2.7	11.3			0.960	61.7
Score	1	2	3	2	4	12	F		
Average	6.0	4.3	7.0	3.8	10.9	12.4		1.198	54.914

Rating

1 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

(Revised_Barkley_Crappie_Database.xlsx)

Table 45. Length frequency and CPUE (fish/hr) of channel, blue, and flathead catfish collected from Lake Barkley in June 2017 using low pulse (15 PPS) electrofishing along the main lake river channel. A chase boat was used. A total of 5.7 hours of sampling consisting of 81- 300-second runs.

	Inch class																														
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	31	32	34	35	37	Total	CPUE	Std err
Blue catfish	3	60	131	96	40	101	139	50	36	80	115	56	36	33	31	14	8	7	1	2	2	2		1	1					1045	183.3	17.5
Channel catfish	1	3	40	18	3	1	14	7	5	12	4	3	1	4	2															118	20.8	4.3
Flathead catfish									1			1		1					1	1	1	1	1	1	1	1	1	1	1	14	2.5	0.9

w fdcatb.d17

Table 46. Relative weight (W_r) of each length group of blue, channel, and flathead catfish collected from Lake Barkley during June 2017. Fish were collected using low pulse (15 PPS) electrofishing.

Species	Length group											
Blue catfish	12.0-19.9 in			20.0-29.9 in			>30.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	303	98	1	14	98	6	1	116		318	98	1
	Length group											
Channel catfish	11.0-15.9 in			16.0-23.9 in			>24.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	19	99	3	4	91	2				23	98	2
	Length group											
Flathead catfish	12.0-19.9 in			20.0-29.9 in			>30.0 in			Total		
	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err	N	Wr	Std err
	2	86	9	6	105	7	4	109	7	12	103	5

wfdcatb.d17

Table 47. Age frequency and CPUE (fish/hr) of blue catfish (<20.0 in TL) collected from low pulse (15 PPS) electrofishing at Lake Barkley in June 2017. Age and growth data from 2014 was used to calculate the appropriate values.

	Inch class																					
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	*Total	%	*CPUE	Std err
1	3	60	131	96	40	34													364	35	63.9	1.8
2						67	139	50	27										283	27	49.6	4.7
3									9	80	115								204	20	35.8	2.7
4												56	36						92	9	16.1	2.4
5														22		4			26	3	4.6	1.1
6														11	31	10	3		55	5	9.6	1.8
7																	5		5	0	0.9	0.5
9																		7	7	1	1.2	0.4
Total	3	60	131	96	40	101	139	50	36	80	115	56	36	33	31	14	8	7	1036		*181.75	17.5
%	0	6	13	9	4	10	13	5	3	8	11	5	3	3	3	1	1	1				

wfdcatb.d17 and wfdbcatag.d14

* fish >20.0 in TL were excluded, as these fish were not represented in the 2014 age data set.

Table 48. Age frequency and CPUE (fish/hr) of channel catfish (<14.0 in TL) collected from low pulse (15 PPS) electrofishing at Lake Barkley in June 2017. Age and growth data from 2014 was used to calculate the appropriate values.

	Inch class													
Age	3	4	5	6	7	9	10	11	12	13	*Total	%	*CPUE	Std err
1	1	3	40	18	3						65	60	11.4	3.8
2						14	4	1	3		22	20	3.9	0.8
3							4	4	6		14	13	2.5	0.7
4									3	4	7	6	1.2	0.4
Total	1	3	40	18	3	14	8	5	12	4	108		*18.95	4.3
%	1	3	37	17	3	13	7	5	11	4				

wfdcatb.d17 and wfdcatag.d14

* fish >14.0 in TL were excluded, as these fish were not represented in the 2014 age data set.

Table 49. Fishery statistics derived from a creel survey at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

Fishing Trips			
	No. of fishing trips (per acre)	173,145	(3.4)
Fishing Pressure			
	Total angler-hours (S.E.)	855,798	(40650.0)
	Angler-hours/acre	16.8	
Catch / Harvest			
	No. of fish caught (S.E.)	1,370,520	(205,000)
	No. of fish harvested (S.E.)	439,556	(73,999)
	Lb of fish harvested	291,554	
Harvest Rates			
	Fish/hour	0.51	
	Fish/acre	8.62	
	Pounds/acre	5.72	
Catch Rates			
	Fish/hour	1.6	
	Fish/acre	26.87	
Miscellaneous Characteristics (%)			
	Male	90.70	
	Female	9.30	
	Resident	58.20	
	Non-resident	41.80	
Method (%)			
	Still fishing	19.60	
	Casting	47.50	
	Trolling	0.70	
	Trotline/Jugging	0.60	
	Bow Fishing	<.01	
	Crappie Anglers Only		
	Casting	37.25	
	Still fishing (1-2 poles)	11.61	
	Spider Rig (3 Poles)	14.18	
	Spider Rig (4-5 Poles)	10.80	
	Spider Rig (>5 Poles)	26.16	
Mode (%)			
	Boat	91.90	
	Bank	5.40	
	Dock	3.30	

Table 50. Length distribution for each species of fish harvested or released (lengths of released fish were estimated by anglers) at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

		Inch class																								
Species		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
White crappie	H									47,557	157,656	17,270	2,984	2,667	762	825	127	64								
	R		192	512	4,416	9,664	11,392	43,903	261,051	9,152	3,392	1,088	128	640	192	192	63									
Black crappie	H									12,791	15,434	6,906	1,201	901		60										
	R				59	117	527	7,673	22,960	1,640	1,699	703	117	175												
Largemouth	H														1,892	2,635	608	1,014		136						
bass	R							18,225	2,678	51,532	14,149	64,226	18,749	37,907	28,532	26,960	12,111	16,187	3,377	3,843	1,165	1,339	291	1,048		60
Smallmouth	H															62	187	62								
bass	R							2,006	54	3,253	488	5,910	1,844	3,470	1,356	1,410	976	759	163	108	108	54	54	56		
Spotted Bass	H							37																		
	R									61	61	243		182												
Bluegill	H			468	2,740	29,606	35,955	8,688	2,473	1,738																
	R		1,750	20,024	35,057	12,312	5,119	324	130																	
Redear sunfish	H						64	579	386	1,867	451	451														
	R			131				196			131	129														
Longear sunfish	H				643	193	64																			
	R	57	1,076	5,095	1,019	169																				
Warmouth	H							246																		
	R					92																				
Green sunfish	R			67																						
Channel catfish	H									921	329	2,632	461	4,606	1,776	6,580	2,500	4,803	1,053	1,711	263	658	329	197		66
	R					187		747		809	62	498		311	62	373	62	933	62		62	685		249	62	62
Blue catfish	H									436	436	599	381	926	327	2,234	872	2,507	545	817	490	490		926	109	272
	R											168								112				112		
Flathead catfish	H																	46						46		
	R																	71								
White bass	H						225	1,297	1,240	4,735	846	3,495	676	338	58											
	R					1,670	1,092	4,304	1,349	5,652	64	2,377	193	256												
Hybrid striped	H															97										
bass	R																									
Yellow bass	H				697	2,789	4,401	6,972	3,007	1,699	44	305		42												
	R		416	9,111	25,210	40,769	14,311	8,362	1,830	1,830	83	42														
Sauger	H													59	176	176	57									
	R									131		196	65	261	131	653	129									
Bullhead	R																									
Buffalo	R														37											
Drum	H																					72				
	R					284	57	284		1,534		2,842	57	170	455	284		739		966		114		227		170
Shad	R									145																
Skipjack herring	H									128		64														
	R							269		2,962	135	741		337		134										
Common Carp	R																	73								
Silver Carp	R											69				206	275	205								
Grass Carp	R																	51						51		
Golden Shiner	R									38																
Gar	H											73						73			73		71			
	R														61			123								

Table 50 (cont).

		Inch class																						
Species		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48	49	56	Total
White crappie	H																								229,912
	R																								345,977
Black crappie	H																								37,293
	R																								35,670
Largemouth	H		33																						6,318
bass	R																								302,379
Smallmouth	H																								311
bass	R																								22,069
Spotted Bass	H																								37
	R																								547
Bluegill	H																								81,668
	R																								74,716
Redear sunfish	H																								3,798
	R																								587
Longear sunfish	H																								900
	R																								7,416
Warmouth	H																								246
	R																								92
Green sunfish	R																								67
Channel catfish	H	461	132		64																				29,542
	R								64																5,290
Blue catfish	H	109	109		163		57																		12,805
	R		56		56							57													561
Flathead catfish	H						46																		138
	R		72																						143
White bass	H																								12,910
	R																								16,957
Hybrid striped	H																								97
bass	R																								0
Yellow bass	H																								19,956
	R																								101,964
Sauger	H																								468
	R																								1,566
Bullhead	H																								0
Buffalo	R		73																						110
Drum	H																								72
	R				114																				8,297
Shad	R																								145
Skipjack herring	H																								192
	R																								4578
Common Carp	R																								73
Silver Carp	R																								755
Grass Carp	R																								102
Golden Shiner	H																								38
Gar	H																								290
	R				61						123						62								430

Table 51. Fish harvest statistics derived from a creel survey at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	Black bass group	Largemouth bass	Smallmouth bass	Spotted bass	**Crappie group**	White crappie	Black crappie	**Catfish group**	Channel catfish	Flathead catfish	Blue catfish	Bullhead	**Panfish group**	Bluegill	Redear sunfish	Longear sunfish	Warmouth	Green sunfish
No. caught	**331,624**	308,663	22,380	584	**648,851**	575,889	72,962	**48,479**	34,832	281	13,366	0	**169,550**	156,383	4,385	8,316	338	67
(per acre)	**(6.50)**	(6.05)	(0.44)	(0.01)	**(12.72)**	(11.29)	(1.43)	**(0.95)**	(0.68)	(0.01)	(0.26)		**(3.32)**	(3.07)	(0.09)	(0.16)	(0.01)	T
No. harvested	**6,633**	6,284	311	36	**267,204**	229,912	37,292	**42,485**	29,542	138	12,805		**74,801**	81,668	3,798	900	246	
(per acre)	**(0.13)**	(0.12)	(0.01)	T	**(5.24)**	(4.51)	(0.73)	**(0.83)**	(0.58)	T	(0.25)		**(1.47)**	(1.60)	(0.07)	(0.02)	T	T
% of total no. harvested	**1.5**	1.4	0.1	T	**60.8**	60.8	8.5	**9.7**	6.7	T	2.9		**19.7**	18.6	0.9	0.2	T	
Lb. harvested	**14,616**	13,872	735	9	**171,566**	144,766	26,800	**70,574**	41,321	819	28,436		**16,641**	16,164	2,435	87	85	
(per acre)	**(0.29)**	(0.27)	(0.01)	T	**(3.36)**	(2.84)	(0.53)	**(1.38)**	(0.81)	(0.02)	(0.56)		**(0.33)**	(0.32)	(0.05)	(0.00)	(0.00)	
% of total lb. harvested	**5.0**	4.8	0.3	T	**58.8**	49.7	9.2	**24.2**	14.2	0.3	9.8		**6.5**	5.5	0.8	T	T	
Mean length (in)		16.3	17.0	8.0		10.9	11.4		15.5	24.7	19.6			6.7	9.8	5.3	8.0	
Mean w eight (lb)		2.25	2.32	0.25		0.62	0.82		1.28	6.92	3.34			0.19	0.64	0.09	0.35	
No. of fishing trips for that species	**72,325**				**57,321**			**14,320**					**10,732**					
% of all trips	**41.8**				**33.1**			**8.3**					**6.2**					
Hours fished for that species	**357,480**				**283,323**			**70,781**					**53048**					
(per acre)	**(7.01)**				**(5.56)**			**(1.39)**					**(1.04)**					
No. harvested fishing for that species	**5,258**				**263,997**			**34,732**					**74,801**					
Lb harvested fishing for that species	**11,911**				**169,210**			**60,263**					**18,820**					
No./hour harvested fishing for that species	**0.01**				**0.99**			**0.57**					**1.58**					
% success fishing for that species	**2.6**				**62.5**			**50.7**					**64.4**					

t = < .005

Table 51 (cont.).

	Sauger	**Morone Group**	White bass	Yellow bass	Hybrid striped bass	Drum	Skipjack herring	Gar	Buffalo	Silver carp	Common Carp	Grass carp	Shad	Golden Shiner	**Anything**
No. caught	2,034	**152,301**	29,867	121,920	97	8,628	4,769	720	109	857	73	0	145	38	
(per acre)	(0.04)	**(2.99)**	(0.59)	(2.39)	(0.00)	(0.17)	(0.09)	(0.01)	(0.00)	(0.02)	T		T	T	
No. harvested	141	**33,059**	12,909	19,956	97	217	218	290	72	755			145	0	
(per acre)	(0.00)	**(0.65)**	(0.25)	(0.39)	T	T	T	(0.01)	T	(0.01)	T		T	T	
% of total no. harvested	0.10	**7.52**	2.94	4.54	0.02	0.05	0.10	0.06	0.02	0.17			0.03	T	
Lb. harvested	149	**6,481**	6,830	3,820	200	431	64	164	891	1,709			48.6	0	
(per acre)	(0.00)	**(0.13)**	(0.13)	(0.07)	T	(0.01)	T	T	(0.02)	(0.03)	T		T	T	
% of total lb. harvested	0.09	**3.95**	2.34	1.31	0.07	0.15	0.02	0.06	0.31	0.59			0.02	T	
Mean length (in)	15.6		10.7	7.9	16.0	15.7	10.7	18.5	28.0	14.5			10.0		
Mean w eight (lb)	1.19		0.55	0.20	2.08	1.97	0.33	0.57	12.29	1.58			0.35		
No. of fishing trips for that species		**2,955**													**15,386**
% of all trips		**1.7**													**8.9**
Hours fished for that species		**14607**													**76,049**
(per acre)		**(0.29)**													**(1.49)**
No. harvested fishing for that species		**16,497**													
Lb harvested fishing for that species		**6,480**													
No./hour harvested fishing for that species		**1.85**													
% success fishing for that species		**54.5**													**19.7**

T = < 0.005

Table 52. Crappie catch and harvest statistics derived at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	White crappie				Black crappie			
	Harvested	Released		Total	Harvested	Released		Total
	>10.0 in	<10.0 in	>10.0 in		>10.0 in	<10.0 in	>10.0 in	
*Total no. of crappie	229,912	331,130	14,847	575,889	37,292	31,336	4,333	72,961
% of crappie harvested by number	86.0				14.0			
*Total weight of crappie (lb)	242,319	93,365	4,187	339,871	26,800	11,279	1,559	39,638
% of crappie harvested by weight	84.4				15.6			
Mean length (in)	10.9				11.4			
Mean weight (lb)	0.62				0.82			
*Catch rate (fish/hr)	0.67				0.09			
*Harvest rate (fish/hr	0.243				0.041			

* Includes effort and catch of non-crappie anglers

Table 53. Monthly crappie angling success at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	Total no. of crappie caught	Total no. of crappie harvested	*Total no. of crappie harvested	No. of crappie fishing trips	Hours fished for crappie	Crappie caught by crappie anglers	Crappie caught/ hour by crappie anglers	Crappie harvested by crappie anglers	Crappie harvested/ hour by crappie anglers
Feb	212,704	93,439	93,439	11,367	56,184	9,898	3.52	93,439	1.55
Mar	93,705	46,473	45,266	8,766	43,327	40,577	2.32	44,506	1.12
Apr	232,218	90,456	90,456	23,040	113,878	42,385	2.45	89,487	0.96
May	28,283	5,947	5,947	3,968	19,614	2,909	1.46	5,222	0.30
Jun	9,998	3,450	3,309	1,746	8,628	467	1.84	3,239	0.63
Jul	1,620	918	918	304	1,503		0.88	864	0.50
Aug	1,557	912	912	488	2,414		0.81	760	0.45
Sept	29,180	10,804	10,804	2,136	10,557	2,941	2.65	10,774	0.98
Oct	21,016	8,466	8,466	3,096	15,305	6,921	1.90	8,098	0.75
Nov	18,569	7,688	7,688	2,410	11,912	9,991	1.88	7,608	0.78
Total	648,851	268,552	*267,205	57,322	283,323	116,089		263,997	
Mean	64,885	26,855		5,732	28,332	14,511	2.41	26399.70	1.00

* harvest w hich excluded crappie kept in a livew ell, but w hich the angler stated they intended to release as part of an organized tournament

Table 54. Crappie angling methods at Kentucky Lake (51,000 acres) during 16 February through 30 November 2017.

Year	Casting (1 pole)	Still-fishing (1-2 poles)	Spider Rig (3 poles)	Spider Rig (4-5 poles	Spider Rig (>5 poles)
2017	37.3%	11.6%	14.2%	10.8%	26.2%
2015	65.9%	29.3%	37.6%	11.7%	14.8%
Mean	51.58%	20.46%	25.89%	11.25%	20.47%

Table 55. Monthly black bass angling success at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

Month	Total no. of bass caught	Total no. of bass harvested	*Total no. of bass harvested	No. of black bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/ hour by bass anglers	Bass harvested by bass anglers	*Bass harvested by bass anglers	Bass harvested/ hour by bass anglers	*Bass harvested/ hour by bass anglers
Feb	18,959	870.55	870.55	4,494	22,212	15,768	0.75	871	871	0.04	0.04
Mar	39,278	4,915	536	7,733	38,221	36,999	0.83	4,826	446	0.11	0.01
Apr	84,565	5,295	2,461	12,847	63,499	74,274	0.79	4,773	1,939	0.05	0.02
May	89,563	13,344	1,668	17,673	87,350	84,052	0.83	12,909	1,233	0.13	0.01
Jun	36,544	2,605	493	10,923	53,989	34,783	0.48	2,464	352	0.03	0.00
Jul	14,740	1,296	270	3,927	19,412	13,822	0.55	1,242	216	0.05	0.01
Aug	7,748	532	114	2,547	12,593	7,140	0.42	532	114	0.03	0.01
Sept	13,947	1,257	120	3,273	16,181	12,810	0.67	1,197	60	0.06	0.00
Oct	17,851	1,472	74	5,883	29,079	16,674	0.45	1,399	0	0.04	0
Nov	8,433	771	27	3,024	14,945	8,354	0.48	772	27	0.04	0.00
Total	331,628	32,358	*6632	72,323	357,481	304,676		30,985	*5258		
Mean							0.65			0.07	*.009

* harvest which excluded bass kept in a livewell, but which the angler stated they intended to release

Table 56. Black bass catch and harvest statistics derived at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	Largemouth bass				Smallmouth bass				Spotted bass			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
	≥15.0 in	12.0-14.9 in	≥15.0 in		≥15.0 in	12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of bass	31,267	121,241	69,030	308,381	1,053	11,320	4,155	22,380	37	425	0	584
*Total no. of bass	(*6,284)		(*94,912)		(*311)		*(5044)					
% of bass harvested by number	94.8				4.7				0.1			
Total weight of bass (lb)	75,423	131,759	75,018	376,577	2,532	10,829	3,975	22,380	9	355	0	584
*Total weight of bass (lb)	(*13,872)		(*111,210.7)		(*734.9)		(*5003.2)					
% of bass harvested by weight	96.7				3.2				0.0			
Mean length (in)	16.3				17.1				8.0			
Mean weight (lb)	2.27				2.36				0.25			
**Catch rate (fish/hr)	0.36				0.03				0.0007			
**Harvest rate (fish/hr)	0.036				0.001				0.0001			

* harvest which excluded bass kept in a livewell, but which the angler stated they intended to release

** Includes effort and catch of non-bass anglers

Table 57. Monthly panfish angling success at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

Month	Total no. of panfish caught	Total no. of panfish harvested	No. of panfish fishing trips	Hours fished by panfish anglers	Panfish caught by panfish anglers	Panfish caught/ hour by panfish anglers	Panfish harvested by panfish anglers	Panfish harvested/ hour by panfish anglers
Feb	1,935	1,064						
Mar	357	179						
Apr	21,626	11,037	1,486	7,347	14,095	2.16	7,383	1.13
May	114,148	62,585	7,143	35,306	103,779	2.90	60,266	1.68
Jun	11,759	3,591	1,197	5,917	8,097	2.75	2,112	0.72
Jul	4,481	2,106	203	1,002	3,834	7.63	1,998	3.98
Aug	4,330	1,633	127	630	798	6.56	190	1.56
Sept	6,854	3,053	359	1,776	4,788	5.08	2,005	2.13
Oct	3,902	1,399	217	1,071	1,951	2.65	847	1.15
Nov	160	27						
Total	169,550	86,673	10,733	53,048	137,342		74,801	
Mean	16,955	8,667	1,073	5,305	13,734	2.97	7,480	1.59

Table 58. Panfish catch and harvest statistics derived from Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	Bluegill				Redear sunfish			
	Harvested	Released		Total	Harvested	Released		Total
		6.0-7.9 in	≥8.0 in			6.0-7.9 in	≥8.0 in	
Total no. of panfish	81,668	17,431	454	156,384	3,798		456	4,386
% of panfish harvested by number	94.2				4.4			
Total weight of panfish (lb)	16,164	1,441	37	22,341	2,435		197	2,689
% of panfish harvested by weight	85.9				12.9			
Mean length (in)	6.7				9.8			
Mean weight (lb)	0.19				0.64			
*Catch rate (fish/hr)	0.18				0.01			
*Harvest rate (fish/hr)	0.095				0.004			

* includes effort and catch of non-panfish anglers

Table 59. Monthly catfish angling success at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

Month	Total no. of catfish caught	Total no. of catfish harvested	No. of catfish fishing trips	Hours fished by catfish anglers	Catfish caught by catfish anglers	Catfish caught/ hour by catfish anglers	Catfish harvested by catfish anglers	Catfish harvested/ hour by catfish anglers
Feb	290	193	66	327				
Mar	670	581	59	292	402	1.80	402	1.80
Apr	2,610	2,386	531	2,624	1,193	0.22	1,193	0.22
May	24,004	20,668	5,450	26,937	15,883	0.67	15,230	0.65
Jun	11,477	10,139	4,539	22,434	10,773	0.75	10,139	0.71
Jul	3,509	3,401	1,419	7,013	3,456	0.65	3,402	0.64
Aug	2,393	2,241	616	3,043	2,165	0.81	2,165	0.81
Sept	1,496	1,167	1,058	5,229	958	0.23	868	0.21
Oct	1,656	1,362	495	2,449	1,067	0.54	1,067	0.54
Nov	372	346	88	433	266	0.53	266	0.53
Total	48,479	42,486	14,320	70,781	36,163		34,732	
Mean						0.60		0.57

Table 60. Catfish catch and harvest statistics derived at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	Blue catfish				Channel catfish				Flathead catfish			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
		8.0-11.9	≥12.0in			8.0-11.9	≥12.0in			8.0-11.9	≥12.0in	
Total no. of catfish	12,805		561	13,366	29,542	1,618	3,485	34,832	138		143	434
% of catfish harvested by number	30.1				69.5				0.3			
Total weight of catfish (lb)	28,436		2,931	31,367	41,320	1,722	3,710	46,952	819		779	1,598
% of catfish harvested by weight	40.3				58.5				1.2			
Mean length (in)	19.6				15.5				24.7			
Mean weight (lb)	3.34				1.28				6.92			
*Catch rate (fish/hr)	0.02				0.04				0.00			
*Harvest rate (fish/hr	0.016				0.030				0.0002			

* includes effort and catch of non-catfish anglers

Table 61. Monthly *Morone* angling success at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

Month	Total no. of *Morone* caught	Total no. of *Morone* harvested	No. of *Morone* fishing trips	Hours fished by *Morone* anglers	*Morones* caught by *Morone* anglers	*Morones* caught/ hour by *Morone* anglers	*Morones* harvested by *Morone* anglers	*Morones* harvested/ hour by *Morone* anglers
Feb	21,474	2,612	397	1,960	1,547	6.40	1,547	6.40
Mar	10,278	2,056	207	1,021	1,787	2.13	1,742	2.07
Apr	17,897	1,268						
May	12,038	5,439	635	3,138	4,569	1.96	3,046	1.31
Jun	8,942	3,028	299	1,479	704	0.91	282	0.36
Jul	13,552	6,857	836	4,133	10,636	3.46	6,317	2.05
Aug	7,900	2,431	276	1,364	4,785	6.46	1,595	2.15
Sept	33,579	4,429	160	789	1,975	2.84	1,047	1.51
Oct	15,201	4,196	93	459	1,031	3.29	921	2.94
Nov	11,439	745						
Total	152,300	33,059	14,607	14,607	27,034		16,497	
Mean						3.15		1.85

Table 62. *Morone* catch and harvest statistics derived at Kentucky Lake (51,000 acres) from 16 February through 30 November 2017.

	White Bass				Yellow Bass			Hybrid Striped Bass				Striped Bass			
	Harvest	Release		Total	Harvest	Release	Total	Harvest	Release		Total	Harvest	Release		Total
		12.0-14.9 in	≥15.0 in						12.0-14.9 in	≥15.0 in		≥15.0 in	12.0-14.9 in	≥15.0 in	
Total no. of *Morone*	12,910	2,826		29,867	19,956	101,965	121,921	97			97	97	320		145
% of *Morone* harvested by number	39.0				60.4			0.3				0.3			
Total w eight of *Morone* (lb)	6,830	988		12,757	3,820		12,294	201			201	675	309		937
% of *Morone* harvested by w eight	59.3				33.1			1.7				5.9			
Mean length (in)	10.7				7.9			16.0				26.0			
Mean w eight (lb)	0.55				0.20			2.08				6.98			
*Catch rate (fish/hr)	0.03				0.14			0.0001				0.0001			
*Harvest rate (fish/hr)	0.015				0.031			0.0001				0.0001			

* includes effort and catch of non-morone anglers

Table 63. Fishery statistics derived from a creel survey at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 1 December 2017 through 30 February 2018.

Fishing Trips			
	No. of fishing trips (per acre)	8,273	(0.5)
Fishing Pressure			
	Total angler-hours (S.E.)	32,217	(8737.4)
	Angler-hours/acre	2.4	
Catch / Harvest			
	No. of fish caught (S.E.)	84,576	(32,396)
	No. of fish harvested (S.E.)	40,514	(16,765)
	Lb of fish harvested	24,809	
Harvest Rates			
	Fish/hour	0.96	
	Fish/acre	2.65	
	Pounds/acre	1.62	
Catch Rates			
	Fish/hour	2.07	
	Fish/acre	5.53	
Miscellaneous Characteristics (%)			
	Male	97.52	
	Female	2.48	
	Resident	94.41	
	Non-resident	5.59	
Method (%)			
	Still fishing	0.31	
	Casting	20.50	
	Trolling		
	Trotline/Jugging		
	Bow Fishing		
	Crappie Anglers Only		
	Casting	1.85	
	Still fishing (1-2 poles)	8.81	
	Spider Rig (3 Poles)	1.85	
	Spider Rig (4-5 Poles)	21.33	
	Spider Rig (>5 Poles)	66.75	
Mode (%)			
	Boat	96.27	
	Bank	0.93	
	Dock	2.80	

Table 64. Length distribution for each species of fish harvested or released (lengths of released fish were estimated by anglers) at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

		Inch class																								
Species		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
White crappie	H									12,060	16,701	5,591	365	256												
	R				33	67	33	334	23,394	2,807	2,473	969	134	100	167	67	68									
Black crappie	H									2,283	1,573	710														
	R				91			183	2,652		457	46		46												
Largemouth	H																									
bass	R					34	34	171		512	205	1,024	273	853	648	205	273	205	68							
Smallmouth	H																									
bass	R					43						43	43			43			88							
Spotted Bass	H																									
	R											53														
Bluegill	H																									
	R				106	211																				
Redear sunfish	H																									
	R																									
Longear sunfish	H																									
	R																									
Warmouth	H																									
	R																									
Green sunfish	R																									
Channel catfish	H																									
	R													24												
Blue catfish	H																									
	R																									
Flathead catfish	H																							53		
	R																									
White bass	H									150	120	360	150	60		30										
	R					35	140	594		349	175	838	349	35												
Hybrid striped	H																									
bass	R																									
Yellow bass	H																									
	R		187	187	327	1,028	140		47	46																
Sauger	H															53										
	R													17	16											
Bullhead	R																									
Buffalo	R																									
Drum	H																									
	R													31		31		31						62		
Shad	R																									
Skipjack herring	H																									
	R																									
Common Carp	R																									
Silver Carp	R																	53								
Grass Carp	R																									
Golden Shiner	R																									
Gar	H																									
	R																									

Table 64 (cont).

		Inch class																							
Species		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48	49	56	Total
White crappie	H																								34,973
	R																								30,646
Black crappie	H																								4,566
	R																								3,475
Largemouth bass	H																								0
	R																								4,505
Smallmouth bass	H																								0
	R																								260
Spotted Bass	H																								0
	R																								53
Bluegill	H																								0
	R																								317
Redear sunfish	H																								0
	R																								0
Longear sunfish	H																								0
	R																								0
Warmouth	H																								0
	R																								0
Green sunfish	R																								0
Channel catfish	H																								0
	R																								24
Blue catfish	H																								0
	R																								0
Flathead catfish	H																								53
	R																								0
White bass	H																								870
	R																								2,515
Hybrid striped bass	H																								0
	R																								0
Yellow bass	H																								0
	R																								1,962
Sauger	H																								53
	R																								33
Bullhead	H																								0
Buffalo	R																								0
Drum	H																								0
	R																								155
Shad	R																								0
Skipjack herring	H																								0
	R																								0
Common Carp	R																								0
Silver Carp	R																								53
Grass Carp	R																								0
Golden Shiner	H																								0
Gar	H																								0
	R																								0

Table 65. Fish harvest statistics derived from a creel survey at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

	Black bass group	Largemouth bass	Smallmouth bass	Spotted bass	**Crappie group**	White crappie	Black crappie	**Catfish group**	Channel catfish	Flathead catfish	Blue catfish	Bullhead	**Panfish group**	Bluegill	Redear sunfish	Longear sunfish	Warmouth	Green sunfish
No. caught	**4,817**	4,505	260	53	**73,660**	65,619	8,041	**77**	24	53	0	0	**317**	317	0	0	0	0
(per acre)	**(0.31)**	(0.29)	(0.02)	(0.00)	**(4.81)**	(4.28)	(0.52)	**(0.01)**	(0.00)	(0.00)	(0.00)	T	**(0.02)**	(0.02)	T	T	T	T
No. harvested	**0**	0	0	0	**39,539**	34,973	4,565	**53**	0	53			**0**	0				
(per acre)	**T**	T	T	T	**(2.58)**	(2.28)	(0.30)	**T**	T	T			**T**	T				
% of total no. harvested					**97.6**	86.3	11.3	**0.1**		0.1								
Lb. harvested					**23,827**	20,837	2,989	**289**	0	289								
(per acre)					**(1.56)**	(1.36)	(0.20)	**(0.02)**	T	(0.02)								
% of total lb. harvested					**96.0**	84.0	12.1	**1.2**	0.0	1.2								
Mean length (in)		13.7	15.4	12.0		10.9	10.4		14.0	24.0				5.7				
Mean w eight (lb)		1.37	2.00	0.74		0.60	0.61		0.88	5.40				0.12				
No. of fishing trips for that species	**1,445**				**6,718**			**0**					**0**					
% of all trips	**17.6**				**81.8**			**0.0**					**0.0**					
Hours fished for that species	**6,498**				**30,226**			**-**					**0**					
(per acre)	**(0.42)**				**(1.97)**			**(0.00)**					**(0.00)**					
No. harvested fishing for that species	**0**				**39,539**			**0**					**0**					
Lb harvested fishing for that species	**0**				**23,827**			**0**					**0**					
No./hour harvested fishing for that species	**0.00**				**0.99**			**0.00**					**0.00**					
% success fishing for that species	**0.0**				**60.0**													

t = < .005

Table 65 (cont.).

	Sauger	**Morone Group**	White bass	Yellow bass	Hybrid striped bass	Drum	Skipjack herring	Gar	Buffalo	Silver carp	Common Carp	Grass carp	Shad	Golden Shiner	**Anything**
No. caught	86	**5,347**	3,384	1,962	0	218	0	0	0	53	0	0	0	0	
(per acre)	(0.01)	**(0.35)**	(0.22)	(0.13)	T	(0.01)	T	T	T	T	T	T	T	T	
No. harvested	53	**870**	870	0		0				0					
(per acre)	T	**(0.06)**	(0.06)	T		T				T					
% of total no. harvested	0.13	**2.14**	2.14												
Lb. harvested	68	**624**	624												
(per acre)	T	**(0.04)**	(0.04)												
% of total lb. harvested	0.27	**2.52**	2.52												
Mean length (in)			11.9	5.7		25.2				18.0					
Mean w eight (lb)			0.71	0.07		5.98				2.75					
No. of fishing trips for that species		**46**													**0**
% of all trips		**0.6**													
Hours fished for that species		**205**													**0**
(per acre)		**(0.01)**													
No. harvested fishing for that species		**159**													
Lb harvested fishing for that species		**624**													
No./hour harvested fishing for that species		**0.78**													
% success fishing for that species		**54.5**													

T = < 0.005

Table 66. Crappie catch and harvest statistics derived at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

	White crappie				Black crappie			
	Harvested	Released		Total	Harvested	Released		Total
	≥10.0 in	<10.0 in	≥10.0 in		≥10.0 in	<10.0 in	≥10.0 in	
*Total no. of crappie	34,972	23,862	6,785	65,619	4,565	2,927	549	8,041
% of crappie harvested by number	88.5				11.5			
*Total weight of crappie (lb)	20,838	8,555	2,432	31,824	2,989	1,090	204	4,283
% of crappie harvested by weight	87.5				12.5			
Mean length (in)	10.9				10.4			
Mean weight (lb)	0.60				0.61			
*Catch rate (fish/hr)	2.04				0.25			
*Harvest rate (fish/hr	1.086				0.142			

* Includes effort and catch of non-crappie anglers

Table 67. Monthly crappie angling success at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

Month	Total no. of crappie caught	Total no. of crappie harvested	*Total no. of crappie harvested	No. of crappie fishing trips	Hours fished for crappie	Crappie caught by crappie anglers	Crappie caught/ hour by crappie anglers	Crappie harvested by crappie anglers	Crappie harvested/ hour by crappie anglers
Dec	47,616	27,670	27,670	3,926	17,662	47,616	2.70	27,670	1.57
Jan	2,960	1,587	1,587	445	2,001	2,961	1.48	1,588	0.79
Feb	23,084	10,617	10,280	2,348	10,562	23,084	2.19	10,281	0.97
Total	73,660	39,874	*39538	6,719	30,225	73,661		39,539	
Mean	24,553	13,291	*13179	2,240	10,075	24,554	2.12	13179.67	2.03

* harvest which excluded crappie kept in a livewell, but which the angler stated they intended to release as part of an organized tournament

Table 68. Monthly black bass angling success at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

Month	Total no. of bass caught	Total no. of bass harvested	*Total no. of bass harvested	No. of black bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/ hour by bass anglers	Bass harvested by bass anglers	*Bass harvested by bass anglers	Bass harvested/ hour by bass anglers	*Bass harvested/ hour by bass anglers
Dec	2,804			502	2,259	2,011	0.89				
Jan	116	33		43	195	99	0.51	33		0.17	
Feb	1,898			899	4,044	1,802	0.45				
Total	4,817	33	*0	1,444	6,498	3,912		33	*0		
Mean							0.61			0.17	*0

* harvest which excluded bass kept in a livewell, but which the angler stated they intended to release

Table 69. Black bass catch and harvest statistics derived at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

	Largemouth bass				Smallmouth bass				Spotted bass			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
	≥15.0 in	12.0-14.9 in	≥15.0 in		≥15.0 in	12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of bass	33	2,167	1,343	4,504	0	86	131	260	0	53	0	53
*Total no. of bass	(*0.0)		(*1376)		(*0.0)		*(131)					
% of bass harvested by number	100.0				0.0				0.0			
Total weight of bass (lb)	93	2,281	1,411	4,798	0	106	158	317	0	39	0	39
*Total weight of bass (lb)	(*0.0)		(*1514)		(*0.0)		(*158)					
% of bass harvested by weight	100.0				0.0				0.0			
Mean length (in)	17.5											
Mean weight (lb)	2.80											
**Catch rate (fish/hr)	0.36				0.01				0.0016			
**Harvest rate (fish/hr)	0.036											

* harvest which excluded bass kept in a livewell, but which the angler stated they intended to release

** Includes effort and catch of non-bass anglers

Table 70. Monthly panfish angling success at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

Month	Total no. of panfish caught	Total no. of panfish harvested	No. of panfish fishing trips	Hours fished by panfish anglers	Panfish caught by panfish anglers	Panfish caught/ hour by panfish anglers	Panfish harvested by panfish anglers	Panfish harvested/ hour by panfish anglers
Dec	317							
Jan	0							
Feb	0							
Total	317							
Mean	106							

Table 71. Panfish catch and harvest statistics derived from Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

	Bluegill				Redear sunfish			
	Harvested	Released		Total	Harvested	Released		Total
		6.0-7.9 in	≥8.0 in			6.0-7.9 in	≥8.0 in	
Total no. of panfish	0.0	211	0.0	317				0.0
% of panfish harvested by number	94.2							
Total weight of panfish (lb)	0.0	25	0.0	37				
% of panfish harvested by weight	85.9							
Mean length (in)								
Mean weight (lb)								
*Catch rate (fish/hr)	0.01							
*Harvest rate (fish/hr)								

* includes effort and catch of non-panfish anglers

Table 72. Monthly catfish angling success at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

Month	Total no. of catfish caught	Total no. of catfish harvested	No. of catfish fishing trips	Hours fished by catfish anglers	Catfish caught by catfish anglers	Catfish caught/ hour by catfish anglers	Catfish harvested by catfish anglers	Catfish harvested/ hour by catfish anglers
Dec	53	53	0.0					
Jan			0.0					
Feb	24		0.0					
Total	77	53						
Mean	26	18						

Table 73. Catfish catch and harvest statistics derived at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

	Blue catfish				Channel catfish				Flathead catfish			
	Harvest	Release		Total	Harvest	Release		Total	Harvest	Release		Total
		8.0-11.9	≥12.0in			8.0-11.9	≥12.0in			8.0-11.9	≥12.0in	
Total no. of catfish				0.0	24		24	24	53			53
% of catfish harvested by number					0.0				100.0			
Total weight of catfish (lb)					0		21	21	289			289
% of catfish harvested by weight									100.0			
Mean length (in)									24.0			
Mean weight (lb)									5.47			
*Catch rate (fish/hr)					T				T			
*Harvest rate (fish/hr)									T			

* includes effort and catch of non-catfish anglers

t = < .005

Table 74. Monthly *Morone* angling success at Kentucky Lake (Jonathan Creek, Blood River, Big Bear Creek) from 01 December through 30 February 2018.

Month	Total no. of *Morone* caught	Total no. of *Morone* harvested	No. of *Morone* fishing trips	Hours fished by *Morone* anglers	*Morones* caught by *Morone* anglers	*Morones* caught/ hour by *Morone* anglers	*Morones* harvested by *Morone* anglers	*Morones* harvested/ hour by *Morone* anglers
Dec	3,598	317	46	205	212	1.03	159	0.78
Jan	116	0.0						
Feb	1,633	552						
Total	5,346	869	46	205	212		159	
Mean	1782	290	15	68	71		53	

Table 75. *Morone* catch and harvest statistics derived at Kentucky Lake (Jonathan Creek) from 01 December through 30 February 2018.

	White Bass				Yellow Bass			Hybrid Striped Bass				Striped Bass			
	Harvest	Release		Total	Harvest	Release	Total	Harvest	Release		Total	Harvest	Release		Total
		12.0-14.9 in	≥15.0 in						12.0-14.9 in	≥15.0 in		≥15.0 in	12.0-14.9 in	≥15.0 in	
Total no. of *Morone*	870	1,222		3,385	0	1,962	1,962				0.0				0.0
% of *Morone* harvested by number	100.0				0.0										
Total w eight of *Morone* (lb)	624	706		2,077	0		129								
% of *Morone* harvested by w eight	100.0				0.0										
Mean length (in)	11.9														
Mean w eight (lb)	0.71														
*Catch rate (fish/hr)	0.11				0.06										
*Harvest rate (fish/hr)	0.027														

* includes effort and catch of non-morone anglers

Table 76. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Lake Beshear during 2017.

	Inch class																							
Season	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std err
Spring		4	5	3	4	7	19	16	6	9	14	6	10	12	8	11	24	12	9	2	1	182	72.8	5.9
Fall	3	33	27	11	2	2	5	3		6	6	3	1	4	2	2	4	1	1			116	58.0	4.7

w fdpsdlb.d17 and w fdw rlb.d17

Table 77. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Beshear during April or May of 2008 to 2017.

				Length group															
	Mean length age-3 at	Age-1		<8.0 in		≥12.0 in		12.0-14.9 in		≥15.0 in		≥18.0 in		≥20.0 in		Total			
Year	capture	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	PSD	RSD_{15}
2017[A]	13.8	6.4	1.3	20.0	3.9	43.6	3.1	12.0	2.4	31.6	4.6	19.2	4.2	4.8	2.4	72.8	5.9	69	50
2016[AB]	13.8	30.4	4.0	16.4	3.4	67.2	8.3	10.8	2.3	56.4	7.0	32.8	4.8	5.6	1.2	102.8	6.5	78	65
2015[B]	13.8	4.4	1.5	4.4	1.5	78.4	4.5	17.6	3.5	60.8	3.4	28.0	3.0	8.0	0.6	91.6	3.9	90	70
2014[A]	13.3	1.9	0.9	3.2	1.4	61.6	5.6	18.0	2.3	43.6	6.1	20.4	2.3	4.4	1.2	83.6	6.8	77	54
2013[A]	13.3	33.8	9.6	37.5	10.3	63.0	11.8	18.0	5.5	45.0	7.2	23.5	5.6	6.0	1.4	127.0	18.4	70	50
2012[A]	13.3	27.6	5.5	34.4	4.9	46.8	3.6	8.8	2.2	38.0	4.6	18.4	1.8	4.4	1.0	114.8	7.0	58	47
2011	13.3	11.7	2.2	13.5	1.7	65.0	9.2	17.5	4.8	47.5	5.9	23.5	3.0	5.5	1.7	92.5	10.3	82	60
2010[A]	13.8	22.3	4.9	9.0	1.7	51.0	6.9	11.3	1.3	39.7	6.1	14.0	3.8	3.7	1.9	82.7	15.7	69	54
2009[A]	13.8	5.2	1.6	3.6	1.7	35.6	3.0	6.0	0.6	29.6	2.9	13.6	1.7	4.4	1.6	47.2	4.6	82	68
2008[A]	13.8	10.4	3.7	8.4	3.9	32.0	4.6	11.2	3.8	20.8	3.4	10.0	2.7	3.6	1.7	51.6	6.8	74	48
Average	13.6	15.4		15.0		54.4		13.1		41.3		20.3		5.0		86.7		74.9	56.5
LBFMP	≥ 12.0 in	≥ 10				≥ 45		≥ 15		≥ 30				≥ 3				55 - 75	20 - 40

(Lake Beshear Bass Database.xls)

Data for 1985-2007 is listed in previous year reports.

[A] age and growth data was not collected. Previous year data used for age estimates.

[B] age and growth data was collected in the Fall. Mean length age-3 was calculated from back calculations. Spring CPUE age-1 was determined from back-calculations and extrapolation with spring data. Mortality was determined from fall age frequency data.
LBFMP - Lake Beshear Fish Management Plan objective goal.

Table 78. Lake specific assessment for largemouth bass collected at Lake Beshear from 2008-2017. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A).

			Length group						
Year	Mean length age-3 at capture	CPUE age-1	12.0-14.9 in CPUE	≥15.0 in CPUE	≥20.0 in CPUE	Total score	Assessment rating	Z	A
2017	13.8	6.4	12.0	31.6	4.8			0.349	29.4
Score	3	3	3	2	3	14	G		
2016	13.8	30.4	10.8	56.4	5.6			0.423	34.5
Score	3	4	2	4	4	17	E		
2015[B]	13.8	4.4	17.6	60.8	8.0			0.457	36.7
Score	3	2	4	4	4	17	E		
2014[A]	13.3	1.9	18.0	43.6	4.4			0.145	13.5
Score	3	1	4	4	3	15	G		
2013[A]	13.3	33.8	18.0	45.0	6.0			0.355	29.9
Score	3	4	4	4	4	19	E		
2012[A]	13.3	27.6	8.8	38.0	4.4			0.291	25.2
Score	3	4	2	3	3	15	G		
2011	13.3	11.7	17.5	47.5	5.5			0.194	17.6
Score	3	3	4	4	4	18	G		
2010[A]	13.8	22.3	11.3	39.7	3.7			0.297	25.7
Score	3	4	3	3	2	15	G		
2009[A]	13.8	5.2	6.0	29.6	4.4			0.142	13.2
Score	3	2	1	2	3	11	G		
2008[A]	13.8	10.4	11.2	20.8	3.6			0.316	27.1
Score	3	3	3	1	2	12	G		
Average	13.6	15.4	13.1	41.3	5.0	15.3		0.297	25.3

Data from 1985 to 2007 is listed in previous year reports.

[A] age and growth data was not collected. Previous year data used for age estimates.

[B] age and growth data was collected in the Fall. Mean length age-3 was calculated from back calculations. Spring CPUE age-1 was determined from back-calculations and extrapolation with spring data. Mortality was determined from fall age frequency data.

Assessment Quartiles were updated. Assessment on this table is updated with new ranges.

Rating
1-7 = Poor (P)
8-11 = Fair (F)
12-16 = Good (G)
17-20 = Excellent (E)

Lake Beshear Bass Data Base

Table 79. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Beshear.

	Age 0^A		Age 0^A		Age 0 ≥5.0 in^A		Age 1^B	
Year class	Mean length	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2017	4.1	0.1	38.0	2.9	6.5	1.9		
2016	4.4	0.1	50.5	6.0	10.0	4.0	6.4	1.3
2015	3.9	0.1	34.5	7.0	3.5	1.5	30.4	4.0
2014	4.8	0.1	24.8	4.4	11.0	1.9	4.4	1.5
2013	4.1	0.1	25.0	7.0	4.5	2.6	1.9	0.9
2012	6.3	0.1	34.0	8.8	33.2	7.4	33.8	9.6
2011	5.0	0.1	41.6	14.8	23.6	7.6	27.6	5.5
2010	4.9	0.1	54.0	4.6	22.0	4.5	11.7	2.2
2009	3.6	0.1	24.8	5.3	2.0	0.6	22.3	4.9
2008	4.3	0.1	12.4	1.2	2.0	0.9	4.8	1.6
Average	4.5		34.0		11.8		15.9	

^{A} Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths removed from a subsample of LMB <10.0 in, which were extrapolated to the entire catch of the fall sample, and length frequencies.

^{B} Data collected during the following spring (April/May) diurnal electrofishing sample.

WFDWRLB.Dxx, WFDWRAGB.Dxx, WFDPSDLB.Dxx

Table 80. Species composition, relative abundance, and CPUE (fish/hr) of sportfish collected during 1.0 hour (4- 900s-runs) of diurnal electrofishing at Lake Pennyrile on 1 May, 2017.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	13	14	15	16	18	19	20	Total	CPUE	Std err
Largemouth bass		3	11	12	2	7	11	18	20	18	3	1	1	1	1	1	1	111	111.0	18.3
Bluegill	6	41	32	14	14	28	19											154	154.0	35.4
Redear sunfish		1	9	5	5	9	15	10										54	54.0	30.4
White crappie							1		2	1								4	4.0	2.8
Longear sunfish		4	21	12	4													41	41.0	7.9
Yellow Bullhead				1														1	1.0	1.0
Warmouth		2	3	7	5	4	1											22	22.0	3.8

wfdpsdp.d17

Table 81. Spring, diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Pennyrile Lake from 2008-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
2017	35.0	11.0	67.0	9.7	4.0	1.6	5.0	1.9	1.0	1.0	111.0	18.4
2016	44.0	9.7	62.0	6.2	13.0	3.0	3.0	1.9	1.0	1.0	122.0	10.0
2015	44.0	3.6	68.8	8.1	8.8	2.9	3.2	1.5	0.8	0.8	124.8	10.6
2014	17.0	3.0	36.0	5.2	7.0	3.0	1.0	1.0			61.0	8.2
2013	63.0	11.8	48.0	4.9	11.0	3.0	2.0	1.2	1.0	1.0	124.0	12.3
2012*												
2011	32.0	10.4	68.0	7.7	12.0	2.5	1.6	1.0	0.8	0.8	113.6	18.3
2010	46.4	9.3	64.3	10.7	12.5	3.3	7.1	1.6	4.5	1.8	130.4	17.0
2009*												
2008	38.9	5.1	63.0	12.0	13.3	2.8	2.0	1.2	0.0	0.0	117.1	14.5
Mean	40.0		59.6		10.2		3.1		1.3		113.0	

wfdpsdp.dxx

Data from 1990 to 2007 is listed in previous year reports.

*Did not sample

Table 82. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Lake Pennyrile during May from 2008-2017.

		Length group									
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Species	Year	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err	CPUE	Std err
Bluegill											
	2017	6.0	2.58	87.0	13.3	42.0	22.5	19.0	9.2	154.0	35.4
	2016	45.0	16.4	65.0	3.4	51.0	12.3	41.0	18.4	202.0	49.1
	2015	30.4	3.0	84.0	11.4	64.8	13.9	32.0	5.7	211.2	
	2014			12.0	4.3	15.0	6.6			27.0	7.9
	2013*	1.0	1.0	18.0	5.8	21.0	6.2			40.0	12.1
	2012	Did Not Sample									
	2011	1.6	1.0	36.8	20.2	41.6	14.2	5.6	1.6	85.6	35.7
	2010	3.6	1.9	81.3	17.2	40.2	6.2	6.3	2.7	131.3	17.0
	2009	Did Not Sample									
	2008	38.1	19.9	136.2	43.0	93.2	42.7	11.3	4.7	278.8	85.4
	Mean	18.0		65.0		46.1		19.2		141.2	

		Length group									
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
Redear sunfish											
	2017			15.0	3.0	14.0	10.4	25.0	18.4	54.0	30.4
	2016			16.0	5.9	15.0	3.0	30.0	7.4	61.0	15.8
	2015	0.8	0.8	12.0	2.5	4.8	1.5	32.8	15.3	50.4	
	2014			8.0	5.4	17.0	5.7	8.0	3.7	33.0	12.5
	2013*			4.0	2.3	9.0	5.5	12.0	2.8	25.0	6.6
	2012	Did Not Sample									
	2011			9.6	4.5	17.6	8.1	28.0	11.9	55.2	21.4
	2010			3.6	1.9	8.9	2.3	17.9	5.0	30.4	5.4
	2009	Did Not Sample									
	2008	2.7	1.8	21.0	9.2	12.8	6.3	41.0	25.1	77.4	40.4
	Mean	1.7		11.1		12.4		24.3		48.3	

wfdpsdp.dxx

*2013 sample collected in June due to water conditions at normal sample time in May

Table 83. PSD and RSD values obtained for largemouth bass, bluegill and redear sunfish collected during 1.0 hour of diurnal electrofishing (4 - 900s-runs) at Lake Pennyrile on 1 May 2017. 95% confidence intervals are in parentheses.

Species	N	PSD	RSD*
Largemouth bass	76	12 (+/-7)	7 (+/-6)
Bluegill	148	41 (+/-8)	13 (+/-5)
Redear sunfish	53	64 (+/-12)	19 (+/-11)

* Largemouth = RSD_{15}, Bluegill = RSD_8, Redear sunfish = RSD_9.

wfdpsdp.d17

Table 84. Lake specific assessment for largemouth bass collected at Pennyrile Lake from 2008-2017. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A) in years when age and growth was collected.

Year	Age-1 CPUE	CPUE 12.0-14.9 in	CPUE >15.0 in	CPUE >20.0 in	Mean length age-3 at capture	Total score	Assessment rating	Z	A
2017	28.0	4.0	5.0	1.0	11.7				
Score	1	1	4	4	4	14	G		
2016	38.0	13.0	3.0	1.0	11.7				
Score	2	2	2	4	4	14	G		
2015	36.0	8.8	3.2	0.8	11.7				
Score	2	1	2	4	4	13	G		
2014	19.8	7.0	1.0		11.7				
Score	1	1	1		4	7	P		
2013	10.6	11.0	2.0	1.0	11.7				
Score	1	2	2	4	4	13	G		
2012	Did not sample								
Score									
2011	31.0	12.0	1.6	0.8	11.7			0.488	38.6
Score	1	2	1	4	4	12	F		
2010	36.1	12.3	7.1	4.5					
Score	2	2	4	4	1	13	G		
2009	Did not sample								
Score									
2008	27.9	13.3	2.0						
Score	1	2	2		1	6	P		
Average	28.4	10.2	3.1	1.1	11.7				

Rating
1 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

Table 85. Species composition, relative abundance, and CPUE (fish/hr) of sportfish collected from Ballard Wildlife Management Area lakes during April 2017. A total of 0.75 hrs (3-900 second runs) of electrofishing was conducted at each lake.

	Inch class																	
Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	19	Total	CPUE	Std err
Little Turner																		
Bluegill	1	5	33	16	12											67	89.3	36.1
Redear sunfish					1		1									2	2.7	1.3
Largemouth bass						1	2	1	1		1	1	3			10	13.3	2.7
White crappie				1			1	1								3	4.0	4.0
Big Turner																		
Bluegill			19	22	6	1										48	64.0	6.1
Redear sunfish			1	1	1											3	4.0	4.0
Spotted bass								1		1						2	2.7	1.3
Largemouth bass					5		3	6	2	3	1	2	1	1	1	25	33.3	4.8
Black crappie		1														1	1.3	1.3
Sauger											1					1	1.3	1.3
Shelby																		
Bluegill		4	26	17	3	1										51	68.0	26.6
Redear sunfish				2	1											3	4.0	2.3
Spotted bass								1		1	1					3	4.0	2.3
Largemouth bass			1	2	4		1		1	1	1	2	1	2		16	21.3	5.3
White crappie					1											1	1.3	1.3
Castor																		
Bluegill	1	2	15	12	6											36	48.0	6.1
Redear sunfish				1	1											2	2.7	1.3
Largemouth bass							1		1	1	2	3	1			9	12.0	2.3
White crappie			1													1	1.3	1.3

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NORTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 presents a summary of conditions encountered while sampling at state-owned or managed lakes and ACOE reservoirs during the 2017 field season.

Nolin River Lake

Black Bass Sampling

Spring (May) and fall (October) electrofishing surveys were conducted in 2017 to monitor the black bass population at Nolin River Lake (Tables 2-9). In 2017, the spring electrofishing catch rates were nearly double those collected in 2016. However, the 2016 catch rates were lower than what has been typically collected over the last 5 years, and the 2017 catch rates are more consistent with those catch rates. Condition factors and age-growth data collected during fall electrofishing were good and consistent with that collected over the last 15 years. Overall, Nolin's largemouth bass population is stable and performing as expected.

Rough River Lake

Hybrid Striped Bass Sampling

Gill netting to monitor the hybrid striped bass population was conducted the last week of November (Tables 10-14). Catch rates in 2017, and in 2016, were lower than those collected during the last several surveys. At the same time growth rate, which has always been excellent, has increased and is the highest documented at Rough River Lake since sampling began in 1999. Age-0 fish accounted for 48% of the total sample (CPUE 15.8), which is three times higher than 2016. Gill netting will continue to be conducted annually for the next few years as part of a project to document any differences in survival and growth rate of reciprocal and original crosses. The hybrid striped bass population continues to be stable and thriving.

Channel Catfish Sampling

Gill netting to assess the channel catfish population was conducted concurrently with hybrid striped bass sampling. A total of 56 channel catfish were collected over 12 net nights for a CPUE of 4.7 fish per net night (Tables 15-16). The CPUE is similar to previous collections prior to 2016. A large number of channel catfish were captured in 2016, likely due to water level at time of sampling (lowest on record during sampling). Condition is good and similar to prior collections.

Dissolved Oxygen – Temperature Profiles

Dissolved oxygen and temperature profiles were conducted in May, June, July, and September in 2017 (Tables 17-20). An August sample could not be conducted due to a dissolved oxygen meter malfunction. Profiles were conducted at three sites (lower, middle, and upper) along the main channel of the south fork of the lake on each sample date consistent with samples in previous years. These profiles were conducted as part of a project to document survival and growth of the original and reciprocal hybrid striped bass crosses stocked at Rough River Lake. Profiles will continue to be conducted May – September for the next few years.

Lake Malone

Largemouth Bass Sampling

Electrofishing to assess the largemouth bass population at Lake Malone was conducted during April (Tables 21-24). Largemouth bass catch rate data collected in 2017 are similar to catch rate data collected during the last several years. Malone has historically been plagued by an overabundance of bass < 12.0 in. A variety of size and creel limits have been tried with little success to reduce this abundance. Even when these fish are not protected, as in the current 12.0- to 15.0-in. protective slot limit, angler harvest is not sufficient to adequately control their numbers. Despite this abundance of smaller-size fish, the number of largemouth greater than 15.0 in. and greater than 20.0 in. has remained in the good to excellent range. The largemouth bass population at Malone is relatively stable and performing as expected. The necessity of continuing the12.0- to 15.0-in protective slot limit will be investigated in 2018.

Mauzy Lake

Largemouth Bass Sampling

Electrofishing to assess the largemouth bass population at Mauzy was conducted in April (Tables 23, 25-27). Over the last 3-4 years the catch rate of largemouth less than 12.0 in has increased while the catch rate of bass over 15.0 in has decreased. This trend continued in 2017 with the exception of the catch rate for largemouth 12.0-15.0 in, which increased. Age-growth analysis was conducted in October 2015 and indicated length at age data had declined dramatically when compared to age-growth analysis in 2012 and prior samples. Annual sampling continue to monitor this trend and age data will be collected again in 2018. Due to multiple drawdowns for repair work, vegetation control, and an attempted shad kill, the lake has not maintained a normal pool for multiple consecutive years since 2009. A few consecutive years with a stable normal pool should allow for a determination of the direction of this fishery.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations was conducted in April (Tables 28-32). Both bluegill and redear sunfish catch rates have been variable over the last few years, but the general trend has been a decrease in the catch rate of bluegill and an increase in the catch rate of redear sunfish. This trend persisted in 2017. In 2017, a total of 186 bluegill (248.0 fish/hr) and 338 redear sunfish (450.7 fish/hr) were collected in 0.75 hours of electrofishing. While bluegill have historically been sampled in mid-May, an earlier April sampling date was selected in 2017 due to an abundance of shoreline Eurasian watermilfoil present in mid-May that makes efficient netting difficult. The earlier sampling date could explain part of the increase in the number of redear and decrease in the number of bluegill collected in 2017, but this trend has also been observed over the last few years during the traditional mid-May sampling time.

Bluegill were last collected for age-growth analysis in October 2015. Mean length at age was lower for each age class when compared to the preceding collection in 2012. In 2015, the mean length at age-2 at capture and the number of years to reach 6.0 in were both some of the worst recorded to date.

Redear sunfish were stocked in Lake Mauzy in 2004 and 2005, but few redear sunfish were collected prior to 2010. Since 2010, the general trend has been an increase in the catch rate of redear sunfish. Despite this continued increase, no redear sunfish greater than 9.0 in have been collected. Redear sunfish were last collected for age-growth analysis with bluegill in October 2015. Age data suggested growth has continually slowed at each age class over the last 8 years. As the catch rate has increased, redear seem to be plateauing in the 8.0- to 9.0-in range.

Intensive sampling of the largemouth bass, bluegill and redear sunfish populations, including age data, will be conducted during 2018 to better define these populations and develop a management strategy moving forward.

Carpenter Lake

Largemouth Bass

Largemouth bass were sampled at Carpenter Lake in April 2017 (Tables 23, 33-35). Total CPUE was within the range of previous samples. Catch rate for fish 12.0-14.9 in was the highest observed since 1999 (CPUE 100.0 fish/hr), yet catch rates for all other length groups was lower than 2016. Bass for age-growth analysis were last collected in 2015. The 2015 growth rate had declined by 1.0 in since 2006. Age-growth data will again be collected in 2018 to see if mean length continues to decline. It will also provide baseline data prior to the introduction of saugeye in 2018. Saugeye will be stocked in 2018 in an attempt to control the gizzard shad population.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill/redear sunfish populations was conducted in April (Tables 30, 36-38). Catch rates for small bluegill (< 6.0 in) in 2017 were well above the 10-year average. Catch rates for 6.0- to 7.9-in bluegill had increased slightly from 2016 and are closer to anticipated values. Both 2013 and 2014 had exceptionally high catch rates for 6.0– to 7.9-in fish which have skewed the long term average. In the last decade only one bluegill greater than 8.0 in has been collected in Carpenter Lake. Gizzard shad were first discovered in the lake in 2006 and seem to be negatively affecting the bluegill population. After two failed shad eradication efforts, saugeye will be stocked at 50 fish/acre beginning in 2018 in an attempt to reduce the number of gizzard shad and small crappie. This reduction should positively affect bluegill growth and produce bluegill greater than 8.0 inches in the near future. Bluegill age and growth data will be collected in 2018 to establish baseline data prior to saugeye introduction.

Fifty-two redear sunfish were collected in April in conjunction with bluegill sampling. Overall, catch rates for all length groups increased from 2016 and fall within expected ranges. Redear sunfish less than 3.0 in have yet to be found in collections since 2010. That is likely a result of sampling inefficiencies rather than lack of reproduction. This is evidenced by the large increase in 3.0– to 5.9-in fish observed this year. Numbers remain fairly low but quality fish are available. Redear sunfish will be collected in conjunction with bluegill for age-growth analysis in 2018.

New Kingfisher Lakes

Largemouth Bass

Electrofishing to assess the largemouth bass population at New Kingfisher Lake was conducted in April and October (Tables 23, 39 – 42). The April sampling was the first standardized sample collected since 2012. A total of 55 largemouth bass were collected in 0.375 hours of sampling. Catch rates for bass less than 12.0 in are lower than prior to renovation, but this is to be expected soon after re-stocking. The catch rate of fish 12.0-14.9 in is similar to pre-renovation samples and the CPUE of fish greater than 15.0 in is the highest ever collected. The presence of these large fish would indicate either there is exceptional growth of the stocked fish (not likely), they are hold overs from the renovation that escaped the rotenone (plausible), or thoughtful anglers have provided theses additional fish, which is the most likely scenario. Regardless of the reason, several preferred-size fish are present in the population. During October, another 31 fish were collected ranging from 6.0 to 19.0 in. The largemouth bass fishery should continue to grow and develop over the next few years.

Bluegill Redear Sunfish Sampling

The sunfish population was sampled via electrofishing in April (Tables 30, 43 – 45). Total CPUE was the highest collected since 1999. Bluegill 3.0-5.9 in accounted for 90% of that total. As the largemouth bass population continues to grow, predation pressure will increase on the small bluegill enhancing their growth rate and size structure. Redear sunfish were not stocked following the renovation, but several have been collected. Their origin is questionable but presence is acceptable. Age data will be collected in the future once the populations have stabilized.

Despite a rotenone treatment of all remaining water following the renovation, gizzard shad were observed during both spring and fall samples. The bluegill population will be monitored to ensure adequate growth and size structure develops, and if not, shad control methods will be invoked. Potential options available for controlling the shad population will be wintertime rotenone treatments and/or saugeye stocking if that proves to be a successful method in Carpenter Lake.

Old Kingfisher Lake

Largemouth Bass

Electrofishing to assess the largemouth bass population was conducted at Old Kingfisher Lake in April and October (Tables 30, 46 – 49). A total of 72 bass were collected ranging from 4.0 to 20.0 in. Catch rates for each length group is similar to 2017 rates at New Kingfisher. As in New Kingfisher, there are several large fish present of unknown origin. Fewer fish were collected during the October sample but still ranged from 5.0 to 19.0 in. Weights were not collected at this time, but will be collected in the future with growth rate data.

Bluegill Redear Sunfish Sampling

The sunfish population at Old Kingfisher Lake was sampled via electrofishing in April (Tables 30, 50 – 52). Total bluegill CPUE was 1333.3 fish/hr with just over 70% made up of 3.0- to 5.9-in fish. Catch rate of 6.0- to 7.9-in fish (309.3 fish/hr) was also very good and higher than all but the two banner years at Carpenter Lake. There were no 8.0-in fish collected but some should be seen in 2018. Gizzard shad were noted during both spring and fall samples. We will keep an eye on the bluegill population to ensure progress continues, otherwise alternative strategies will need to be invoked. Two potential options for controlling the shad are winter shad eradications and saugeye stocking.

Old and New Kingfisher are now connected by a six-foot metal culvert and should presumably develop nearly identical fish populations. If, after several years, both Old and New Kingfisher show similar population characteristics, sampling data may be combined and reported together as Kingfisher Lake.

*Old and New Kingfisher were drawn down December 2012 to complete renovation work. The lakes were allowed to dry during 2013 and renovation work was completed during the summer of 2014. As water levels increased, channel catfish, bluegill and advanced fingerling largemouth bass were stocked in fall of 2015.

Washburn Lake

Largemouth Bass

Electrofishing to assess the largemouth bass population at Washburn Lake was conducted in April and October (Tables 23, 53 – 59). The population has been relatively stable over the past several years and comprised mostly of fish less than 12.0 in with one or two larger fish collected. Catch rate for bass less than 8.0 in was the highest since 2001. Catch rate for 8.0- to 11.9-in (306.7 fish/hr) and 12.0- to 14.9-in (42.7 fish/hr) fish increased from 2016. Total CPUE was the highest recorded since renovation. Largemouth bass were sampled again during October to determine condition factor and age and growth statistics. Condition factors (Wr) are within the range typically encountered in NWFD lakes. Mean length at age remains similar to the last age data collection (2010) and fish continue to be stockpiling at approximately 12.0 in. The fertility issue has yet to be identified or resolved and water clarity can range from gin clear to pea soup within a week’s time. Submerged aquatic vegetation has also become an issue that requires chemical treatment multiple times a year. There are likely several factors contributing to the poor quality of this fishery. Treating vegetation in a timely manner to facilitate improved bass foraging, and angler access, will be attempted. Using trail cameras to document angler usage will be discussed. Lake renovation plans to dredge and deepen extensive shallow areas will also be discussed and will take place when the water control structure is replaced.

Bluegill Redear Sunfish Sampling

The sunfish population was sampled via electrofishing in May (Tables 30, 60 – 62). Almost equal numbers of bluegill and redear sunfish were collected in 2017. Bluegill catch rate is similar to previous collections but distributed a little differently than usual. Washburn is the only state lake sampled in NWFD to produce 8.0-in bluegill in 2017. Bluegill age and growth statistics have not been determined since 2009 and data will be collected in 2018. Redear sunfish have been on a general rise since 2012 but catch rates are similar to previous collections.

Honeycomb Lake (Peabody WMA)

Electrofishing to assess the sunfish population at Honeycomb Lake was conducted in April (Tables 30 and 63). We have been trying to establish a trophy sunfish fishery in this lake over the last several years. Redear sunfish have been stocked on two occasions, and spawning gravel, and dense habitat has been added. The April sample allowed us to collect more redear sunfish than usual but did not seem to affect our bluegill catch. Fertilization efforts will continue in 2018 and more fish habitat will be added as time allows. We hope to get a gravel road and boat ramp constructed to facilitate easier access for management activities. The fishery is progressing well and efforts will continue.

Lil Gill Lake (Peabody WMA)

Electrofishing to assess the sunfish population at Lil Gill Lake was conducted in April (Tables 30 and 64). We have been trying to establish a trophy sunfish fishery in this lake over the last several years. We collected more redear sunfish than bluegill in 2017. The fishery seems to be progressing well and efforts will continue. The lake will be fertilized again in 2018 and fish habitat will be added as time allows.

Table 1. Annual summary of sampling conditions by waterbody, species sampled and date for Northwestern Fishery District lakes during 2017.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Nolin River Lake	LMB	5/8	930	Shock	Sunny, breezy, 65°	65.8	512.8	68"	Good	
Nolin River Lake	LMB	5/9	930	Shock	Sunny, windy (15 mph), 75°	68	513	40"	Good	
Nolin River Lake	LMB	5/10	930	Shock	Sunny, breezy (10-15 mph), 80°	71.6	513.1	48"	Good	
Nolin River Lake	LMB	10/18	930	Shock	Sunny, breezy, 60°	70.5	512.8	24-58"	Fair	Collect fish for age/growth
Rough River Lake	HSB	5/31	1030	Temp/DO	Sunny, 85°		499.7		Good	
Rough River Lake	HSB	6/14	1030	Temp/DO	Sunny, 90°		495.2	60"	Good	
Rough River Lake	HSB	7/18	930	Temp/DO	Sunny, hot, light breeze, 90°		497.2		Good	
Rough River Lake	HSB	9/8	930	Temp/DO	Sunny, clear, 60°		495.9	54"	Good	
Rough River Lake	HSB	11/27-28	900	Gill Net	Sunny, breezy, 50s	49-53	490.7-488.3	30-42	Good	Urban on NF, NWFD on SF, 12 net nights
Lake Malone	LMB	4/18	1030	Shock	Mostly cloudy, 75°	68.5	+1'	21"	Fair - Poor	Water murky, very difficult to see fish
Lake Malone	LMB	4/19	1000	Shock	Mostly sunny, breezy (10-15mph), 75°	70.5	+1'	22"	Fair - Poor	Water murky, very difficult to see fish
Mauzy Lake	LMB	4/12	1000	Shock	Sunny, light breeze (5-8mph)	62.2	pool	48"	Good	
Mauzy Lake	BG/RE	4/28	1030	Shock	Cloudy, windy, 58°	67.1	+ 1'	36"	Good	
Carpenter Lake	LMB	4/13	900	Shock	Sunny, 60°	64.8	pool	32"	Good	
Carpenter Lake	BG/RE	4/26	1000	Shock	Sunny, breezy, 75°	69.1	pool	38"	Good	
New Kingfisher Lake	LMB	4/13	1130	Shock	Sunny, 75-80°	65.8	+ 4"	30"	Good	
New Kingfisher Lake	LMB	10/17	1300	Shock	Sunny, 60°	67.3	pool	20"	Good	
New Kingfisher Lake	BG/RE	4/26	1230	Shock	Partly sunny, windy 77°	73.4	pool	34"	Good	
Old Kingfisher Lake	LMB	4/13	1030	Shock	Sunny, 70°	66.7	+ 4"	33"	Good	
Old Kingfisher Lake	LMB	10/17	1200	Shock	Sunny, 60°	67.3	pool	20"	Good	
Old Kingfisher Lake	BG/RE	4/26	1130	Shock	Sunny, windy, 75°	72.4	pool	29"	Good	
Washburn Lake	LMB	4/17	1000	Shock	Cloudy, 75°	72.7	pool	34"	Good	
Washburn Lake	LMB	10/17	930	Shock	Sunny, 55°	67.3	pool	56"	Fair	Water clear, vegetation very thick
Washburn Lake	BG/RE	5/2	1000	Shock	Sunny, windy (15-20mph), 68°	65.3	pool	75"	Fair	Very clear water, milfoil thick around edges
Honeycomb Lake (PWMA)	BG/RE	4/25	1000	Shock	Sunny, light breeze, 70°	67.8	pool	64"	Good	Beavers have raised normal pool approx 2'
Lil Gill Lake (PWMA)	BG/RE	4/25	1100	Shock	Sunny, light breeze, 70°	67.3	pool	84"	Fair	Water clear, fish running from boat

Table 2. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 5.0 hours of 30-minute diurnal electrofishing at Nolin River Lake in May 2017.

		Inch class																							
Area	Species	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	SE
Upper	Largemouth bass	1	2	6	11	28	75	57	37	22	28	44	74	48	27	11	1	2	6	3	1		484	193.6	19.0
	Spotted bass	1							2	2	2	7	3	1									18	7.2	2.6
Mid	Largemouth bass		3	4	7	14	30	31	19	19	18	23	51	63	31	9	8	1	1	3		1	336	134.4	24.0
	Spotted bass		3		2	2		3	5	7	8	10	8	3									51	20.4	4.5
Total	Largemouth bass	1	5	10	18	42	105	88	56	41	46	67	125	111	58	20	9	3	7	6	1	1	820	164.0	17.5
	Spotted bass	1	3		2	2		3	7	9	10	17	11	4									69	13.8	3.3

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Table 3. PSD and RSD[a] values obtained for each black bass species taken in spring electrofishing samples in each area of Nolin River Lake during May 2017; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ stock	PSD	RSD[b]
Upper	Largemouth bass	361	60 (± 5)	14 (± 4)
	Spotted bass	17	76 (± 21)	6 (± 11)
Mid	Largemouth bass	278	69 (± 6)	19 (± 4)
	Spotted bass	44	66 (± 14)	7 (± 7)
Total	Largemouth bass	639	64 (± 4)	16 (± 3)
	Spotted bass	61	69 (± 11)	6 (± 6)

[a] Largemouth bass = 8 in, spotted bass = 7 in

[b] Largemouth bass = RSD$_{15}$, spotted bass = RSD$_{14}$.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Nolin River Lake during spring electrofishing 1999-2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	36.2	8.8	46.2	8.0	60.6	4.0	21.0	2.3	1.6	0.4	164.0	17.4
2016	19.6	5.3	23.8	6.0	37.1	6.6	12.0	2.6	1.6	0.6	92.4	14
2015												
2014	21.4	2.3	29.2	2.5	64.0	5.4	15.0	1.7	1.4	0.6	129.6	6.9
2013												
2012	76.9	9.6	52.7	6.4	53.8	4.7	16.0	2.1	0.2	0.2	199.3	14.8
2011*												
2010*												
2009	30.0	5.7	25.1	4.3	36.0	3.6	5.3	1.1	0.7	0.3	96.4	7.1
2008	50.4	7.9	45.8	5.4	34.2	4.3	11.3	1.6	3.6	1.0	141.8	11.2
2007	53.3	10.0	17.3	2.2	27.6	4.9	8.2	1.3	0.7	0.5	106.4	14.2
2006	17.8	2.8	15.8	1.5	23.6	2.7	7.6	1.5	0.4	0.4	64.7	5.7
2005	27.1	5.0	27.1	4.1	25.3	3.9	14.2	2.3	0.4	0.3	93.8	10.1
2004	23.7	1.6	16.4	3.7	16.2	2.4	8.9	2.6	0.4	0.3	65.3	6.8
2003	12.9	3.7	10.2	2.3	8.9	2.2	7.6	2.0	0.0		39.6	9.2
2002	4.0	1.3	9.8	2.6	8.0	3.1	8.0	1.6	0.0		29.8	5.4
2001	5.5	1.7	27.0	7.4	18.0	3.3	9.0	2.8	0.0		59.5	11.7
2000	9.5	3.1	35.0	6.3	41.5	5.1	14.0	4.3	0.5	0.5	100.0	13.1
1999	n/d		61.3	16.8	56.9	9.2	8.0	1.8	0.4	0.4	126.2	26.0

* Unable to sample due to high water

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Table 5. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 2.0 hours of 30-minute diurnal electrofishing at Nolin River Lake in October 2017.

		Inch class																				
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	SE
Upper	Largemouth bass																					
	Spotted bass																					
Mid	Largemouth bass	4	65	23	14	41	33	25	15	15	11	19	13	14	11	11	7		1	322	161.0	70.1
	Spotted bass	1	5	6	5	5	5	5	1	3	2	5	2	1						46	23.0	3.9
Total	Largemouth bass																					
	Spotted bass																					

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Table 6. Number of fish and relative weight (Wr) for length groups of largemouth bass collected at Nolin River Lake during October 2017. Standard errors are in parentheses.

		Length group					
Species	Area	8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Upper						
Largemouth bass	Lower						
Largemouth bass	Total	54	92 (1)	46	88 (1)	30	91 (2)

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Table 7. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Nolin River Lake in October 2017.

Year		Age						
class	No.	1	2	3	4	5	6	7
2016	32	7.5						
2015	12	5.9	10.7					
2014	9	6.5	10.6	12.7				
2013	4	7.7	11.1	12.8	14.0			
2012	6	6.2	10.5	12.3	13.5	14.6		
2011	2	5.4	10.0	11.5	13.2	14.5	15.8	
2010	1	4.8	10.5	12.0	13.0	14.0	15.1	16.3
Mean		6.9	10.6	12.5	13.6	14.5	15.5	16.3
No.	66	66	34	22	13	9	3	1
Smallest		3.6	8.7	11.2	12.7	13.8	15.1	16.3
Largest		10.2	13.0	14.2	15.4	16.1	16.1	16.3
SE		0.2	0.2	0.1	0.2	0.3	0.3	
95% CI (±)		0.3	0.3	0.3	0.4	0.5	0.6	

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Table 8. Age-frequency and CPUE (fish/nn) per inch class of largemouth bass collected in 2.0 hours of electrofishing at Nolin River Lake during October 2017.

	Inch class																			
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	No.	CPUE	SE	Age (%)
0	4	65	23	14	41	33											180	90.0		56.1
1							25	10	15	9	13	3	1				76	37.9	17.4	23.7
2								5		2	4	3	5	2			21	10.4	3.5	6.5
3											2	5	4	2			13	6.5	1.6	4.1
4												3		2	3		8	4.2	0.9	2.5
5													4	4	4		12	6.1	0.8	3.7
6															4	3	7	3.6	0.6	2.2
7																4	4	1.7	0.7	1.2
Total	4	65	23	14	41	33	25	15	15	11	19	14	14	11	11	7	321			
(%)	1.2	20.2	7.2	4.4	12.8	10.3	7.8	4.7	4.7	3.4	5.9	4.4	4.4	3.4	3.4	2.2				100

nwd1lmb.d17, nwd1lmba.d17

Table 9. Population assessment for largemouth bass based on spring electrofishing at Nolin River Lake from 2000-2017 (scoring based on statewide assessment).

Year	Mean length age 2+ at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017	12.9 (3)	58.8 (4)	60.6 (4)	21.0 (4)	1.6 (4)	0.968	58.7	19	Excellent
2016		23.1 (3)	37.1 (4)	12.0 (2)	1.6 (4)			> 14	G - E
2015									
2014		22.2 (2)	64.0 (4)	15.0 (3)	1.4 (4)			> 14	G - E
2013									
2012	13.4 (4)	82.9 (4)	53.8 (4)	16.0 (3)	0.2 (2)	0.582	44.1	17	Excellent
2011*									
2010*									
2009	12.6 (3)	29.2 (3)	36.0 (4)	5.3 (1)	0.7 (3)			14	Good
2008	12.6 (3)	49.7 (4)	34.2 (4)	11.3 (2)	3.6 (4)	0.553	42.5	17	Excellent
2007	12.6 (3)	51.6 (4)	27.6 (3)	8.2 (2)	0.7 (3)	0.609	45.0	15	Good
2006	12.6 (3)	17.0 (2)	23.6 (3)	7.6 (2)	0.4 (2)	0.447	36.0	12	Fair
2005	13.1 (3)	26.2 (3)	25.3 (3)	14.2 (3)	0.2 (2)	0.617	46.0	14	Good
2004	13.1 (3)	22.9 (3)	16.2 (1)	8.9 (2)	0.4 (2)	0.684	49.5	11	Fair
2003	13.1 (3)	11.3 (1)	8.9 (1)	7.6 (2)	0.0 (1)	0.534	41.4	8	Poor
2002	13.1 (3)	3.8 (1)	8.0 (1)	8.0 (2)	0.0 (1)			8	Poor
2001	13.1 (3)	5.0 (1)	18.0 (2)	9.0 (2)	0.0 (1)			9	Fair
2000	13.1 (3)	9.0 (1)	41.4 (4)	14.0 (3)	0.5 (3)			14	Good

* Unable to sample due to high water

Table 10. Length frequency and CPUE (fish/nn) for hybrid striped bass collected in 12 net-nights of sampling at Rough River Lake during November 2017.

	Inch class																			
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE	SE
Hybrid striped bass	17	35	35	80	22			2	34	61	16	25	31	12	13	5	3	391	32.6	3.8

nwd2gn.d17

Table 11. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Rough River Lake during November 2017. Standard errors are in parentheses.

	Length group					
	8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
Species	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	172	93 (1)	2	88 (5)	201	86 (1)

nwd2gn.d17

Table 12. Mean back calculated lengths (in) at each annulus for hybrid striped bass collected at Rough River Lake in November 2017.

		Age										
Year class	No.	1	2	3	4	5	6	7	8	9	10	11
2016	98	11.8										
2015	45	11.2	16.5									
2014	31	9	15.7	18.1								
2013	11	10.2	15.9	18.6	20.3							
2012	15	8.4	14.9	17.9	19.6	20.7						
2011	1	10.6	16.4	19.0	20.2	21.1	22.3					
2010	1	7.0	14.1	16.3	17.6	18.6	19.7	20.7				
2009	1	9.8	16.7	18.7	19.7	20.8	21.6	22.2	22.8			
2006	1	7.2	11.4	13.0	14.3	15.7	16.3	17.9	18.9	19.9	20.5	21.5
Mean		10.9	15.9	18.1	19.6	20.4	20.0	20.3	20.9	19.9	20.5	21.5
No.	204	204	106	61	30	19	4	3	2	1	1	1
Smallest		6.6	11.1	13.0	14.3	15.7	16.3	17.9	18.9	19.9	20.5	21.5
Largest		16.9	18.0	20.1	21.6	21.9	22.3	22.2	22.8	19.9	20.5	21.5
SE		0.1	0.1	0.1	0.2	0.3	1.3	1.2	1.9			
95% CI (±)		0.2	0.2	0.2	0.5	0.6	2.6	2.5	3.8			

nwd2hsba.d17

Table 13. Age-frequency and CPUE (fish/nn) per inch class of hybrid stiped bass collected in 12 net-nights of sampling at Rough River Lake during November 2017.

	Inch class																				
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	No.	CPUE	SE	Age (%)
0	17	35	35	80	22													189	15.8		48.3
1								2	34	60	2							98	8.2	1.2	25.1
2										1	10	17	16					44	3.7	0.8	11.3
3											4	8	13	4	2			31	2.5	0.5	7.9
4													2	1	6	1	1	11	0.9	0.3	2.8
5														6	5	3		14	1.2	0.4	3.6
6																	1	1	0.1	<0.1	0.2
7														1				1	0.1	<0.1	0.2
8																	1	1	0.1	<0.1	0.2
11																1		1	0.1	<0.1	0.2
Total	17	35	35	80	22			2	34	61	16	25	31	12	13	5	3	391			
(%)	4.4	8.9	8.9	20.5	5.6			0.5	8.7	15.6	4.1	6.4	7.9	3.1	3.3	1.3	0.8				100

nwd2gn.d17, nwd2hsba.d17

Table 14. Population assessment for hybrid striped bass based on fall gill net sampling at Rough River Lake from 1999-2017 (scoring based on statewide assessment).

Year	CPUE (excluding age 0)	Mean length age 2+ at capture	CPUE ≥ 15.0 in	CPUE age 1	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017	16.8 (3)	18.5 (4)	16.7 (4)	8.2 (4)	0.635	47.0	15	Excellent
2016	22.3 (3)	17.6 (3)	21.0 (4)	4.8 (3)	0.523	40.7	13	Good
2014	43.8 (4)	16.8 (2)	32.6 (4)	14.2 (4)	0.457	36.7	14	Excellent
2012	35.1 (4)	16.7 (2)	25.1 (4)	11.6 (4)	0.717	51.2	14	Excellent
2010	60.2 (4)	16.8 (2)	34.5 (4)	28.9 (4)	0.525	40.8	14	Excellent
2008	25.1 (4)	16.3 (1)	19.3 (4)	6.3 (3)	0.544	42.0	12	Good
2006	23.7 (4)	16.9 (2)	14.5 (4)	8.9 (4)	0.447	36.1	14	Excellent
2003	33.9 (4)	16.5 (2)	30.9 (4)	3.1 (2)	0.680	49.8	12	Good
2001	29.9 (4)	15.9 (1)	16.8 (4)	13.1 (4)			13	Good
1999	26.4 (4)	16.5 (2)	18.5 (4)	8.1 (4)			14	Excellent

Table 15. Length frequency and CPUE (fish/nn) for channel catfish collected in 12 net-nights of sampling at Rough River Lake during November 2017.

	Inch class																		
Species	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	CPUE	SE
Channel catfish	1	1	1	6	1	3	2	4	6	8	9	4	3	5	1	1	56	4.7	0.9

nwd2gn.d17

Table 16. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Rough River Lake during November 2017. Standard errors are in parentheses.

	Length group					
	11.0-15.9 in		16.0-23.9 in		≥ 24.0 in	
Species	No.	Wr	No.	Wr	No.	Wr
Channel catfish	12	83 (3)	41	90 (1)	2	103 (3)

nwd2gn.d17

Table 17. Dissolved oxygen (ppm) and temperature profile conducted at three sites on Rough River Lake on 31 May 2017.

	Site location					
	Lower		Middle		Upper	
Depth (ft.)	Temp	DO	Temp	DO	Temp	DO
Surface	26.0	12.9	27.2	11.9	27.6	14.7
2	25.8	12.8	27.1	11.2	26.0	16.8
4	25.5	13.6	25.8	12.9	24.9	14.0
6	25.2	13.6	25.6	12.0	23.9	11.8
8	24.6	13.7	24.4	9.2	19.9	4.0
10	23.4	8.8	23.2	5.9	19.1	4.0
12	22.5	4.2	21.7	3.7	17.8	4.4
14	21.7	2.2	20.7	3.5	17.5	4.6
16	21.3	1.4	20.1	3.5	17.4	4.7
18	20.9	1.0	19.8	3.4	17.3	4.9
20	20.5	0.7	19.1	3.2	17.2	5.0
22						
25	19.6	0.7	18.8	2.9	17.2	5.0
26						
28			Depth 29'		Depth 25'	
30	18.0	0.7				
32						
34						
36						
38						
40						
45	Depth 48'					
50						

Table 18. Dissolved oxygen (ppm) and temperature profile conducted at three sites on Rough River Lake on 14 June 2017.

	Site Location					
	Lower		Middle		Upper	
Depth (ft.)	Temp	DO	Temp	DO	Temp	DO
Surface	29.1	7.9	30.3	8.7	29.6	10.3
2	29.0	7.8	29.5	8.8	29.4	9.7
4	29.0	7.8	28.7	9.0	28.8	10.9
6	29.0	7.8	27.4	8.2	28.4	10.4
8	28.0	7.8	26.5	7.2	26.3	9.4
10	26.2	6.9	25.9	5.7	24.3	5.4
12	24.9	4.0	24.3	1.7	21.3	3.9
14	23.7	1.0	23.5	0.9	19.5	3.0
16	22.8	0.4	21.8	0.6	19.4	2.6
18					19.1	1.9
20	20.8	0.4	19.6	0.5	18.9	1.4
22						
25	19.7	0.4	18.8	0.6	18.3	0.7
26						
28					Depth 25'	
30			Depth 30'			
32						
34						
36						
40						
45	Depth 45'					
50						

Table 19. Dissolved oxygen (ppm) and temperature profile conducted at three sites on Rough River Lake on 18 July 2017.

	Site location					
	Lower		Middle		Upper	
Depth (ft.)	Temp	DO	Temp	DO	Temp	DO
Surface	30.4	7.0	31.0	6.6	31.0	8.8
2	30.5	6.6	30.6	6.9	30.6	9.0
4	30.3	6.8	30.2	7.0	30.3	8.9
6	30.2	6.7	30.2	6.7	30.1	8.1
8	30.1	6.8	29.9	5.2	29.7	7.6
10	29.7	6.5	29.5	4.0	28.6	6.4
12	29.0	3.9	28.5	2.7	25.6	4.6
14	27.4	1.4	27.6	2.1	22.8	4.3
16	26.4	0.7	25.7	1.6	21.7	4.0
18	25.6	0.6	24.3	0.9	20.9	3.4
20	25.0	0.6	22.4	0.3	20.6	2.5
22					20.5	2.5
25	23.8	0.6	21.1	0.4		
26					20.2	1.3
28						
30						
32			Depth 31'		Depth 26.5'	
34						
36						
38						
40						
45	Depth 55'					
50						

Table 20. Dissolved oxygen (ppm) and temperature profile conducted at three sites on Rough River Lake on 8 September 2017.

	Site location					
	Lower		Middle		Upper	
Depth (ft.)	Temp	DO	Temp	DO	Temp	DO
Surface	24.3	4.6	24.5	6.2	24.1	10.1
2	24.1	4.6	24.4	6.4	22.5	11.3
4	24.1	4.6	23.8	6.4	22.1	9.9
6	24.0	4.4	23.7	6.3	22.0	10.1
8	24.0	4.4	23.7	6.3	21.7	9.9
10	24.0	4.5	23.7	6.3	21.7	8.5
12	24.0	4.6	23.7	6.2	18.6	5.2
14	24.0	4.6	23.6	6.2	18.2	5.1
16	24.0	4.6	23.4	5.4	17.7	5.0
18	24.0	4.5	22.9	3.9	17.6	5.1
20	24.0	4.6	20.8	1.9	17.5	5
22	24.0	4.3	20.2	1.7	17.5	4.6
25	24.0	4.4	19.9	1.7	17.5	3.7
26	24.0	4.3	19.9	1.6		
28	24.0	4.2				
30	24.0	4.2	19.8	1.5		
32	24.0	3.9	Depth 30'		Depth 24'	
34	23.9	2.7				
36	23.2	0.4				
38	22.8	0.3				
40	22.3	0.2				
45	Depth 45'					
50						

Table 21. Length frequency and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing at Lake Malone in April 2017.

	Inch class																						
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	SE
Largemouth bass	3	8	10	9	5	19	16	23	22	35	38	39	23	10	14	14	18	8	4	2	320	128.0	16.8

nwd3psd.d17

Table 22. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Malone 1999-2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	14.0	3.2	32.0	6.8	44.8	8.1	37.2	9.2	5.6	1.3	128.0	16.8
2015	18.8	2.7	81.6	7.7	60.8	5.3	42.8	7.2	8.4	1.2	204.0	17.2
2014	9.6	1.3	44.4	9.6	23.2	4.6	29.8	3.3	5.0	0.6	107.0	16.7
2012	46.4	18.4	123.6	18.1	48.8	10.9	48.8	10.3	2.8	1.0	267.6	44.5
2011	45.6	10.3	56.0	7.3	35.2	7.7	34.4	6.8	4.0	1.1	171.2	26.8
2010	37.2	8.8	49.6	5.0	49.6	5.4	62.0	7.1	3.6	1.6	198.4	16.3
2009	10.0	1.4	29.6	4.4	51.2	7.6	37.2	3.6	5.6	0.4	128.0	11.7
2008	18.8	6.5	78.8	6.6	77.2	5.0	43.6	8.1	6.4	1.5	218.4	12.4
2007	29.2	4.0	80.4	10.4	30.8	2.0	37.6	10.3	3.6	1.3	178.0	17.8
2006	31.6	3.7	81.6	14.3	22.4	2.1	28.0	5.9	5.2	1.6	163.6	19.8
2005	32.4	4.8	69.2	14.3	32.0	8.7	53.6	5.7	8.4	1.2	187.2	30.1
2004	28.4	3.9	53.6	5.7	26.4	4.2	53.2	3.9	6.0	1.6	161.6	12.8
2003	57.0	3.3	76.5	6.8	35.0	5.0	57.5	4.9	9.5	2.8	226.0	12.1
2002[a]	8.6	3.3	43.4	5.0	43.4	8.5	41.7	7.6	8.0	3.0	137.1	17.5
2001[a]	18.0	8.1	66.0	12.0	50.0	8.0	31.3	6.3	0.7	0.7	165.3	15.6
2000[a]	13.3	3.4	46.0	4.2	51.3	7.8	24.0	4.0	2.0	0.9	134.7	14.5
1999[a]	n/d		48.7	9.8	61.3	7.0	23.3	4.9	2.7	1.3	133.3	12.7

[a] Nocturnal sample

nwd3psd.d17

Table 23. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples at Lake Malone, Carpenter Lake, Old and New Kingfisher lakes, Mauzy Lake and Washburn Lake during 2017; 95% confidence intervals are in parentheses.

Lake	Species	No. ≥ 8.0 in	PSD	RSD_{15}
Malone	Largemouth	285	72 (± 5)	33 (± 5)
Mauzy	Largemouth	198	14 (± 11)	5 (± 2)
Carpenter	Largemouth	126	74 (± 8)	14 (± 6)
New Kingfisher	Largemouth	34	97 (± 6)	68 (± 17)
Old Kingfisher	Largemouth	25	96 (± 8)	60 (± 20)
Washburn	Largemouth	133	14 (± 6)	2 (± 2)

nwd3psd.d17
nwd4psd.d17
nwd5psd.d17
nwd6psd.d17
nwd7psd.d17
nwd8psd.d17

Table 24. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous Mortality (z)	Annual Mortality (A)%	Total score	Assessment Rating
2017		12.8 (1)	44.8 (3)	37.2 (4)	5.6 (4)			≥ 13	Good
2015	10.8 (3)*		60.8 (4)	42.8 (4)	8.4 (4)			≥ 16	G - E
2014		7.8 (1)	23.2 (2)	29.8 (3)	5.0 (4)			≥ 11	F - G
2012		31.2 (2)	48.8 (3)	48.8 (4)	2.8 (3)			≥ 13	Good
2011		41.2 (2)	35.2 (3)	34.4 (4)	4.0 (4)			≥ 14	G - E
2010	10.4 (2)	15.1 (1)	49.6 (3)	62.0 (4)	3.6 (3)	0.397	32.7	13	Good
2009	10.3 (2)	8.8 (1)	51.2 (4)	37.2 (4)	5.6 (4)	0.293	25.4	15	Good
2008	10.3 (2)	16.4 (2)	77.2 (4)	43.6 (4)	6.4 (4)	0.357	30.0	16	Good
2007	10.3 (2)	29.2 (2)	30.8 (2)	37.6 (4)	3.6 (3)	0.330	28.1	13	Good
2006	11.5 (4)	20.2(2)	22.4 (2)	28.0 (3)	5.2 (4)	0.526	40.9	15	Good
2005	11.5 (4)	19.0 (2)	32.0 (2)	53.6 (4)	8.4 (4)	0.387	32.0	16	Good
2004	11.5 (4)	19.0 (2)	26.4 (2)	53.2 (4)	6.0 (4)	0.365	31.1	16	Good
2003	11.5 (4)	35.0 (2)	35.0 (3)	48.0 (4)	8.5 (4)	0.416	34.1	17	Excellent
2002	11.5 (4)	6.0 (1)	43.4 (3)	41.7 (4)	8.0 (4)			16	Good
2001	12.9 (4)	14.0 (1)	50.0 (4)	31.3 (4)	0.7 (1)			14	Good

*Back calculated from age table

Table 25. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of diurnal electrofishing at Mauzy Lake in April 2017.

	Inch class																				
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	SE
Largemouth bass	30	27	2	24	80	20	25	34	21	5	4	1	2		2		1	2	1	281	374.7	34.7

nwd4psd.d17

Table 26. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Mauzy Lake during spring 1999-2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	110.7	17.3	212.0	14.0	40.0	4.6	12.0	2.3	5.3	1.3	374.7	34.7
2015	40.0	12.1	133.0	21.8	20.0	7.8	15.0	1.9	5.0	3.8	208.0	37.1
2014	65.0	7.2	110.0	3.5	21.0	3.4	35.0	5.7	13.0	6.8	231.0	8.4
2013	80.0	24.3	98.7	19.6	13.3	4.8	34.7	4.8	4.0	2.3	226.7	25.3
2012	96.0	16.5	42.0	2.6	20.0	4.9	40.0	9.1	15.0	3.4	198.0	12.8
2011	48.0	11.6	21.3	3.5	58.7	2.7	40.0	4.6	10.7	3.5	168.0	8.0
2010	26.7	3.5	78.7	13.1	21.3	2.7	44.0	10.1	17.3	8.1	170.7	26.7
2009[a]												
2008	104.0	31.4	147.0	16.3	21.0	5.0	83.0	9.3	7.0	1.9	355.0	48.2
2007	46.0	5.3	49.0	12.3	40.0	2.8	64.0	17.5	0.0		199.0	31.0
2006	68.0	14.1	40.0	4.0	24.0	4.0	60.0	4.6	0.0		192.0	21.2
2005	52.0	8.6	25.0	6.6	147.0	11.5	21.0	7.9	4.0	1.6	245.0	22.3
2004	20.0	9.2	132.0	2.3	5.3	1.3	6.7	1.3	0.0		164.0	10.6
2003[b]	98.6	18.7	163.2	31.9	73.6	6.1	20.8	6.4	2.8	2.8	356.3	58.7
2002[c]	36.0	14.1	169.3	40.6	9.3	1.3	6.7	2.7	1.3	1.3	221.3	45.4
2001[c]	12.0	2.3	246.7	53.5	26.7	10.7	4.0	2.3	0.0		289.3	64.2
2000[c]	37.3	5.8	224.0	20.5	2.7	1.3	5.3	3.5	0.0		269.3	25.3
1999[c]	n/d		165.3	8.7	17.3	5.4	4.0	2.3	1.3	1.3	186.7	14.1

[a] Lake drawn down for repairs in 2009

[b] Lake renovated in 2003

[c] Nocturnal sample

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Table 27. Population assessment for largemouth bass based on spring electrofishing at Mauzy Lake from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017		78.7 (4)	40.0 (3)	12.0 (2)	5.3 (4)			≥ 14	G - E
2015	10.2 (2)*		20.0 (2)	15.0 (2)	5.0 (4)			≥ 13	Good
2014		40.0 (2)	21.0 (2)	35.0 (4)	13.0 (4)			≥ 13	Good
2013		63.1 (3)	13.3 (1)	34.7 (4)	4.0 (4)			≥ 13	Good
2012	13.6 (4)[a]	74.0 (3)	20.0 (2)	40.0 (4)	15.0 (4)	0.965	61.9	17	Excellent
2011		61.3 (3)	56.7 (4)	40.0 (4)	10.7 (4)			≥ 16	G - E
2010			21.3 (2)	44.0 (4)	17.3 (4)			≥ 11	F -G
2009[b]									
2008	12.2 (4)	99.0 (4)	21.0 (2)	83.0 (4)	7.0 (4)	0.466	37.3	18	Excellent
2007	12.2 (4)	21.0 (2)	40.0 (3)	64.0 (4)	0.0 (0)	0.374	31.2	13	Good
2006	10.3 (2)	24.0 (2)	24.0 (2)	60.0 (4)	0.0 (0)	0.755	53.0	10	Fair
2005	10.3 (2)	34.0 (2)	147.0 (4)	21.0 (3)	4.0 (4)			15	Good
2004	10.3 (2)	2.7 (1)	5.3 (1)	6.7 (2)	0.0 (0)	0.884	58.7	6	Poor
2003[c]	10.3 (2)	86.8 (4)	73.6 (4)	20.8 (3)	2.8 (3)			16	Good
2002	10.3 (2)	25.3 (2)	9.3 (1)	6.7 (2)	1.3 (2)			9	Fair
2001	10.3 (2)	5.3 (1)	26.7 (2)	4.0 (2)	0.0 (0)			7	Poor

[a] Only one age-3 fish

[b] Lake drawn down for repairs in 2009

[c] Lake renovated in 2003

* Back calculated age table

Table 28. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected during 0.75 hour of electrofishing at Mauzy Lake in April 2017.

	Inch class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	SE
Bluegill	4	6	50	68	30	18	10		186	248.0	30.8
Redear sunfish			11	50	21	83	145	28	338	450.7	54.4

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Table 29. Spring electrofishing CPUE (fish/hr) for each length group of bluegill (2000-2017) and redear sunfish (2007-2017) collected at Mauzy Lake during spring samples.

Bluegill	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	13.3	7.9	197.3	24.4	37.3	9.61	0.0		0.0		248.0	30.8
2015	17.3	12.1	165.3	27.1	44.0	7.1	0.0		0.0		226.7	31.2
2014	10.3	2.3	253.7	55.6	104.0	21.0	0.0		0.0		368.0	69.1
2013	91.2	21.1	417.6	54.0	73.6	11.1	0.0		0.0		582.4	60.9
2012	23.0	7.8	553.0	108.5	55.0	14.3	0.0		0.0		631.0	126.7
2011	182.4	72.9	726.4	144.1	216.0	51.4	121.6	43.3	0.0		1246.4	195.0
2010	238.4	76.5	280.0	41.0	97.6	34.0	0.0		0.0		616.0	74.4
2009[a]												
2008[a]												
2007	101.3	11.1	621.3	39.6	38.7	8.9	0.0		0.0		761.3	44.5
2006	96.0	27.9	614.0	137.7	10.0	7.6	0.0		0.0		720.0	163.4
2005	289.7	45.5	596.2	101.3	14.1	5.8	0.0		0.0		900.0	86.6
2004	101.1	18.0	84.6	17.5	64.8	12.0	1.1	1.1	0.0		251.7	36.1
2003[b]												
2002	9.3	3.5	94.7	19.6	125.3	29.2	1.3	1.3	0.0		230.7	48.0
2001	5.3	3.5	65.3	16.2	137.3	27.9	1.3	1.3	0.0		209.3	40.7
2000	1.3	1.3	52.0	4.0	73.3	5.3	4.0	2.3	0.0		130.7	10.9

Redear	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	0.0		109.3	22.9	304.0	50.6	37.3	16.2	0.0		450.7	54.4
2015	0.0		140.0	17.4	254.7	53.9	18.7	7.4	0.0		413.3	59.5
2014	1.1	1.1	112.0	19.7	208.0	26.1	27.4	6.0	0.0		348.6	33.1
2013	0.0		72.0	11.0	161.6	26.0	65.6	15.5	0.0		299.2	40.8
2012	0.0		107.0	13.7	39.0	7.6	33.0	8.6	0.0		179.0	21.9
2011	3.2	2.0	8.0	6.2	32.0	32.0	35.2	26.4	0.0		78.4	65.3
2010	0.0		16.0	10.1	240.0	48.3		7.3	0.0		270.4	61.0
2009[a]												
2008[a]												
2007	2.7	1.7	41.3	13.1	14.7	3.8	6.7	5.2	0.0		65.3	12.6

[a] Lake drawn down for repairs in 2008-2009

[b] Lake renovated in 2003

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Table 30. PSD and RSD[a] values obtained for bluegill and redear sunfish collected in spring electrofishing samples at NWFD state-owned lakes during 2017; 95% confidence intervals are in parentheses.

Lake	Species	No.	PSD	RSD[a]
Mauzy	Bluegill	176	16 (± 6)	0
	Redear sunfish	327	53 (± 5)	0
Carpenter	Bluegill	389	32 (± 5)	0
	Redear sunfish	45	49 (± 15)	20 (± 12)
New Kingfisher	Bluegill	352	9 (± 3)	0
	Redear sunfish	22	31 (± 20)	0
Old Kingfisher	Bluegill	478	24 (± 4)	0
	Redear sunfish	19	16 (± 17)	5 (± 10)
Washburn	Bluegill	84	36 (± 10	17 (± 8)
	Redear sunfish	102	30 (± 9)	2 (± 2)
Honeycomb (PWMA)	Bluegill	34	85 (± 12)	50 (± 17)
	Redear sunfish	29	41 (± 19)	14 (± 13)
Lil Gill (PWMA)	Bluegill	26	65 (± 19)	19 (± 15)
	Redear sunfish	45	56 (± 16)	2 (± 4)

[a] Bluegill = RSD_8, redear = RSD_9

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nwd8bg.d17
nwd17bg.d17
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Table 31. Population assessment for bluegill based on spring electrofishing at Mauzy Lake from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			37.3 (2)	0.0 (1)			≥ 5	P - G
2015	3.4 (1)	≥5 (1)	44.0 (2)	0.0 (1)			5	Poor
2014			104.0 (4)	0.0 (1)			≥ 7	F - G
2013			73.6 (3)	0.0 (1)			≥ 5	P - G
2012	4.0 (2)	4-4+ (2)	55.0 (3)	0.0 (1)	0.884	58.7	8	Fair
2011			337.6 (4)	121.6 (4)			≥ 10	G - E
2010			97.6 (4)	0.0 (1)			≥ 7	F - G
2009[a]								
2008[a]								
2007	3.3 (1)	4-4+ (2)	38.7 (2)	0.0 (1)	0.642	35.8	6	Poor
2006	3.7 (2)	4-4+ (2)	10.0 (1)	0.0 (1)	0.755	53.0	6	Poor
2005	4.3 (2)	2-2+ (4)	14.1 (1)	0.0 (1)			8	Fair
2004	4.3 (2)	2-2+ (4)	65.9 (3)	1.1 (2)			11	Good
2003[b]								
2002	4.3 (2)	2-2+ (4)	126.7 (4)	1.3 (2)			12	Good
2001	4.3 (2)	2-2+ (4)	138.7 (4)	1.3 (2)			12	Good

[a] Lake drawn down for repairs in 2009

[b] Lake renovated in 2003

Table 32. Population assessment for redear sunfish based on spring electrofishing at Mauzy Lake from 2007-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	Years to 8.0 in	CPUE ≥ 8.0 in	CPUE ≥ 10.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			37.3 (4)	0.0 (1)			≥ 7	F - G
2015	5.9 (2)	≥ 6 (1)	18.7 (4)	0.0 (1)			8	Fair
2014			27.4 (4)	0.0 (1)			≥ 7	F - G
2013			65.6 (4)	0.0 (1)			≥ 7	F - G
2012	7.6 (4)	4-4+ (3)	33.0 (4)	0.0 (1)			12	Good
2011			35.2 (4)	0.0 (1)			≥ 7	F - G
2010			14.4 (3)	0.0 (1)			≥ 6	P - G
2009[a]								
2008[a]								
2007	8.2 (4)	3-3+ (4)	6.7 (2)	0.0 (1)	0.790	54.6	11	Good

[a] Lake drawn down for repairs in 2008-2009.

Table 33. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hours of 15-minute diurnal electrofishing at Carpenter Lake in April 2017.

	Inch class																							
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE	SE
Largemouth bass	3	3	5	8	5	3	9	6	15	28	31	16	4	3	3	3	1	2	0	1	1	150	200.0	38.6

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Table 34. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carpenter Lake 1999-2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	32.0	2.3	44.0	12.9	100.0	20.8	24.0	4.6	5.3	2.7	200.0	38.6
2016	97.3	31.5	57.3	5.8	65.3	11.4	33.3	5.3	12.0	6.1	254.3	41.9
2015	21.3	5.8	86.7	3.5	12.0	2.3	17.3	2.7	0.0		137.3	4.8
2014	16.0	6.7	131.2	17.6	48.0	13.2	30.4	5.9	12.8	5.4	225.6	37.0
2013	80.0	26.2	138.7	9.6	20.0	4.0	22.7	1.3	5.3	1.3	261.3	38.5
2012	40.0	16.7	74.7	15.0	46.7	7.4	22.7	12.7	1.3	1.3	184.0	46.7
2011	182.7	15.4	166.7	9.6	73.3	13.1	9.3	3.5	4.0	4.0	432.0	30.2
2010	73.3	19.4	198.7	39.6	10.7	5.8	12.0	4.6	2.7		294.7	34.7
2009	102.7	18.7	166.7	26.3	18.7	4.8	8.0	2.3	0.0		296.0	27.2
2008	136.0	17.7	229.0	28.8	9.0	2.5	11.0	4.1	1.0	1.0	385.0	50.3
2007	45.3	7.4	128.0	24.3	12.0	2.3	10.7	3.5	1.3		196.0	31.8
2006	97.3	12.0	134.7	8.7	24.0	1.3	9.3	2.3	0.0		265.3	55.4
2005	157.3	3.5	165.3	48.6	30.7	3.5	2.7	1.3	0.0		356.0	54.6
2004	80.0	16.7	128.0	28.0	22.7	3.5	21.3	8.7	2.7		252.0	47.7
2003	181.3	49.3	97.3	11.4	18.7	4.8	36.0	12.2	1.3		333.3	63.4
2002[a]	12.0	4.6	52.0	4.6	12.0	0.0	21.3	3.5	0.0		97.3	4.8
2001[a]	14.7	8.7	29.3	5.3	90.7	9.3	66.7	2.7	1.3		201.3	17.6
2000[a]	2.7	1.3	45.3	7.1	48.0	2.3	0.0				96.0	8.3
1999[a]	1.3	1.3	142.7	18.5	29.3	13.5	1.3	1.3			174.7	31.0

[a] Nocturnal sample

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Table 35. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017		34.7 (3)	100.0 (4)	24.0 (3)	5.3 (4)			≥ 15	G - E
2016		97.3 (4)	65.3 (4)	33.3 (4)	12.0 (4)			≥ 17	Excellent
2015	10.6 (2)*		12.0 (1)	17.3 (3)	0.0 (1)			≥ 8	P - F
2014		16.0 (2)	48.0 (4)	30.4 (4)	12.8 (4)			≥ 15	G - E
2013		69.3 (4)	20.0 (2)	22.7 (3)	5.3 (4)			≥ 14	G - E
2012		12.0 (2)	46.7 (4)	22.7 (3)	1.3 (2)			≥ 12	F - G
2011		182.7 (4)	73.3 (4)	9.3 (2)	4.0 (4)			≥ 15	G - E
2010	10.1 (1)	72.0 (4)	10.7 (1)	12.0 (2)	2.7 (3)	0.438	35.5	11	Fair
2009	10.3 (2)	97.9 (4)	18.7 (2)	8.0 (2)	0.0 (1)			11	Fair
2008	10.3 (2)	120.3 (4)	9.0 (1)	11.0 (2)	1.0 (2)	0.561	42.9	11	Fair
2007	10.3 (2)	39.9 (3)	12.0 (1)	10.7 (2)	1.3 (2)	0.560	42.9	10	Fair
2006	11.6 (4)	78.7 (4)	24.0 (2)	9.3 (2)	0.0 (1)	1.160	68.7	13	Good
2005	11.6 (4)	132.0 (4)	30.7 (3)	2.7 (1)	0.0 (1)			13	Good
2004	11.6 (4)	56.0 (4)	22.7 (2)	21.3 (3)	2.7 (3)	1.155	68.5	16	Good
2003	11.6 (4)	162.7 (4)	54.7 (4)	36.0 (4)	1.3 (2)	0.943	61.1	18	Excellent
2002	11.6 (4)	12.0 (2)	12.0 (1)	21.3 (3)	0.0 (1)			11	Fair
2001	11.6 (4)	8.0 (2)	90.7 (4)	66.7 (4)	1.3 (2)			16	Good

* Back calculated age table

Table 36. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.75 hour of electrofishing at Carpenter Lake in April 2017.

	Inch class												
Species	1	2	3	4	5	6	7	8	9	10	Total	CPUE	SE
Bluegill	2	65	87	124	50	88	40				456	608.0	84.3
Redear sunfish			7	14	1	8	5	8	8	1	52	69.3	19.8

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Table 37. Spring electrofishing CPUE (fish/hr) for each length group of bluegill (1999-2017) and redear sunfish (2010-2017) collected at Carpenter Lake during spring samples.

Bluegill	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	89.3	27.9	348.0	38.8	170.7	22.0	0.0		0.0		608.0	84.3
2016	8.0	3.6	133.3	30.5	156.0	25.0	0.0		0.0		297.3	52.5
2015	2.7	1.7	125.3	17.9	220.0	52.9	0.0		0.0		348.0	65.5
2014	5.3	4.0	352.0	34.6	332.0	34.1	1.3		0.0		690.7	49.7
2013	20.0	9.2	138.7	27.1	312.0	42.5	0.0		0.0		470.7	70.8
2012	1.6	1.6	144.0	31.9	147.2	22.3	0.0		0.0		292.8	49.7
2011	16.0	10.4	400.0	157.5	180.8	50.5	0.0		0.0		596.8	214.4
2010	10.7	6.4	100.0	18.6	101.3	19.0	0.0		0.0		212.0	30.8
2009	17.3	9.6	124.0	24.4	140.0	17.9	0.0		0.0		281.3	42.9
2008	0.0		88.0	18.8	150.0	50.7	0.0		0.0		238.0	68.5
2007	2.7	2.7	61.3	17.7	168.0	38.5	1.3	1.3	0.0		233.3	9.1
2006	1.3	1.3	57.3	10.0	102.7	12.1	0.0		0.0		161.3	21.3
2005	12.1	9.8	190.1	17.1	98.9	6.8	18.7	9.0	0.0		319.8	23.1
2004	12.3	4.6	26.2	7.1	46.2	11.4	1.5	1.5	0.0		86.2	20.4
2003	7.7	2.8	102.6	23.0	47.4	13.2	3.9	1.7	0.0		161.5	34.1
2002	2.3		8.1		17.2		1.2		0.0		28.7	0.0
2001			198.7	74.7	152.0	22.7	41.3	12.7	0.0		392.0	108.9
2000			4.0	2.3	10.7	4.8	12.0	6.1	0.0		26.7	9.6
1999			10.7	2.6	82.7	10.9	12.0	8.0	0.0		105.3	18.0

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Redear	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
	0.0		29.3	19.0	17.3	5.2	22.7	10.0	1.3	1.3	69.3	19.8
2016	0.0		1.3	1.3	8.0	2.9	12.0	6.4	2.7	1.7	21.3	7.9
2015	0.0		2.7	2.7	10.7	3.4	40.0	9.9	1.3	1.3	53.3	11.4
2014	0.0		0.0		10.7	4.0	72.0	11.7	0.0		82.7	11.4
2013	0.0		1.3	1.3	9.3	2.5	12.0	2.7	0.0		22.7	2.5
2012	0.0		8.0	3.6	41.6	20.3	6.4	3.0	0.0		56.0	25.2
2011	0.0		32.0	24.4	28.8	17.6	16.0	5.7	0.0		76.8	43.1
2010	0.0		2.7	2.7	16.0	4.6	9.3	2.5	0.0		28.0	6.5

nw d5bg.d17

Table 38. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 2001-2016 (scoring based on statewide assessment).

Year	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			170.7 (4)	0.0 (1)			≥ 7	F - G
2016			156.0 (4)	0.0 (1)			≥ 7	F - G
2015	4.9 (4)	4-4+ (2)	220.0 (4)	0.0 (1)			11	Good
2014			333.3 (4)	1.3 (2)			≥ 8	F - E
2013			312.0 (4)	0.0 (1)			≥ 7	F - G
2012			147.2 (4)	0.0 (1)			≥ 7	F - G
2011			180.8 (4)	0.0 (1)			≥ 7	F - G
2010	4.9 (4)	3-3+ (3)	101.3 (4)	0.0 (1)	0.615	45.9	12	Good
2009	4.6 (3)	3-3+ (3)	140.0 (4)	0.0 (1)			11	Good
2008	4.6 (3)	3-3+ (3)	150.0 (4)	0.0 (1)	0.571	43.9	11	Good
2007	4.6 (3)	3-3+ (3)	169.3 (4)	1.3 (2)	0.386	32.0	12	Good
2006	5.6 (4)	2-2+ (4)	84.6 (3)	0.0 (1)	1.657	80.9	12	Good
2005	5.6 (4)	2-2+ (4)	117.6 (4)	18.7 (4)			16	Excellent
2004	5.6 (4)	2-2+ (4)	47.7 (2)	1.5 (2)			12	Good
2003	5.6 (4)	2-2+ (4)	53.3 (2)	4.0 (3)	1.427	76.0	13	Good
2002	5.6 (4)	2-2+ (4)	18.4 (1)	1.2 (2)			11	Good
2001			145.7 (4)	41.3 (4)			≥ 10	G - E

Table 39. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing at New Kingfisher Lake in April 2017.

	Inch class																	
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	SE
Largemouth bass	10	11					1	2	3	5	13	6	1	1	2	55	146.7	43.7

nwd6psd.d17

Table 40. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at New Kingfisher Lake during spring samples 1999-2017.

	Length group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017***	56.0	21.2	2.7	2.7	26.7	2.7	61.3	30.1	146.7	43.7
2012-2016					No sampling					
2011	213.3	75.9	128.0	28.1	24.0	4.6	16.0	8.0	381.3	99.6
2010	178.7	48.5	112.0	25.5	34.7	9.6	16.0	8.0	341.3	84.2
2009	109.3	37.3	24.7	2.7	21.3	2.7	0.0		165.3	37.3
2008**	282.7	37.3	240.0	33.3	56.0	9.2	0.0		578.7	71.8
2007	98.7	27.8	392.0	92.7	21.3	2.7	2.7	2.7	514.7	112.8
2006	189.3	14.1	333.3	46.3	10.7	2.7	0.0		533.3	62.9
2005	287.2	97.4	428.2	53.5	41.0	6.8	12.8	5.1	769.2	141.2
2004	161.5	45.1	243.6	45.6	12.8	6.8	2.6	2.6	420.5	92.5
2003	105.6	28.2	425.0	55.5	8.3	4.8	0.0		538.9	59.8
2002*	116.3		258.1		4.7		0.0		379.1	
2001*	89.7		364.1		20.5		2.6		476.9	
2000*	137.8		493.3		24.4		6.7		662.2	
1999*			315.6		17.8		2.2		335.6	

***First standardized sample since renovation

**Major fish kill 9/5/08

*Nocturnal samples

nwd6psd.d17

Table 41. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.333 hour of diurnal electrofishing at New Kingfisher Lake in October 2017.

Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	SE
Largemouth bass	2	6	6	3	1	1	1	1	1	0	3	3	2	1	31	93.10	0.00

nwd6lmb.d17

Table 42. Population assessment for largemouth bass based on spring electrofishing at New Kingfisher Lake from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			26.7 (3)	61.3 (4)	0.0 (1)			≥ 10	F - G
2012-2016	No sampling - Renovation								
2011		192.0 (4)	24.0 (2)	16.0 (2)	0.0 (1)			≥ 10	F - G
2010			34.7 (2)	16.0 (2)	0.0 (1)			≥ 7	P - G
2009	10.5 (2)	77.3 (4)	21.3 (2)	0.0 (1)	0.0 (1)			10	Fair
2008	10.5 (2)	250.7 (4)	56.0 (4)	0.0 (1)	0.0 (1)	0.562	43.0	12	Fair
2007	10.5 (2)	96.0 (4)	21.3 (2)	2.7 (1)	0.0 (1)	0.608	39.2	10	Fair
2006	11.0 (3)	149.3 (4)	10.7 (1)	0.0 (1)	0.0 (1)	1.335	73.7	10	Fair
2005	11.0 (3)	248.7 (4)	41.0 (3)	12.8 (2)	0.0 (1)			13	Good
2004	11.0 (3)	94.9 (4)	12.8 (1)	2.6 (1)	0.0 (1)	1.230	70.8	10	Fair
2003	11.0 (3)	100.0 (4)	8.3 (1)	0.0 (1)	0.0 (1)	1.330	73.6	10	Fair
2002	11.0 (3)	116.3 (4)	4.7 (1)	0.0 (1)	0.0 (1)			10	Fair
2001	11.0 (3)	89.7 (4)	20.5 (2)	2.6 (1)	0.0 (1)			11	Fair

Table 43. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in 0.375 hours of electrofishing at New Kingfisher Lake in April 2017.

	Inch class									
Species	2	3	4	5	6	7	8	Total	CPUE	SE
Bluegill	7	28	120	172	31	1		359	957.3	222.3
Redear Sunfish				3	12	4	3	22	58.7	32.4

nwd6bg.d17

Table 44. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at New Kingfisher Lake during spring samples 1999-2017.

	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	18.7	5.3	853.3	203.7	85.3	28.2	0.0		0.0		957.3	222.3
2012-2016	No sampling											
2011	8.0	4.6	338.7	37.3	413.3	97.6	0.0		0.0		760.0	92.3
2010	130.7	27.1	274.7	30.8	80.0	21.2	0.0		0.0		485.3	47.2
2009	194.7	21.3	338.7	35.3	74.7	30.1	0.0		0.0		608.0	53.3
2008	42.7	5.3	242.7	65.5	37.3	14.9	0.0		0.0		322.7	85.2
2007	5.3	2.7	69.3	26.3	45.3	5.3	0.0		0.0		120.0	33.3
2006	16.0	13.5	104.0	33.8	14.0	2.0	0.0		0.0		134.0	44.0
2005	0.0		53.9	7.7	12.8	6.8	10.3	6.8	0.0		76.9	8.9
2004	0.0		15.4	8.9	23.1	11.8	0.0		0.0		38.5	4.4
2003	12.8	6.8	56.4	2.6	15.4	7.7	5.1	2.6	0.0		89.7	5.1
2002			9.3		62.8		7.0		0.0		79.1	0.0
2001			61.5		66.7		7.7		0.0		135.9	0.0
2000			31.1		66.7		11.1		0.0		109.0	0.0
1999			6.7		20.0		4.4		0.0		31.1	0.0

nwd6bg.d17

Table 45. Population assessment for bluegill based on spring electrofishing at New Kingfisher Lake from 2001-2017 (scoring based on statewide assessment).

Year	Mean length age 2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			85.3 (3)	0.0 (1)			≥ 6	P - G
2012-2016				No sampling				
2011			413.3 (4)	0.0 (1)			≥ 7	F - G
2010			80.0 (4)	0.0 (1)			≥ 7	F - G
2009	4.3 (2)	3-3+ (3)	74.7 (3)	0.0 (1)			9	Fair
2008	4.3 (2)	3-3+ (3)	37.3 (2)	0.0 (1)	2.140	88.2	8	Fair
2007	4.3 (2)	3-3+ (3)	45.3 (2)	0.0 (1)	0.574	42.6	8	Fair
2006	5.7 (4)	2-2+ (4)	14.0 (1)	0.0 (1)	1.587	79.5	10	Good
2005	5.7 (4)	2-2+ (4)	23.1 (1)	10.3 (3)			12	Good
2004	5.7 (4)	2-2+ (4)	23.1 (1)	0.0 (1)			10	Good
2003	5.7 (4)	2-2+ (4)	21.6 (1)	5.4 (2)	0.865	57.9	11	Good
2002	5.7 (4)	2-2+ (4)	69.8 (3)	7.0 (2)			13	Good
2001	5.7 (4)	2-2+ (4)	64.4 (3)	6.7 (2)			13	Good

Table 46. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.317 hour of diurnal electrofishing at Old Kingfisher Lake in April 2017.

	Inch class																			
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	SE
Largemouth bass	14	28	4	1	1				2	3	4	6	3	2	1	2	1	72	227.1	0.0

nwd7psd.d17

Table 47. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Old Kingfisher Lake during spring sampling 2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
*2017	148.3	0.0	3.2	0.0	28.4	0.0	47.3	0.0	3.2	0.0	227.1	0

*First standardized sample since renovation

nwd7psd.d17

Table 48. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.307 hours of diurnal electrofishing at Old Kingfisher Lake in October 2017.

Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	SE
Largemouth bass	3	1	9	2	1	0	0	0	1	1	1	1	3	0	1	24	78.2	0.0

nwd7lmb.d17

Table 49. Population assessment for largemouth bass based on spring electrofishing at Old Kingfisher Lake for 2017 (scoring based on statewide assessment).

Year	Mean length age 3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			28.4 (3)	47.3 (4)	3.2 (3)			≥ 12	F - E

Table 50. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in 0.375 hours of electrofishing at Old Kingfisher Lake in April 2017.

	Inch class											
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	SE
Bluegill	1	21	27	112	223	115	1			500	1333.3	178.0
Redear sunfish					4	12	2		1	19	50.7	14.1

nwd7bg.d17

Table 51. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Old Kingfisher Lake during spring sampling 2017.

	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	58.7	14.1	965.3	100.6	309.3	72.2	0.0		0.0		1333.3	178.0

nwd7bg.d17

Table 52. Population assessment for bluegill based on spring electrofishing at Old Kingfisher Lake for 2017 (scoring based on statewide assessment).

Year	Mean length age 2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			309.3 (4)	0.0 (1)			≥ 7	F - G

Table 53. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2017.

	Inch class																				
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	SE
Largemouth bass	7	40	32	18	2	4	43	66	15	1							1		1	230	613.3	46.3

nwd8psd.d17

Table 54. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Washburn Lake during spring samples 2001-2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	258.7	31.4	306.7	9.6	42.7	7.1	5.3	2.7	5.3	2.7	613.3	46.3
2015	66.7	22.8	253.3	61.5	8.0	4.6	10.7	2.7	8.0	4.6	338.7	44.9
2014	90.7	7.1	333.3	30.8	8.0	4.6	10.7	2.7	5.3	2.7	442.7	23.3
2012	213.3	39.8	218.7	46.3	16.0	0.0	8.0	0.0	5.3	2.7	456.0	77.7
2011	205.3	44.9	133.3	35.3	2.7	2.7	5.3	2.7	0.0		346.7	78.6
2010	96.0	28.1	80.0	16.7	5.3	5.3	2.7	2.7	2.7	2.7	184.0	45.5
2009	104.0	60.0	82.7	39.8	0.0		10.7	5.3	0.0		197.3	104.3
2008	170.7	42.9	61.3	21.8	16.0	0.0	13.3	9.6	0.0		261.3	59.6
2007	133.3	35.3	80.0	4.6	16.0	4.6	21.3	9.6	0.0		250.7	30.8
2006	96.0	9.2	98.7	39.3	64.0	0.0	18.7	5.3	2.7	2.7	277.3	25.4
2005	43.6	11.2	146.2	16.0	28.2	5.1	2.6	2.6	2.6	2.6	220.5	25.3
2004	46.2	4.4	353.9	49.5	0.0		0.0		0.0		400.0	51.2
2003	123.1	33.5	438.5	49.5	0.0		0.0		0.0		561.5	52.4
2002	50.0		321.4		0.0		0.0		0.0		371.4	0.0
2001	260.0		8.0		0.0		0.0		0.0		268.0	0.0

* Washburn Lake renovated summer 1999 and restocked spring 2000

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Table 55. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hours of diurnal electrofishing at Washburn Lake in October 2017.

	Inch class																			
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	SE
Largemouth bass	11	7	2	7	19	12	6	12	4	1							1	82	218.70	2.70

nwd8lmb.d17

Table 56. Number of fish and relative weight (Wr) for length groups of largemouth bass collected during electrofishing samples at Washburn Lake in October 2017. Standard errors are in parentheses.

	Length group					
Species	8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	44	84 (1)	17	80 (20)	1	101

nwd8lmb.d17

Table 57. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Washburn Lake in October 2017.

Year		Age				
class	No.	1	2	3	4	5
2016	30	6.4				
2015	8	7.1	10.4			
2014	3	6.1	9.6	10.7		
2013	1	6.1	8.5	9.8	11.4	
2012	1	6.1	8.8	10.3	11.3	12.4
Mean		6.5	9.9	10.4	11.4	12.4
No.	43	43	13	5	2	1
Smallest		3.9	8.5	9.7	11.3	12.4
Largest		8.6	11.1	11.4	11.4	12.4
SE		0.1	0.2	0.3	0.1	
95% CI (±)		0.3	0.5	0.7	0.1	

nwd8lmba.d17

Table 58. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass collected in 0.375 hours of electrofishing at Washburn Lake in October 2017.

	Inch class												
Age	5	6	7	8	9	10	11	12	13	No.	CPUE	SE	Age (%)
0	11	7								18	48.0		22.5
1			2	7	19	11	1			40	105.4	7.5	50.0
2							4	6	2	12	32.8	6.5	15.0
3						1	1	3		5	13.8	3.1	6.3
4								3		3	8.0	3.1	3.7
5									2	2	5.3	1.3	2.5
Total	11	7	2	7	19	12	6	12	4	80			
(%)	13.8	8.8	2.5	8.8	23.8	15.0	7.5	15.0	5.0				100

nwd8lmb.d17, nwd8lmba.d17

Table 59. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake 2003-2017 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥ 15.0 in	CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017	10.4 (2)	258.7 (4)	42.7 (3)	5.3 (1)	5.3 (4)	0.939	60.9	14	Good
2015			8.0 (1)	10.7 (2)	8.0 (4)			≥ 9	F - G
2014		90.7 (4)	8.0 (1)	10.7 (2)	5.3 (4)			≥ 12	F - G
2012			16.0 (1)	8.0 (2)	5.3 (4)			≥ 9	F - G
2011			2.7 (1)	5.3 (2)	0.0 (1)			≥ 6	P - F
2010	10.7 (2)	96.0 (4)	5.3 (1)	0.0 (1)	0.0 (1)	0.819	55.9	9	Fair
2009	13.1 (4)	99.7 (4)	0.0 (1)	10.7 (2)	0.0 (1)			12	Fair
2008	13.1 (4)	165.9 (4)	16.0 (1)	13.3 (2)	0.0 (1)	1.117	67.3	12	Fair
2007	13.1 (4)	131.2 (4)	16.0 (1)	21.3 (3)	0.0 (1)	0.944	61.1	13	Good
2006	11.2 (3)	94.7 (4)	64.0 (4)	18.7 (3)	2.7 (3)	0.669	48.8	17	Excellent
2005	11.2 (3)	41.0 (3)	28.2 (2)	2.6 (1)	2.6 (3)			12	Good
2004	11.2 (3)	48.3 (3)	0.0 (1)	0.0 (1)	0.0 (1)			9	Fair
2003	11.2 (3)	131.6 (4)	0.0 (1)	0.0 (1)	0.0 (1)			10	Fair

Table 60. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 0.375 hours of electrofishing at Washburn Lake in May 2017.

	Inch class											
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	SE
Bluegill	4	23	39	11	4	3	13	14		111	296.0	8.0
Redear			2	30	35	6	11	18	2	104	227.3	29.7

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Table 61. Spring electrofishing CPUE (fish/hr) for each length group of bluegill (2001-2017) and redear sunfish (2012-2017) collected at Washburn Lake during spring samples.

Bluegill	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	72.0	25.7	144.0	25.7	42.7	19.2	37.3	20.8	0.0		296.0	8.0
2015	26.0	13.6	152.0	18.2	122.0	17.4	8.0	4.6	0.0		308.0	20.8
2014	0.0		181.3	64.1	133.3	9.6	8.0	4.6	0.0		322.7	55.9
2013	10.7	7.1	101.3	16.2	109.3	58.5	2.7	2.7	0.0		224.0	46.2
2012	30.0	11.9	158.0	27.6	64.0	23.3	22.0	6.8	0.0		274.0	49.1
2011	24.0	10.7	93.3	16.5	33.3	10.4	5.3	2.7	0.0		156.0	19.6
2010	53.3	16.2	152.0	57.9	32.0	0.0	0.0		0.0		237.3	41.7
2009	60.0	15.1	80.0	19.0	138.0	10.0	0.0		0.0		278.0	20.8
2008	2.7	2.7	152.0	37.8	168.0	48.7	0.0		0.0		322.7	69.5
2007	58.7	14.1	245.3	37.1	40.0	12.2	0.0		0.0		344.0	54.5
2006	58.7	50.7	138.7	39.3	32.0	16.0	0.0		0.0		229.3	81.6
2005	161.5	31.9	155.8	18.9	9.6	3.7	0.0		0.0		326.9	39.3
2004	80.8	7.4	48.1	3.7	11.5	5.0	21.2	10.6	0.0		161.5	13.0
2003	7.7	3.1	71.2	12.7	113.5	39.9	0.0		0.0		192.3	39.9
2002			46.5		102.3		0.0		0.0		148.8	0.0
2001			28.0		64.0		4.0		0.0		96.0	0.0

* Washburn Lake renovated summer 1999 and restocked spring 2000
nwd8bg.d17

Redear	Length group											
	< 3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2017	0.0		178.7	57.8	45.3	9.6	53.3	29.3	0.0		227.3	29.7
2015	0.0		44.0	12.4	74.0	23.0	94.0	29.5	0.0		212.0	55.1
2014	0.0		5.3	2.7	85.3	14.9	98.7	30.8	0.0		189.3	39.8
2013	0.0		96.0	20.1	85.3	2.7	0.0		0.0		181.3	22.8
2012	0.0		28.0	12.4	2.0	2.0	0.0		0.0		30.0	11.0

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Table 62. Population assessment for bluegill based on spring electrofishing at Washburn Lake 2003-2017 (scoring based on statewide assessment).

Year	Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (A)%	Total score	Assessment rating
2017			80.0 (3)	37.3 (4)			≥ 9	F - G
2015			130.0 (4)	8.0 (4)			≥ 10	F - G
2014			141.3 (4)	8.0 (4)			≥ 10	F - G
2013			112.0 (4)	2.7 (3)			≥ 9	F - G
2012			86.0 (3)	22.0 (4)			≥ 9	F - G
2011			38.7 (2)	5.3 (4)			≥ 8	P - G
2010			32.0 (2)	0.0 (1)			≥ 5	P - F
2009	4.7 (3)	3-3+ (3)	138.0 (4)	0.0 (1)	0.599	45.1	11	Good
2008	5.3 (4)	2-2+ (4)	168.0 (4)	0.0 (1)	2.046	87.1	13	Good
2007	5.3 (4)	2-2+ (4)	40.0 (2)	0.0 (1)	1.050	65.0	11	Good
2006	5.3 (4)	2-2+ (4)	32.0 (2)	0.0 (1)			11	Good
2005	5.4 (4)	2-2+ (4)	9.6 (1)	0.0 (1)			10	Good
2004	5.4 (4)	2-2+ (4)	32.7 (2)	22.0 (4)			14	Excellent
2003	5.4 (4)	2-2+ (4)	118.0 (4)	0.0 (1)			13	Good

Table 63. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.281 hrs of diurnal electrofishing at Honeycomb Lake (PWMA) during April 2017.

	Inch class									
Species	4	5	6	7	8	9	10	Total	CPUE	SE
Bluegill	2	3	2	10	14	3		34	121.0	0.0
Redear sunfish	5	5	7	6	2	3	1	29	103.2	0.0

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Table 64. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.306 hrs of diurnal electrofishing at Lil Gill Lake (PWMA) during April 2017.

	Inch class										
Species	3	4	5	6	7	8	9	10	Total	CPUE	SE
Bluegill	3	4	2	3	9	5			26	85.0	0.0
Redear sunfish	1	3	11	6	14	10		1	46	150.3	0.0

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SOUTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions are summarized in Table 1.

Barren River Lake (10,000 acres)

Black Bass

Black bass were collected with diurnal electrofishing in mid-April from both lake arms (Tables 2-5). A total of 873 black bass were collected at a rate of 145.5 fish/hr (Table 2). The overall catch rate for largemouth bass (124.7 fish/hr) increased from the previous two years (Table 3). Largemouth bass made up 86% of the total catch while spotted bass made up 14% (Table 2) and their distribution remains tied to the lower 1/3 of the reservoir. The 2016 spawn resulted in a strong age-1 year class (age-1 CPUE = 39.5 fish/hr; Table 4), which was up from the previous two years. The largemouth bass population assessment rated “Excellent”.

Largemouth bass size structure indices (PSD = 70 and RSD_{15} = 38; Table 5) were higher than previous year averages. Spotted bass size structure remains high quality as well (PSD = 69 and RSD_{14} =32). The smallmouth bass population remains poorly represented in samples (Tables 2 and 6), but larger fish are reported by anglers.

Fall young of year sampling (Tables 6 and 7) suggested a moderate 2017 year-class. Largemouth bass made up the majority of the fall sample (93%), while spotted bass only made up 7% of the sample (Table 6). Smallmouth bass remain poorly represented in samples. Age-0 CPUE (150.2 fish/hr; Table 7) and age-0 CPUE $\geq$5.0 in (23.5 fish/hr) was lower when compared to most years. Age-0 largemouth bass mean length (4.0 in) was average compared to most years.

Crappie

Trap netting for crappie yielded 902 total crappie (521 black crappie and 381 white crappie) in 85 net-nights (Table 8). The crappie population appears to remain an even mix of both species (58% white and 42% black). Age-0 catch rates of both species represented 25% of total crappie catch (6% of white crappie and 40% of black crappie catch rates; Tables 9 and 10). The population is reflective of good 2015 and moderate-poor 2016 year classes for both species (Tables 9 and 10). White crappie reached harvestable size (9.0 in) in 1.6 years and 10.0 inches in 2.3 years (calculated from Von Bertalanffy equation; FAST 3.0 software). Black crappie reached harvestable size (9.0 in) in 2.7 years and 10.0 inches in 3.8 years (calculated from Von Bertalanffy equation; FAST 3.0 software). The assessment rating remained “Fair” for black crappie, while white crappie dipped to a “Fair” assessment (Tables 11 and 12). This resulted in an overall crappie assessment rating of “Fair” (Table 13). The length-weight equations for black crappie (n=315) and white crappie (n=361) are:

$$\text{Black crappie } \text{Log}_{10}\text{ (weight)} = -5.92623+3.46988* \text{Log}_{10}\text{(Length)}$$
$$\text{White crappie } \text{Log}_{10}\text{ (weight)} = -5.62311+3.32189* \text{Log}_{10}\text{(Length)}$$

Hybrid Striped Bass

Gillnet sampling for hybrids in late September/early October yielded a good catch rate (15.5 fish/nn) overall, with mostly larger (≥13.0 in) sizes represented (Table 15). The double stocking rate (n=400,000) year class of 2013 (age-4+) has subsisted well in the fishery; however, similarly stocked year classes (2015 and 2016) have not performed as well (Table 16). The assessment rating for the fishery improved to “Excellent” due to the increase in the catch rates of larger-sized (15.0-in plus) and age-1 fish (Table 17). Larger-sized fish were in better condition (Wr=88; Table 18) than the 2015 sample (Wr=79), but remained lower than average relative weights (mid-upper 90’s) from prior years. The length-weight equation for hybrid striped bass (n=93) was:

$$\text{Log}_{10}\text{ (weight)} = -5.79652+3.34046* \text{Log}_{10}\text{(Length)}$$

Briggs Lake (18 acres)

Sunfish

The sunfish population was sampled by diurnal electrofishing on April 17 (Table 19). Overall CPUE of bluegill (218.0 fish/hr) was slightly lower than the average from previous years (Table 20). Redear CPUE (202.0 fish/hr) was similar to recent years (Table 21). The catch rate of the >8.0-in length group (126.0 fish/hr) achieved its' highest CPUE ever recorded at the lake. Size structure indices for bluegill (PSD = 44) dipped significantly from 2015 (PSD = 44) while indices for redear (PSD = 69) continued to reflect high quality fisheries (Table 22). The population assessments for both bluegill and redear remain "Excellent", similar to previous years (Tables 23 and 24). Sampling of smaller-sized redear remains enigmatic and a poor predictor of year class strength. Redear length-frequency from hoop net samples (Table 25) was similar to the spring electrofishing sample.

Channel Catfish

Channel catfish were sampled with tandem set hoop nets in mid-June and late August with limited success (3.1 fish/set-night; Table 25). Only age-1+ fish (stocked in fall of 2016) were collected (Table 26) and they were in excellent condition (Wr = 97; Table 27). Dissolved oxygen levels remained good (>7 ppm) throughout the sampling period and seemingly not a factor in low catch rates. Due to this year's and the previous year's poor sample, the stocking rate was doubled to 50 fish per acre every even year.

Green River Lake (8,210 Acres)

Muskie

Muskellunge sampling continues to be problematic as multiple attempts (Table 1) were made with diurnal and nocturnal electrofishing with poor results. Samplings results seemingly do not reflect the current population (2014 angler attitude survey and angler catch rates) or historic sampling norms. As a result, no catch data is presented for this year. Muskie growth rates and condition data will be presented in the Fish Habitat Branch APR.

Black Bass

Nocturnal bass electrofishing was conducted on the upper and lower ends of each lake arm (Green River and Robinson Creek) during late-April and early-mid May (Table 28). Overall bass CPUE was 226.9 fish/hr, bolstered by a good 2016 year class from all three bass species.

The overall largemouth CPUE of 164.0 fish/hr is the highest noted as is the catch rate of largemouth >15.0 inches (59.8 fish/hr) and remains well above average (Table 29). Largemouth bass size structure indices dipped slightly (PSD=71; RSD=43; Table 30) from previous years' values. The population assessment for largemouth bass remained "Excellent" which is similar to most recent years (Table 31).

Spotted bass catch rate (55.7 fish/hr) nearly doubled from last year, attaining more historic levels (approximating 50.0 fish/hr). The population continues to produce fish >12.0 inches in length, which was rare prior to alewife introduction in 2004, when few spotted bass achieved such lengths.

Fall YOY sampling (Tables 32 and 33) suggests a very good largemouth bass year class in 2016, but a weaker 2017 year class, as age-0 overall CPUE (19.0 fish/hr) and age-0 CPUE >5.0 in (7.0 fish/hr) were both well below average. Mean age-0 largemouth bass length (4.8 in) was slightly above average.

Walleye/White bass

Experimental gill net sampling for white bass and walleye during mid-November produced moderate catch rates for both species (Table 34). White bass CPUE (10.1 fish/nn) dipped from 2015, but was still dominated by the 2014 year class (age-3+; Table 35). The moderate 2015 year class marks a significant all-natural contribution to the fishery, even though the spawning population density was low. Growth rates (mean length age-2+ = 14.3 in; Table

37) and condition indices for all size ranges (Wr = 95 – 98; Table 39) of white bass has been excellent. The white bass population assessment fell to “Good”, due to low age-1+ fish densities (weak 2016 year class). The length-weight equation for white bass (n=94) was similar to previous years:

$$\text{Log}_{10}\text{ (weight)} = -3.44205 + 3.10253^* \text{ Log}_{10}\text{ (Length)}$$

Walleye CPUE (2.8 fish/nn) increased slightly from 2015 with multiple year classes (age-0 through age-5) represented (Tables 34 and 36). Growth rate (19.5 in by age-2+; Table 38) and condition indices for all size ranges (Wr = 93-101; Table 40) remain excellent. The walleye population assessment remained “Good”. The length-weight equation for walleye (n=33) was similar to previous years:

$$\text{Log}_{10}\text{ (weight)} = -3.81301+3.31099^* \text{ Log}_{10}\text{ (Length)}$$

Mill Creek Lake (109 acres)

Black Bass

Bass were sampled by nocturnal electrofishing on April 12 (Table 1); results are presented in Tables 41-43. Largemouth bass catch rates of fish $\geq$ 15.0 in (50.7 fish/hr) and fish $\geq$ 20.0 in (8.7 fish/hr) remains excellent, similar to previous years (Table 42). Size structure indices (PSD = 65; RSD = 43; Table 43) remain very good. Age data has not been collected from this population.

Shanty Hollow Lake (136 acres)

Sunfish

Sunfish (bluegill and redear) were sampled by diurnal electrofishing on April 26. Catch rates of intermediate-size bluegill improved significantly, but still lag below historic values (Table 45) despite resuming lake fertilization in 2016 after a 3-year hiatus (2013-2015). Bluegill size structure has slid from a PSD = 58 in 2015 to PSD = 31 (Table 47). Bluegill population assessment remains “Fair”, similar to recent years (Table 48).

The redear population remains low density (CPUE = 19.2 fish/hr; Table 44 and 46), but with good size structure (PSD = 48, RSD = 32; Table 47). The population assessment rated “Fair”, deviating from “Good” ratings from recent years (Table 49). Redear length-frequency derived from hoop net samples (Table 50) was similar to the spring electrofishing sample.

Channel Catfish

Tandem hoop nets were deployed from September 5-11 with poor results (Tables 50 and 51). Nets were fished in suitable dissolved oxygen levels (5-9 ppm) and captured miscellaneous other fish species, but only five channel catfish (age-3+ and 4+). Hoopnetting done from 2007-2011 by Black Bass/Warm Water Fisheries Research crews yielded catch rates ranging from 70 – 139 fish/set. Recent stocking rates may explain some of the decline in catch as the lake was only stocked once in the last 3 years (2016; at reduced rate of 10 fish/a).

Spurlington Lake (25 acres)

Channel Catfish

Tandem hoop nets were deployed from September 5-11 with poor results (Tables 52 and 53). Nets were fished in suitable dissolved oxygen levels (7-9 ppm) and captured miscellaneous other fish species, but only seven channel catfish representing six year classes (age-1+ to 6+). Recent stocking rate changes may explain some of the decline in catch as the lake was only stocked once in the last 3 years (2016; at 25 fish/a).

Fagan Branch Lake (140 acres)

Black bass

Largemouth were sampled on November 27 for condition indices (Table 1). Largemouth condition remains low across all size groups (Wr = 79-86; Table 54) and similar to previous samples from 2001 (Wr = 80-85) and 2002 (Wr = 81-88). The length-weight equation for largemouth bass (n=114) was similar to previous years:

$$\text{Log}_{10}\text{ (weight)} = -3.59504+3.19619* \text{ Log}_{10}\text{ (Length)}$$

Lake infertility (secchi depths ranging from 12 to 22 feet) and significant aquatic vegetation stands (brittle naiad and American pondweed) contribute to bass crowding and likely poorer foraging success.

Table 1. Lake sampling conditions in the Southwestern Fisheries District in 2017.

Lake	Date	Species	Weather	Water temp. surface (F)	Conductivity (umhos)	Secchi (in.)	Comments
Barren River	4/12	Bass	calm and clear	67-69	237		8-ft below summer pool & rising with 74 cfs outflow
	4/18	Bass	overcast	69			7-ft below summer pool & rising with 51 cfs outflow
	4/19	Bass	cloudy	74	275		7-ft below summer pool & rising with 51 cfs outflow
	4/25	Bass	clear	71			4-ft below summer pool & rising with 53 cfs outflow
	10/2	YOY bass	clear	74	200		summer pool & steady w/ 269 cfs outflow
	10/4	YOY bass	clear	73	220	24	summer pool & steady w/ 269 cfs outflow
	10/4	YOY bass	clear		197	30	summer pool & steady w/ 269 cfs outflow
	10/5	YOY bass	clear	73	203		summer pool & steady w/ 269 cfs outflow
	9/28-9/29	Hybrids	clear	77			summer pool & steady w/ 269 cfs outflow
	10/3	Hybrids	cloudy				summer pool & steady w/ 269 cfs outflow
	10/17-10/20	Crappie	clear	66-68		26	4-ft below summer pool & falling w/ 1800 cfs outflow
	10/24-10/25	Crappie	overcast/windy	60-66			5-ft below summer pool & falling w/ 2600 cfs outflow
Briggs	4/17	Bluegill & Redear	overcast	72		84	Normal
	6/16-6/19	Channel catfish	cloudy/windy			48	Normal
	8/25	Channel catfish	clear/windy	83		26	Normal
Fagan Branch	11/27	Trout & Bass	Clear	50			Normal
Green River	2/14	Muskie EF	overcast/windy	47		48	winter pool & steady w/ 435 cfs outflow (5 fish)
	3/3	Muskie EF	cloudy/windy				1-ft above winter pool & falling with 2200 cfs outflow (10 fish)
	3/23	Muskie NEF	cloudy/calm	53			1-ft above winter pool & steady w/ 114 cfs outflow (4 fish)
	4/4	Muskie NEF	clear/calm	57			1-ft below summer pool & rising w/ 843 cfs outflow (14 fish)
	4/19	Bass	clear/calm				summer pool & steady w/ 1300 cfs outflow
	4/25	Bass	clear/calm	68-69	135	66	summer pool & steady w/ 1600 cfs outflow
	10/12	YOY bass	overcast		151		summer pool & steady w/ 400 cfs outflow
	10/26	YOY bass	clear		147	45	summer pool & steady w/ 400 cfs outflow
	11/9	YOY bass	clear				2-ft above summer pool & rising with 417 cfs outflow
	11/16	YOY bass	cloudy/windy	57	147		2-ft above summer pool & falling with 2300 cfs outflow
	11/14-11/17	White Bass & Walleye	overcast/windy	56			2-ft above summer pool & rising/falling with 419-2300 cfs outflow
Mill Creek	4/12	Bass	clear	66-71	231		Normal
Shanty Hollow	4/26	Bluegill & Redear	clear/windy	66-70	114	60	High
	5/10	Bluegill & Redear	cloudy/windy	69-72	118	39	Normal
	9/5-9/11	Channel catfish	overcast-rainy	76		42	Normal
Spurlington	9/15-9/18	Channel catfish	cloudy	69-77			Normal

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Barren River Lake in mid-late April 2017.

		Inch class																							
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std err
Peninsula	Smallmouth bass											1											1	0.7	0.7
	Spotted bass	1	5	2	3	1	4	6	9	6	8	10	10	17	6		1					1	90	60.0	20.4
	Largemouth bass	2	3		1	5	8	10	9	8	13	14	13	20	25	29	14	4	2	1			181	120.7	9.3
Beaver Creek	Smallmouth bass																						0		
	Spotted bass																						0	0.0	
	Largemouth bass		1	1			4	8	5	5	8	11	19	25	37	16	11	6	5	2			164	109.3	19.1
Peter Creek	Smallmouth bass													1									1	0.7	0.7
	Spotted bass			1	3	1	2	2		1	2	2	7	9									30	20.0	7.2
	Largemouth bass		10	31	8	8	24	21	9	3	4	8	12	14	13	14	6	5	3				193	128.7	11.6
Walnut Creek	Smallmouth bass																						0		
	Spotted bass						1			2													3	2.0	1.2
	Largemouth bass		5	27	7	19	26	38	18	2	6	13	10	21	7	5	4	2					210	140.0	53.1
TOTAL	Smallmouth bass											1		1									2	0.3	0.2
	Spotted bass	1	5	3	6	2	7	8	9	9	10	12	17	26	6		1					1	123	20.5	8.6
	Largemouth bass	2	19	59	16	32	62	77	41	18	31	46	54	80	82	64	35	17	10	3			748	124.7	12.9

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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Barren River Lake 1997-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	6.7	1.4	31.1	5.2	48.4	6.4	49.3	6.5	3.3	0.7	135.6	11.6
1998	17.2	4.2	11.4	2.7	23.2	3.1	32.2	2.7	1.2	0.4	83.8	8.3
1999	10.7	2.4	31.3	5.6	41.7	6.9	36.3	4.7	2.3	0.6	120.8	11.2
2000	8.3	1.7	24.1	3.5	33.0	3.2	27.3	2.4	1.4	0.5	92.7	7.3
2001	11.8	1.6	42.3	4.0	49.3	6.3	61.9	4.1	1.1	0.4	165.3	9.6
2002	12.6	2.2	22.4	2.9	30.4	4.0	37.6	4.2	1.3	0.4	102.9	9.5
2003	21.7	3.4	22.5	3.5	20.5	2.9	39.5	4.7	0.3	0.2	104.2	10.6
2004	47.7	14.0	37.7	6.3	16.7	4.0	18.4	3.3	0.7	0.5	120.2	22.2
2005	17.7	2.9	66.0	7.7	31.5	4.7	36.8	3.4	2.0	0.7	152.0	8.6
2006	22.8	4.7	46.2	6.9	57.2	9.8	44.0	6.0	1.3	0.4	170.2	21.8
2007	12.7	3.1	44.2	10.9	37.7	5.0	37.2	5.8	1.0	0.6	131.7	17.0
2008	38.2	7.8	30.3	4.6	30.3	3.1	38.3	3.8	1.5	0.6	137.2	11.5
2009	14.7	4.1	25.7	2.4	18.8	2.3	23.2	3.9	1.3	0.6	82.3	9.8
2010	29.0	4.2	40.3	6.3	36.7	4.4	28.8	2.3	0.7	0.3	134.8	12.8
2011						no data due to flooding						
2012	31.3	9.0	52.7	7.3	65.2	7.0	54.7	5.6	2.7	0.6	203.8	15.8
2013						no data due to flooding						
2014	26.9	10.0	45.8	6.1	48.7	5.5	44.0	7.2	2.0	0.8	165.3	18.5
2015	10.5	3.1	44.3	6.7	40.2	5.8	24.7	4.3	1.2	0.4	119.7	12.2
2016	7.5	1.6	16.5	2.8	48.0	4.9	23.5	3.9	0.5	0.3	95.5	7.4
2017	31.7	9.5	27.8	5.5	30.0	3.3	35.2	5.5	0.5	0.3	124.7	12.9

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Table 4. Population assessment of largemouth bass based on spring sampling at Barren River Lake 2007-2017 (scoring based on statewide assessment).

	Year																	
	2007		2008		2009		2010		2012		2014*		2015		2016		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Growth																		
Mean length age-3 at capture	14.1	4	14.4	4	14.4	4	14.4	4	14.4	4	14.6	4	14.6	4	14.6	4	14.6	4
Size structure																		
Spring CPUE 12.0-14.9 in	37.7	4	30.3	3	18.8	2	36.7	4	65.2	4	48.7	4	40.2	4	48.0	4	30.0	3
Size structure																		
Spring CPUE $\geq$15.0 in	37.2	4	38.3	4	23.2	4	28.8	4	54.7	4	44.0	4	24.7	4	23.5	4	35.2	4
Size structure																		
Spring CPUE $\geq$20.0 in	1.0	3	1.5	3	1.3	4	0.7	3	2.7	4	2.0	4	1.2	3	0.5	3	0.5	3
Recruitment																		
Spring CPUE age-1	18.0	2	13.8	2	18.9	2	35.7	3	43.8	4	44.5	4	19.2	2	8.0	1	39.5	3
Instantaneous mortality (z)			-0.62								-0.558							
Annual mortality (A)%			46.2								44.2							
Total score		17		14		16		18		20		20		17		16		17
Assessment rating		Excellent		Good		Good		Excellent		Excellent		Excellent		Excellent		Good		Excellent

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* - age data collected in fall

Table 5. PSD and RSD values obtained for each black bass species collected during 6.0 hours (12-0.50-hour runs) of spring diurnal electrofishing at each area of Barren River Lake in mid-late April 2017. 95% confidence intervals are in parentheses.

Area	Species	No. $\geq$stock size	PSD	RSD[A]
Peninsula	Largemouth bass	162	75 (7)	46 (8)
	Spotted bass	78	68 (10)	32 (10)
Beaver Creek	Largemouth bass	158	84 (6)	49 (8)
	Spotted bass	0	*	*
Peter Creek	Largemouth bass	112	67 (9)	37 (9)
	Spotted bass	25	80 (16)	36 (19)
Walnut Creek	Largemouth bass	126	49 (9)	14 (6)
	Spotted bass	3	*	*
Total	Largemouth bass	558	70 (4)	38 (4)
	Spotted bass	106	69 (9)	32 (9)

[A] Largemouth bass = RSD_{15}, spotted bass = RSD_{14}.

* No fish of sufficient size were collected during sampling.

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Table 6. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Barren River Lake from early October 2017.

		Inch class																				
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Std err
Peninsula	Smallmouth bass		1			1														2	1.3	1.3
	Spotted bass		15	1	5	10	1	2				1								35	23.3	2.4
	Largemouth bass	6	33	8	3	3	8	5		1	2	4	2	4	1		1			81	54.0	5.0
Beaver Creek	Smallmouth bass																			0		
	Spotted bass																			0		
	Largemouth bass	13	253	67	5	20	21	3	5	4	6	8	7		3	2	2		1	420	280.0	88.5
Peter Creek	Smallmouth bass																			0		
	Spotted bass	2	18	10	1									1						32	21.3	15.5
	Largemouth bass	17	89	18	4	15	12	6	7	11	4	3	1	2	1	2			1	193	128.7	54.7
Walnut Creek	Smallmouth bass																			0		
	Spotted bass		5	5	1			2												13	8.7	5.9
	Largemouth bass	40	185	31	10	17	15	1	4	7	7	2	2	1	2		1			325	216.7	63.7
TOTAL	Smallmouth bass		1			1														2	0.3	0.3
	Spotted bass	2	38	16	7	10	1	4				1		1						80	13.3	4.6
	Largemouth bass	76	560	124	22	55	56	15	16	23	19	17	12	7	7	4	4		2	1019	169.8	36.7

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Table 7. Indices of year-class strength at age-0 and age-1 and mean length (in.) of largemouth bass collected during diurnal fall electrofishing at Barren River Lake 2002-2017.

	Age-0[A]		Age-0[A]		Age-0 ≥5.0 in[A]		Age-1[B]	
Year-class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	4.0	0.05	171.7	25.8	34.2	4.1	26.9	3.7
2003	4.4	0.04	198.0	30.8	84.0	18.7	44.9	13.3
2004	3.7	0.04	108.4	22.2	20.8	3.9	11.2	2.5
2005	3.7	0.04	160.7	25.6	25.3	4.2	17.5	3.6
2006	3.4	0.02	299.7	87.2	21.8	5.6	18.0	4.8
2007	4.2	0.06	61.5	12.8	14.0	2.5	13.8	1.5
2008	3.8	0.03	307.5	46.9	59.7	10.5	18.9	4.4
2009	3.2	0.02	401.3	76.1	36.8	8.6	35.7	5.2
2010	5.7	0.05	166.6	19.1	105.0	18.7	ND	
2011	4.5	0.05	175.5	33.7	65.7	10.8	43.8	9.4
2012	5.1	0.08	70.0	16.7	32.7	11.0	ND	
2013	3.9	0.03	369.3	92.2	61.5	10.0	44.5	13.1
2014	4.4	0.08	108.5	27.5	33.0	6.3	19.2	na
2015	3.8	0.03	167.7	23.5	18.7	3.4	8.0	1.7
2016	4.3	0.04	191.8	38.9	46.5	13.9	39.5	12.1
2017	4.0	0.04	150.2	36.3	23.5	3.8		

[A] Data collected by fall (September-November) diurnal electrofishing. Mean lengths were determined by analysis of otoliths removed from a subsample of LMB <10.0 in, and extrapolated to the entire catch of the fall sample.

[B] Data collected during the following spring (April/May) diurnal electrofishing sample.

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swdbrlag. d02 - d17
swdbrlyy. d02 - d17

Table 8. Length frequency and CPUE (fish/nn) of each inch class of white and black crappie collected by trap net (85 net-nights) at Barren River Lake from mid-late October 2017.

		Inch class													Std.
Location	Species	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE	error
Beaver Creek	White crappie		2	12	1	6	13	37	123	103	9	4	310	10.7	2.6
	Black crappie		27	9	47	46	45	52	15	8	1		250	8.6	2.1
Walnut Creek	White crappie		4	2			1	1	14	40	9		71	1.3	0.4
	Black crappie	16	152	2	23	20	26	19	9	4			271	4.8	1.0
TOTAL	White crappie		6	14	1	6	14	38	137	143	18	4	381	4.5	1.0
	Black crappie	16	179	11	70	66	71	71	24	12	1		521	6.1	1.0

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Table 9. Age frequency and CPUE (fish/nn) of black crappie collected during 85 net-nights at Barren River Lake from mid-late October 2017.

	Inch class													Std.
Age	2	3	4	5	6	7	8	9	10	11	Total	Percent	CPUE	error
0+	16	179	11								206	39	2.4	0.6
1+				67	31	17		3	1		119	23	1.4	0.3
2+				3	35	51	57	10	1		157	30	1.8	0.4
3+						3	4	9	4		20	4	0.2	0.1
4+							11	3	6	1	21	4	0.2	0.1
Total	16	179	11	70	66	71	72	25	12	1	523	100		
%	3	34	2	13	13	14	14	5	2	0	100			

swdbrltn.d17; swdbrlag.d17

Table 10. Age frequency and CPUE (fish/nn) of white crappie collected during 85 net-nights at Barren River Lake from mid-late October 2017.

	Inch class													
Age	3	4	5	6	7	8	9	10	11	12	Total	Percent	CPUE	Std. error
0+	6	14	1								21	6	0.2	0.1
1+				4	4	3	14	7			32	8	0.4	0.09
2+				2	9	35	123	129	14		312	82	3.7	0.8
3+					1			7	2	1	11	3	0.1	0.03
4+									2	2	4	1	0.05	0.01
5+														
6+										1	1	0	0.01	0.01
Total	6	14	1	6	14	38	137	143	18	4	381	100		
%	2	4	0	2	4	10	36	38	5	1	100			

swdbrltn.d17; swdbrlag.d17

Table 11. Black crappie assessment from trap netting at Barren River Lake from 1986-2017 (scoring based on statewide assessment).

	CPUE excluding age-0		CPUE age-1		CPUE age-0		CPUE ≥8.0 in		Mean length age 2+ at capture			
Year	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Total score	Rating
1986	10.7	4	6.9	4	3.8	4	2.8	3	8.7	2	17	E
1987	3.3	2	1.9	3	2.8	4	1.3	2	9.6	3	14	G
1988	6.2	3	5.7	4	0.1	1	0.4	1	9.3	3	12	F
1989	9.2	4	1.5	3	7.5	4	5.9	4	8.2	1	16	G
1990	29.1	4	26.1	4	0.1	1	1.9	3	8.8	2	14	G
1991	3.5	3	1.0	2	0.9	2	3.6	4	7.6	1	12	F
1992	9.2	4	3.5	3	0.1	1	4.2	4	7.7	1	13	G
1993	12.6	4	1.1	2	0.3	2	9.1	4	8.1	1	13	G
1994	0.7	1	0.1	1	0.8	2	0.7	2	8.8	2	8	P
1995	7.4	3	6.5	4	1.3	3	0.5	1	8.9	2	13	G
1996	9.0	4	0.8	2	0.5	2	4.2	4	7.8	1	13	G
1997	9.1	4	1.5	3	0.9	2	6.0	4	7.6	1	14	G
1998	1.7	1	0.1	1	1.8	3	1.6	3	8.2	1	9	F
1999	4.7	3	3.8	4	0.3	2	0.9	2	8.6	2	13	G
2000	1.8	2	0.2	1	0.2	1	0.7	2	7.8	1	7	P
2001	5.7	3	0.3	1	0.4	2	4.5	4	7.6	1	11	F
2002	4.6	3	1.0	2	3.1	4	3.3	3	8.7	2	14	G
2003	2.4	2	1.2	2	5.4	4	0.9	2	9.7	3	13	G
2004	6.9	3	4.4	4	0.7	2	2.2	3	9.2	3	15	G
2005*	6.4	3	2.3	3	2.0	4	4.4	4	9.1	3	17	E
2006*	2.7	2	1.4	2	0.6	2	1.3	2	8.9	2	10	F
2007	6.6	3	3.2	3	0.2	1	1.3	2	8.5	2	11	F
2008*	1.8	2	0.2	1	1.4	3	1.6	3	9.7	3	12	F
2009*	5.9	3	4.3	4	0.4	2	0.6	1	8.0	1	11	F
2010	5.7	3	1.4	2	0.8	2	3.6	4	8.7	2	13	G
2011	5.3	3	2.3	3	0.2	1	3.1	3	9.0	2	12	F
2012	5.2	3	1.0	2	0.1	1	3.3	3	8.3	1	10	F
2013	9.7	4	0.7	2	12.3	4	8.5	4	8.7	2	16	G
2015	3.1	2	1.4	2	7.0	4	0.4	1	7.8	1	10	F
2017	0.7	1	1.4	2	2.4	4	1.3	2	8.0	1	10	F

* Age assessment data extrapolated from previous age data

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Table 12. White crappie assessment from trap netting at Barren River Lake from 1986 - 2017 (scoring based on statewide assessment).

	CPUE excluding age-0		CPUE age-1		CPUE age-0		CPUE ≥8.0 in		Mean length age 2+ at capture			
Year	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Total score	Rating
1986	13.6	3	3.6	3	1.9	3	8.9	4	9.0	2	15	G
1987	4.0	2	1.3	2	0.4	1	2.5	2	10.8	4	11	F
1988	3.1	2	2.5	2	0.2	1	2.5	2	11.1	4	11	F
1989	4.2	2	1.7	2	3.3	3	2.6	2	11.0	4	13	G
1990	22.8	4	20.8	4	0.5	2	13.4	4	10.8	4	18	E
1991	31.0	4	0.5	1	1.0	2	8.9	4	9.8	3	14	G
1992	6.8	3	5.1	3	0.1	1	4.0	3	11.5	4	14	G
1993	5.8	2	0.6	1	0.0	1	5.2	3	10.0	3	10	F
1994	0.7	1	0.1	1	0.7	2	0.4	1	10.6	4	9	F
1995	8.0	3	7.7	4	0.6	2	5.5	3	11.5	4	16	G
1996	6.3	2	0.8	1	1.4	2	5.6	3	9.7	3	11	F
1997	6.7	3	5.1	3	1.0	2	5.2	3	10.2	3	14	G
1998	1.2	1	0.7	1	2.0	3	0.9	1	10.9	4	10	F
1999	6.5	2	5.9	3	0.5	2	2.9	2	10.9	4	13	G
2000	2.5	2	0.3	1	0.0	1	2.4	2	9.3	2	8	P
2001	1.6	1	0.5	1	0.2	1	1.3	1	10.5	4	8	P
2002	1.4	1	0.3	1	1.2	2	0.8	1	10.7	4	9	F
2003	1.4	1	1.0	2	0.4	1	1.1	1	11.5	4	9	F
2004	1.6	1	0.9	1	0.2	1	1.3	1	11.1	4	8	P
2005*	0.7	1	0.6	1	0.0	1	0.7	1	11.0	4	8	P
2006*	0.3	1	0.2	1	0.0	1	0.2	1	10.6	4	8	P
2007	0.4	1	0.3	1	0.8	2	0.3	1	11.2	4	9	F
2008*	0.0	1	0.0	1	0.2	1	0.0	1	10.8	4	8	P
2009*	4.4	2	4.0	3	0.0	1	4.0	3	10.2	3	12	F
2010	0.7	1	0.3	1	0.6	2	0.7	1	10.9	4	9	F
2011	4.7	2	4.5	3	0.2	1	2.8	2	10.9	4	12	F
2012	7.5	3	2.5	2	0.1	1	6.5	4	9.9	3	13	G
2013	5.6	2	0.2	1	11.9	4	5.6	3	10.1	3	13	G
2015	7.0	3	3.7	3	4.8	4	3.6	3	10.2	3	16	G
2017	4.2	2	0.4	1	0.2	1	4.0	3	9.7	3	10	F

* Age assessment data extrapolated from previous age data

sw dbrltn.D85 - D17

Table 13. Population assessment for all crappie from Barren River trap net data collected from 2007-2017 (scoring based on statewide assessment).

	Year																	
	2007		2008		2009		2010		2011		2012		2013		2015		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Population density (CPUE age-1 and older)	7.0	2	1.8	1	10.3	3	6.4	2	10.0	3	12.7	3	15.4	4	10.1	3	8.0	3
Recruitment (CPUE age-1)	3.6	2	0.2	1	8.3	4	1.7	2	6.8	3	3.5	2	0.9	1	5.0	3	1.8	2
Recruitment (CPUE age-0)	1.0	2	1.6	2	0.4	1	1.4	2	0.5	1	0.2	1	24.2	4	11.7	4	2.7	3
Size structure (CPUE ≥8.0 in)	1.6	1	1.6	1	4.6	3	4.3	3	5.8	3	9.8	4	14.1	4	4.0	2	5.3	3
Growth (Mean length age-2 at capture)	8.6	1	9.8	3	9.1	1	8.9	1	9.0	1	9.3	2	9.5	2	9.1	1	9.0	1
Instantaneous mortality (Z)	-1.59																	
Annual mortality (A)%	79.9																	
Total score:		8		8		12		10		11		12		15		13		12
Assessment rating:		Poor		Poor		Fair		Fair		Fair		Fair		Good		Good		Fair

sw dbrltn.D06 - D17

Table 14. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected by trap nets (85 net-nights) at Barren River lake from mid-late October 2017. Numbers in parentheses represent 95% confidence intervals.

Species	Number ≥5.0 in	PSD	RSD_{10}
White crappie	361	95 (2)	46 (5)
Black crappie	315	34 (5)	4 (2)

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Table 15. Length frequency and CPUE (fish/nn) for blue catfish, white bass, and hybrid striped bass collected by experimental gillnets (6 net-nights) from late September and early October at Barren River Lake, KY 2017.

	Inch class																				Std.
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	CPUE	error
Blue catfish			3	6	10	6	3		3	4	2	2		1	2				2	44	7.3	2.6
White bass	2	5			1	2	5	2	3	1										21	3.5	2.4
Hybrid striped bass							8	7	7	28	6	1	4	5	5	9	9	4		93	15.5	5.8

swdbrlgn.d17

Table 16. Age frequency and CPUE (fish/nn) of hybrid striped bass collected from experimental gillnets late September and early October at Barren River Lake, 2017.

	Inch class															Std.
Age	13	14	15	16	17	18	19	20	21	22	23	24	Total	Percent	CPUE	error
1+	8	7	7	28	6								56	60	9.3	4.3
2+						1	4	2					7	8	1.2	0.8
3+								3	4	2			9	10	1.5	0.6
4+									1	7	8	4	20	22	3.3	2.1
5+											1		1	1	0.2	0.1
Total	8	7	7	28	6	1	4	5	5	9	9	4	93	100		
%	9	8	8	30	6	1	4	5	5	10	10	4	100			

swdbrlgn.D17; swdbrlag.D17

Table 17. Hybrid striped bass population assessment from experimental gillnetting at Barren River Lake 2012-2017 (scoring based on statewide assessment).

	Year					
	2012		2015		2017	
Parameter	Value	Score	Value	Score	Value	Score
Population density						
CPUE age-1 and older	18.0	3	10.1	3	15.5	3
Growth rate						
Mean length age-2+ at capture	18.4	3	18.5	3	19.5	4
Size structure						
CPUE >15.0 in	12.2	3	8.0	3	13.0	4
Recruitment						
CPUE age-1	7.0	3	2.4	2	9.3	4
Instantaneous mortality (z)	-0.308					
Annual mortality (A)%	26.5					
Total score		12		11		15
Assessment rating		Good		Good		Excellent

swdbrlag.d12-17

swdbrlgn.d12-17

Table 18. Relative weight (Wr) for each length group of hybrid striped bass collected by gill nets (8 net-nights) at Barren River Lake from late September and early October, 2017. Standard errors are in parentheses.

	Length group		
	8.0-11.9 in	12.0-14.9 in	>15.0 in
Wr		83 (1)	88 (1)
N	0	15	78

swdbrlgn.D17

Table 19. Length frequency and CPUE (fish/hr) of bluegill, redear sunfish and warmouth collected in 0.5 hours (4- 450-sec runs) of diurnal electrofishing at Briggs Lake on 17 April 2017.

	Inch class												Std.
Species	1	2	3	4	5	6	7	8	9	10	Total	CPUE	error
Bluegill	2	6	5	36	16	18	17	9			109	218.0	63.5
Redear sunfish				3	7	21	7	30	32	1	101	202.0	50.5
Warmouth	1		1		2		3				7	14.0	3.8

swdbrgbg.d17

Table 20. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Briggs Lake from mid-April to mid-May 2007-2017. Standard errors are in parentheses.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
2007	8.0	83.2	84.8	25.6	201.6
	(4.4)	(9.9)	(26.1)	(9.9)	(33.7)
2008	288.0	106.0	70.0	16.0	384.0
	(175.0)	(31.2)	(18.9)	(5.7)	(96.2)
2009	19.2	137.6	17.6	19.2	193.6
	(10.3)	(19.5)	(6.9)	(6.5)	(21.5)
2010	20.8	94.4	153.6	52.8	321.6
	(14.2)	(38.0)	(81.0)	(41.9)	(159.3)
2011	66.0	94.0	60.0	24.0	244.0
	(15.1)	(39.2)	(19.7)	(3.3)	(60.7)
2012	56.0	158.0	62.0	16.0	292.0
	(32.2)	(32.7)	(21.3)	(7.3)	(53.7)
2013	4.8	40.0	81.6	19.2	145.6
	(2.0)	(13.6)	(26.5)	(4.1)	(43.1)
2014	3.2	27.2	128.0	9.6	168.0
	(2.0)	(10.3)	(25.7)	(4.7)	(32.4)
2015*	174.0	112.0	170.0	108.0	564.0
	(59.5)	(23.8)	(26.6)	(25.4)	(104.4)
2017	16.0	114.0	70.0	18.0	218.0
	(8.6)	(38.1)	(15.8)	(8.3)	(63.5)

swdbrgbg.D07 - D17

* nocturnal electrofishing used due to high water clarity

Table 21. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Briggs Lake during mid-April to mid-May 2007-2017. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
2007	na	8.0	62.4	12.8	1.6	83.2
		(3.6)	(13.0)	(6.5)	(1.6)	(16.9)
2008	1.6	3.2	na	4.0	na	8.0
	(1.6)	(2.0)		(2.3)		(3.6)
2009	1.6	8.0	54.4	17.6	4.8	81.6
	(1.6)	(6.2)	(14.8)	(12.0)	(3.2)	(25.1)
2010	na	9.6	16.0	17.6	1.6	43.2
		(3.9)	(7.2)	(9.6)	(1.6)	(19.9)
2011	na	4.0	14.0	28.0	12.0	46.0
		(4.0)	(2.0)	(10.6)	(4.0)	(14.4)
2012	4.0	58.0	94.0	6.0	2.0	162.0
	(2.3)	(19.2)	(33.1)	(3.8)	(2.0)	(49.9)
2013	1.6	41.6	48.0	56.0	6.4	147.2
	(1.6)	(16.7)	(18.8)	(11.9)	(3.9)	(37.6)
2014	1.6	8.0	96.0	67.2	8.0	178.2
	(1.6)	(3.6)	(12.9)	(13.1)	(4.4)	(24.0)
2015*	na	34.0	72.0	108.0	12.0	214.0
		(15.5)	(5.7)	(21.0)	(5.2)	(20.8)
2017	na	20.0	56.0	126.0	2.0	202.0
		(8.3)	(7.3)	(38.8)	(2.0)	(50.5)

swdbrgbg.D07 - D17

* nocturnal electrofishing used due to high water clarity

Table 22. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear sunfish collected by diurnal electrofishing at Briggs Lake on 17 April 2017. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD[a]
Bluegill	101	44 (9)	9 (5)
Redear sunfish	101	69 (9)	33 (9)

[a] Bluegill=RSD_8; redear sunfish=RSD_9

swdbrgbg.d17

Table 23. Bluegill population assessment for Briggs Lake 2009 - 2017 (scoring based on statewide assessment).

	2009		2010		2011		2012		2013		2014		2015		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Growth																
Mean length age-2 at capture	4.9*	4	4.9*	4	4.9*	4	4.7	3	4.7*	3	4.7*	3	4.7*	3	4.7*	3
Growth																
Years to 6.0 in	2.6*	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4	2.6*	4
Size structure																
CPUE ≥6.0 in	36.8	2	206.4	4	84.0	3	78.0	3	100.8	4	137.6	4	278.0	4	88.0	3
Size structure																
CPUE ≥8.0 in	19.2	4	52.8	4	24.0	4	16.0	4	19.2	4	9.6	4	108.0	4	18.0	4
Instantaneous mortality (z)																
Annual mortality (A)%																
Total score:		14		16		15		15		15		15		15		14
Assessment rating:		Excellent		Excellent		Excellent		Excellent		Excellent		Excellent		Excellent		Excellent

*No age data collected; values carried over from 2007 and 2012

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Table 24. Redear population assessment for Briggs Lake 2009 - 2017 (scoring based on statewide assessment).

	2009		2010		2011		2012		2013		2014		2015		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Growth Mean length age-3 at capture	8.6*	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4	8.6*	4
Growth Years to 8.0 in	2.7*	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4	2.7*	4
Size structure CPUE ≥8.0 in	17.6	3	17.6	3	28.0	4	6.0	2	62.4	4	67.2	4	108.0	4	126.0	4
Size structure CPUE ≥10.0 in	4.8	4	1.6	3	12.0	4	2.0	4	6.4	4	8.0	4	12.0	4	2.0	4
Instantaneous mortality (z) Annual mortality (A)%																
Total score:		15		14		16		14		16		16		16		16
Assessment rating:		Excellent		Good		Excellent		Good		Excellent		Excellent		Excellent		Excellent

*No age data collected, values carried over from 2007

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Table 25. Length frequency and CPUE (fish/set-night) of channel catfish collected during 8 sets of tandem hoop nets (2 sets with 3 nets each) at Briggs Lake during mid-June and late-August 2017.

	Inch class														
Species	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	Std err
Channel catfish									5	8	8	4	25	3.1	1.2
Redear sunfish	1	9	9	8	41	41	13	1					123	15.4	3.3

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Table 26. Age frequency and CPUE (fish/set-night) of channel catfish collected from tandem hoopnetting at Briggs Lake in mid-June and late-Auguest 2017.

Age	Inch class				Total	Percent	CPUE	Std. error
	12	13	14	15				
0+					0			
1+	5	8	8	4	25	100	3.1	1.2
Total	5	8	8	4	25	100.0		
%	20	32	32	16	100			

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Table 27. Relative weight (Wr) for each length group of channel catfish collected by 8 nights of tandem set hoopnets (2 sets with 3 nets each) at Briggs Lake from 13-19, June and 22-28, August 2017. Standard errors are in parentheses.

	Length group		
	11.0-15.9 in	16.0-23.9 in	≥24.0 in
Wr	97(2)		
N	25	0	0

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Table 28. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of nocturnal electrofishing at Green River Lake on April 19 and 25, 2017.

		Inch class																					
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Green River Arm																							
Holmes Bend	Smallmouth bass									1				1							2	1.3	0.7
	Spotted bass		1	7	3	1	5	7	4	4	1	1	2								36	24.0	7.6
	Largemouth bass		6	13	21	28	42	15	15	39	30	9	18	27	20	13	12	9	4	4	325	216.7	7.7
Ramp 1	Smallmouth bass		1	3	1		1		1			1			1	1					10	6.7	1.3
	Spotted bass	3	1	1	2	2	12	13	16	2	5	6	2	1	1	1					68	45.3	10.5
	Largemouth bass	2	2	5	7	7	10	9	6	22	31	19	12	16	17	11	25	9	6	1	217	144.7	15.8
Robinson Creek Arm																							
Smith Ridge	Smallmouth bass																				0		
	Spotted bass	1	5	4	5	4	10	17	3	5	4	2									60	40.0	22.3
	Largemouth bass		1	15	15	7	9	3	7	31	16	2	7	16	15	11	14	14	4		187	124.7	14.6
Lone Valley	Smallmouth bass			3	1	5	3	3	4	4	4		2	2							31	20.7	3.5
	Spotted bass	3	4	3	9	7	20	29	28	23	12	9	14	3	3	3					170	113.3	8.7
	Largemouth bass				1	1	5	5	5	26	62	21	18	26	25	24	22	9	3	2	255	170.0	12.1
TOTAL	Smallmouth bass		1	6	2	5	4	3	5	5	4	1	2	3	1	1					43	7.2	2.6
	Spotted bass	7	11	15	19	14	47	66	51	34	22	18	18	4	4	4					334	55.7	11.8
	Largemouth bass	2	9	33	44	43	66	32	33	118	139	51	55	85	77	59	73	41	17	7	984	164.0	11.7

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Table 29. Spring diurnal electrofishing CPUE (fish/hr) of largemouth bass by length group collected at Green River Lake during late-April to early-mid May since 1997.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	3.7	1.0	22.3	2.5	23.3	2.8	23.2	2.1	1.2	0.5	72.5	5.2
1998	33.5	7.7	9.0	1.8	8.8	2.0	17.5	1.8	2.0	0.7	68.8	8.6
1999	21.4	3.8	53.5	7.2	19.4	4.0	14.3	1.7	2.8	0.8	108.6	12.5
2000	2.5	0.9	41.0	4.4	24.2	3.4	14.7	3.4	3.2	1.0	82.3	8.6
2001	10.2	2.5	26.7	3.0	32.2	6.5	12.5	1.5	1.7	0.4	81.5	7.8
2002	5.0	1.1	9.5	1.5	20.5	2.5	13.0	2.5	1.2	0.4	48.0	4.2
2003	5.8	1.4	12.3	2.1	5.8	1.8	18.2	3.0	1.8	0.7	42.2	4.1
2004	17.3	2.7	22.8	2.1	11.6	1.8	15.6	2.6	0.9	0.3	67.3	6.4
2005	67.8	8.0	30.7	2.8	11.7	1.9	16.8	2.5	1.5	0.7	127.0	12.5
2006	15.1	2.0	44.4	3.6	23.1	2.8	18.9	2.1	0.3	0.2	96.2	5.3
2007	3.8	1.0	20.5	2.5	33.7	5.8	22.2	3.6	0.5	0.3	80.2	10.3
2008	22.8	9.5	25.8	4.7	27.8	4.0	30.2	2.7	0.8	0.4	106.7	17.0
2009	7.2	1.8	11.3	3.4	13.0	2.7	42.8	7.9	1.7	0.8	74.3	12.3
2010						no data due to flooding						
2011						no data due to flooding						
2012	16.5	4.3	54.8	6.3	35.3	6.4	38.0	5.4	1.3	0.5	144.7	16.3
2013	4.2	0.7	23.7	3.7	44.0	4.8	52.8	5.3	3.3	0.7	124.7	11.7
2014						no data due to flooding						
2015	9.2	1.8	23.3	6.0	23.7	3.7	51.7	5.9	2.7	0.7	107.8	15.0
2016	15.0	3.7	13.0	2.7	25.0	4.7	40.0	5.8	2.5	0.7	93.5	9.1
2017	21.8	5.9	41.5	6.3	40.8	6.4	59.8	4.7	4.0	0.9	164.0	11.7

sw dgrlbb.D97-D17

Table 30. PSD and RSD values for each black bass species collected during 6.0 hours (12- 0.50-hour runs) of nocturnal electrofishing by area at Green River Lake on April 19 and 25, 2017. 95% confidence intervals are in parentheses.

Area	Species	No. $\geq$stock size	PSD	RSD^A
Green River Arm				
Holmes Bend	Largemouth bass	257	57(6)	35(6)
	Spotted bass	25	32(19)	8(9)
	Smallmouth bass	2	*	*
Ramp 1	Largemouth bass	194	76(6)	44(7)
	Spotted bass	61	30(12)	8(7)
	Smallmouth bass	5	60(48)	40(48)
Robinson Creek Arm				
Smith Ridge	Largemouth bass	149	66(8)	50(8)
	Spotted bass	45	24(14)	*
	Smallmouth bass		*	*
Lone Valley	Largemouth bass	253	84(5)	44(6)
	Spotted bass	151	44(8)	15(6)
	Smallmouth bass	27	44(19)	15(14)
Total	Largemouth bass	853	71(3)	43(3)
	Spotted bass	282	37(6)	11(4)
	Smallmouth bass	34	50(17)	21(14)

[A] Largemouth bass = RSD_{15}, spotted bass and smallmouth bass = RSD_{14}.

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Table 31. Population assessment of largemouth bass based on nocturnal spring sampling at Green River Lake from 2005-2017 (scoring based on statewide assessment).

	2005		2006		2007		2008		2009		2012		2013		2015		2016		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	14.4	4	14.4	4	14.4	4	14.4	4	14.6	4	14.6	4	14.6	4	13.1	4	13.1	4	13.1	4
Spring CPUE age-1	65.3	4	14.3	2	3.8	1	22.8	3	7.2	1	15.5	2	3.8	1	16.0	2	17.3	2	34.5	3
Spring CPUE 12.0-14.9 in	11.7	1	23.1	3	33.7	4	27.8	3	13.0	1	35.3	4	44.0	4	23.7	3	25.0	3	40.8	4
Spring CPUE ≥15.0 in	16.8	3	18.9	3	22.2	4	30.2	4	42.8	4	39.3	4	52.8	4	51.7	4	40.0	4	59.8	4
Spring CPUE ≥20.0 in	1.5	4	0.3	2	0.5	3	0.8	3	1.7	4	1.3	4	3.3	4	2.7	4	2.5	4	4.0	4
Instantaneous mortality (z)									-0.610						-0.473					
Annual mortality (A)%									45.7						37.71					
Total score		16		14		16		17		14		15		17		17		17		19
Assessment rating		Good		Good		Good		Excellent		Good		Good		Excellent		Excellent		Excellent		Excellent

sw dgrlag.D03, D09, 15

sw dgrlbb.D02-D17

Table 32. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Green River Lake from mid-late October through mid-November 2017.

		Inch class																						
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Green River Arm																								
Holmes Bend	Smallmouth bass					1																1	0.7	0.7
	Spotted bass	2	63	47	9	8	14	12	7	2	1	2										167	111.3	12.7
	Largemouth bass		25	20	10	10	5	2	4	6	4			1		1	1					89	59.3	16.8
Ramp 1	Smallmouth bass	1	6	5		2	1	1	1													17	11.3	7.3
	Spotted bass				1	1	2	4	4	3	1	1		1								18	12.0	4.0
	Largemouth bass			1		2	3	2	1	1		5	3	3		1	2	3				27	18.0	9.0
Robinson Creek Arm																								
Smith Ridge	Smallmouth bass																						0.0	
	Spotted bass		8	2		1			3					1								15	10.0	3.5
	Largemouth bass	1	11	10	4	3	4	1	7	9	7	3		3	5	3	2	1		2	1	77	51.3	13.5
Lone Valley	Smallmouth bass	1	11	3				1	2						1		1					20	13.3	4.7
	Spotted bass	20	20	2	5	6	4	4	2	1		1	1		1							67	44.7	7.3
	Largemouth bass	2	2						1						2	1		1	1			10	6.7	0.7
TOTAL	Smallmouth bass	2	17	8		3	1	2	3						1		1					38	6.3	2.6
	Spotted bass	22	91	51	15	16	20	20	16	6	2	4	1	2	1							267	44.5	12.8
	Largemouth bass	3	38	31	14	15	12	5	13	16	11	8	3	7	7	6	5	5	1	2	1	203	33.8	8.3

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Table 33. Largemouth bass mean length (in) at age-0 and catch rates at age 0 and age 1 collected at Green River Lake since 2002.

	Age 0[A]		Age 0[A]		Age 0 ≥5.0 in[A]		Age 1[B]	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	3.9	0.1	32.7	9.7	5.3	1.2	7.3	1.6
2003	3.9	0.1	32.8	9.7	5.5	1.2	11.9	2.1
2004	5.0	0.1	60.8	9.0	28.0	3.6	65.3	7.7
2005	5.2	0.1	31.7	7.4	16.8	4.3	14.3	2.4
2006	4.3	0.1	13.5	3.4	3.7	1.2	3.8	1.0
2007	4.2	0.1	21.8	5.3	5.8	2.2	22.8	9.5
2008	4.8	0.1	23.7	5.8	11.5	3.6	7.2	1.8
2009	3.7	0.1	66.8	9.8	11.5	3.9	ND	
2010	4.8	0.1	45.0	8.1	18.3	4.9	ND	
2011	3.9	0.1	28.8	7.5	5.8	1.5	15.5	4.0
2012	4.2	0.1	16.5	4.2	5.0	2.0	3.8	0.8
2013	5.9	0.1	26.0	15.4	19.3	12.9	ND	
2014	data collected too late in year for reasonable comparisons							
2015	5.7	0.1	65.0	22.6	44.7	15.8	17.5	4.2
2016	5.1	0.1	55.3	8.7	30.3	7.9	34.7	8.8
2017	4.8	0.1	19.0	6.6	7.0	2.5		

[A] Data collected by fall (late-Sept through early November) diurnal electrofishing. Mean lengths were determined by otoliths taken from a subsample of LMB <9.0 inches and extrapolated to the entire catch of the fall sample.

[B] Data collected during the following spring (May) nocturnal electrofishing.

swdgrlbb.D02 - D17

swdgrlag. D02 - D17

swdgrlyy. D02 - D13, 15-17

Table 34. Length frequency and CPUE (fish/nn) for white bass and walleye collected in experimental gillnets (14 net-nights) from November 14-17 at Green River Lake, KY 2017.

	Inch class																					Std.
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE	error
White bass		4	3	3			3	17	48	42	22									142	10.1	2.5
Walleye				1	4	3	1		2	3	4	6	4		5	1	2	2	1	39	2.8	0.6

swdgrlgn.d17

Table 35. Age frequency and CPUE (fish/nn) of white bass collected from Green River Lake in experimental gillnets (14 net-nights) from 14-17 November 2017.

	Inch class													Std.
Age	7	8	9	10	11	12	13	14	15	16	Total	Percent	CPUE	error
0+	4	3	3								10	7	0.7	0.3
1+						2	2	3			7	5	0.5	0.1
2+						1	15	28	9		53	37	3.8	1.0
3+								17	33	21	71	50	5.1	1.5
4+											0	0		
5+											0	0		
6+											0	0		
7+										1	1	1	0.1	0.0
Total	4	3	3			3	17	48	42	22	142	100		
%	3	2	2			2	12	34	30	15	100			

swdgrlgn.D17, swdgrlag.D17

Table 36. Age frequency and CPUE (fish/nn) of walleye collected from experimental gillnets in Green River Lake from 14-17 November 2017.

	Inch class																		Std.
Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	Percent	CPUE	error
0+	1	4	3	1												9	24	0.6	0.2
1+						2	3	4	6	1						16	43	1.1	0.4
2+										3		1	1			5	14	0.4	0.1
3+												4				4	11	0.3	0.1
4+															1	1	2	0.1	0.1
5+														2	1	3	8	0.2	0.1
Total	1	4	3	1		2	3	4	6	4		5	1	2	2	38	100.0		
%	3	11	8	3		5	8	11	16	11		14	3	5	5	100			

swdgrlgn.D17, swdgrlag.D17

Table 37. White bass population assessment from experimental gillnetting at Green River Lake 1991-2007, 2015 and 2017.

	CPUE age-1 and older		Mean length age-2+ at capture		CPUE ≥ 12.0 in		CPUE age 1					
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
1991	22.2	4	14.0	4	10.7	4	14.6	4	1.204	70.0	16	E
1992	33.8	4	13.4	3	16.8	4	10.1	4	1.542	78.6	15	E
1993	32.3	4	13.7	4	16.3	4	15.0	4	0.964	61.9	16	E
1994	22.6	4	13.4	3	15.6	4	4.5	3	0.347	29.4	14	E
1995	17.6	3	13.5	3	11.9	4	9.1	4	NA		14	E
1996	33.1	4	13.6	4	18.9	4	18.4	4	1.012	63.7	16	E
1997	17.1	3	12.9	3	10.9	4	3.8	3	0.680	49.3	13	G
1998	19.1	4	12.9	3	6.3	3	6.4	3	1.187	69.5	13	G
1999	26.6	4	13.3	2	13.4	4	16.2	4	1.117	67.3	14	E
2000	11.5	3	13.6	4	9.4	4	2.8	2	0.619	46.2	13	G
2001	8.0	2	14.0	4	4.9	3	0.1	1	0.646	47.6	10	G
2002	10.2	3	13.8	4	4.4	3	5.4	3	0.735	52	13	G
2003	18.9	4	12.5	2	1.3	2	2.3	2	0.660	48.3	10	G
2004	5.8	2	12.8	2	0.5	1	3.5	3	1.320	73.3	8	F
2005	7.4	3	12.4	2	3.5	2	5.8	3	NA		10	G
2006	5.8	2	13.8	4	4.1	3	2.1	2	0.341	28.9	11	G
2007	3.2	1	14.0	4	2.6	2	1.1	1	0.575	43.7	8	F
2015	24.8	4	NA	4	23.8	4	24.0	4	NA		16	E
2017	9.4	3	14.3	4	9.4	4	0.7	1	NA		12	G

NA - data not available or not amenable for use

sw dgrlgn. d91-d08, 15, 17

sw dgrlag.d91-08, 15, 17

Table 38. Walleye population assessment from experimental gillnetting at Green River Lake 1996-2017 (scoring based on statewide assessment).

	CPUE excluding age-0		Mean length age-2+ at capture		CPUE ≥20.0 in		CPUE age 1		Mortality			
Year		Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
1996	1.8	1	18.5	3	0.1	1	1.4	2	NA		7	F
1997	0.8	1	17.3	1	0.2	2	0.4	1	NA		5	P
1998	0.5	1	17.6	2	0.1	1	0.3	1	NA		5	P
1999	3.2	2	17.3	1	0.1	1	1.7	3	NA		7	F
2000	5.0	3	18.1	2	0.2	2	4.1	4	-0.684	49.6	11	G
2001	5.8	3	17.8	2	0.0	1	5.0	4	NA		10	G
2002	2.6	2	17.8	2	0.4	2	0.7	1	-0.778	54.1	7	F
2003	2.1	1	18.3	2	0.5	2	1.6	2	NA		7	F
2004	1.1	1	16.4	1	0.0	1	0.8	1	NA		4	P
2005	0.6	1	17.8	2	0.1	1	0.5	1	NA		5	P
2006	2.3	1	17.9	2	0.1	1	1.6	2	-0.489	38.7	6	P
2007	6.8	4	18.6	3	0.8	3	3.9	4	-0.689	49.8	14	E
2008	3.7	2	19.6	4	0.9	3	1.1	2	-0.357	30.0	11	G
2009	4.1	3	19.6	4	1.1	4	2.3	3	-0.657	48.2	14	E
2010	3.6	2	18.8	3	1.0	3	1.7	3	-0.566	43.2	11	G
2011	1.8	1	19.3	4	0.8	3	0.4	1	-0.409	33.5	9	F
2012	3.1	2	19.2	4	0.9	3	1.3	2	-0.479	38.1	11	G
2013	2.8	2	19.2	4	0.9	3	1.1	2	NA		11	G
2014	1.0	1	20.1	4	0.7	3	0.1	1	NA		9	F
2015	2.1	1	19.5	4	1.1	4	0.8	1	NA		10	G
2017	2.1	1	19.5	4	0.8	3	1.1	2	NA		10	G

NA - catch data not amenable to mortality estimates

sw dgrlgn.d96-15, 17

sw dgrlag.d96-15, 17

Table 39. Relative weight (Wr) for each length group of white bass collected by gill nets (14 net-nights) at Green River Lake from 14-17 November 2017. Standard errors are in parentheses.

	Length group		
	6.0-8.9 in	9.0-11.9 in	≥12.0 in
Wr	97(3)	98(2)	95(1)
N	5	3	86

swdgrlgn.D17

Table 40. Relative weight (Wr) for each length group of walleye collected by gill nets (14 net-nights) at Green River Lake from 14-17 November 2017. Standard errors are in parentheses.

	Length group		
	10.0-14.9 in	15.0-19.9 in	≥20.0 in
Wr	93(1)	98(2)	101(2)
N	10	15	8

swdgrlgn.D17

Table 41. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during 1.5 hours (6- .25-hour runs) of nocturnal electrofishing at Mill Creek Lake on 12 April 2017.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Spotted bass	1	4	3	11	13	12	8	9	10	4	4	3		2						84	56.0	8.2
Largemouth bass		2	10	5	2	10	13	9	30	23	8	6	19	9	18	11	6	11	2	194	129.3	14.8

swdmilbb.D17

Table 42. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Mill Creek Lake during mid-late April to mid-May, 2006-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	Total CPUE	Std. error
2006	42.7	6.8	124.0	6.8	36.7	3.8	29.3	8.4	6.0	2.7	232.7	16.5
2007	ND											
2008	ND											
2009	ND											
2010	ND											
2011	42.0	9.3	49.3	4.3	32.7	3.8	64.0	9.6	4.7	1.2	188.0	9.6
2014	2.0	1.4	36.7	6.7	56.7	5.4	46.0	6.1	6.0	2.7	141.3	11.5
2017	12.7	4.2	41.3	5.1	24.7	5.7	50.7	9.8	8.7	3.5	129.3	14.8

swdmilbb.D06, D11, D14, D17

ND = no data collected

Table 43. PSD and RSD$_{15}$ values from spring nocturnal electrofishing (1.5 hours; 6 runs; 0.25 hours each) for largemouth bass at Mill Creek Lake on 12 April 2017. 95% confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD (± 95% CI)	RSD$_{15}$ (± 95% CI)
Spotted bass	65	35(12)	8(6)
Largemouth bass	175	65(7)	43(7)

swdmilbb.D17

Table 44. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by 1.5 hours (12 runs; 450 sec./run) of diurnal electrofishing at Shanty Hollow Lake on 26 April 2017 .

	Inch class											Std.
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	error
Bluegill	4	25	36	48	38	30	22	4		207	165.6	12.9
Redear			1		11	1	3	4	4	24	19.2	3.6
Warmouth	1			1		2	4			8	6.4	2.0

swdshlbg.d17

Table 45. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Shanty Hollow Lake from 2001-2017. Standard errors are in parentheses.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
2001	99.9	224.7	239.4	4.4	573.3
	(28.2)	(57.5)	(67.8)	(3.5)	(153.3)
2002	78.0	391.3	121.3	10.7	601.3
	(15.2)	(55.2)	(15.0)	(2.8)	(67.1)
2003	43.3	346.7	106.0	5.3	501.3
	(10.4)	(34.6)	(17.0)	(2.8)	(47.6)
2004	85.7	285.2	157.1	*	590.8
	(26.7)	(53.0)	(27.6)		(100.1)
2005	76.3	194.5	124.3	1.2	396.3
	(16.5)	(23.2)	(15.3)	(0.8)	(43.3)
2006	134.0	78.7	98.7	12.7	324.0
	(45.3)	(8.9)	(13.9)	(4.7)	(50.2)
2007	197.1	321.5	94.6	0.7	613.8
	(33.0)	(38.2)	(18.2)	(0.7)	(64.2)
2008	115.1	142.8	108.9	*	366.8
	(23.9)	(11.5)	(18.4)		(31.5)
2009	16.0	184.0	28.7	*	228.7
	(8.1)	(41.7)	(8.0)		(51.2)
2010	66.0	181.3	29.3	0.7	277.3
	(11.2)	(24.6)	(5.8)	(0.7)	(27.5)
2011			NO DATA		
2012	192.8	452.0	59.2	0.8	704.8
	(25.9)	(70.1)	(11.5)	(0.8)	(82.6)
2013			NO DATA		
2014			NO DATA		
2015	38.7	51.3	67.3	3.3	160.7
	(14.6)	(9.6)	(10.5)	(1.2)	(26.7)
2017	23.2	97.6	41.6	3.2	165.6
	(8.0)	(9.8)	(5.8)	(2.4)	(26.7)

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Table 46. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Shanty Hollow Lake from 2001 - 2017. Standard errors are in parentheses.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
2001	*	0.8	13.8	42.1	*	60.0
		(0.8)	(5.3)	(8.7)		(8.3)
2002	*	3.3	6.7	6.7	*	16.7
		(1.2)	(2.2)	(3.1)		(5.1)
2003	*	2.7	1.3	10.7	*	14.7
		(1.1)	(0.9)	(6.0)		(5.9)
2004	1.2	8.0	8.0	9.9	*	27.1
	(0.8)	(2.6)	(2.2)	(3.2)		(4.8)
2005	1.2	3.7	9.2	3.7	*	17.9
	(1.2)	(1.5)	(2.7)	(1.5)		(3.8)
2006	0.0	8.0	6.0	8.7	*	22.7
		(3.3)	(2.2)	(2.9)		(5.6)
2007	1.5	9.5	34.2	2.9	*	48.0
	(1.0)	(2.8)	(6.4)	(1.2)		(7.3)
2008	1.2	3.1	9.2	11.7	*	25.2
	(0.8)	(1.9)	(3.0)	(6.2)		(9.2)
2009	3.3	16.0	6.0	6.0	*	31.3
	(2.1)	(3.6)	(4.0)	(3.7)		(9.2)
2010	0.0	12.7	8.7	2.0	*	23.3
		(3.4)	(2.3)	(1.4)		(4.1)
2011			NO DATA			
2012	4.0	20.8	5.6	9.6	*	40.0
	(2.2)	(5.6)	(2.4)	(3.1)		(8.2)
2013			NO DATA			
2014			NO DATA			
2015	*	3.3	6.0	16.0	0.7	25.3
		(1.5)	(2.2)	(3.6)	(0.7)	(4.2)
2017	*	9.6	3.2	6.4	*	19.2
		(2.0)	(1.8)	(1.1)		(3.6)

swdshlbg.D01 - D17

Table 47. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear collected by diurnal electrofishing at Shanty Hollow Lake on 26 April 2017. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD[a]
Bluegill	178	31(7)	2(2)
Redear	23	48(21)	17(15)

[a] Bluegill=RSD_8; redear sunfish=RSD_9

swdshlbg.D17

Table 48. Bluegill population assessments from 2006 - 2017 at Shanty Hollow Lake (scoring based on statewide assessment).

	2006		2007		2008		2009		2010		2011	2012		2013	2014	2015		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		Value	Score			Value	Score	Value	Score
Mean length age-2 at capture	4.8*	3	4.8*	3	3.7	1	3.7*	2	3.7*	1	ND	3.7*	1	ND	ND	3.4*	1	3.4	1
Years to 6.0 in	2.6*	4	2.6*	4	2.7	4	2.7*	4	2.7*	4	ND	2.7*	4	ND	ND	3.0	3	3.0	3
CPUE ≥6.0 in	111.3	4	95.3	4	108.9	4	28.7	1	30.0	2	ND	60.0	3	ND	ND	70.7	3	44.8	2
CPUE ≥8.0 in	12.7	4	0.7	2	0.0	1	0.0	1	0.7	1	ND	0.8	1	ND	ND	3.3	3	3.2	3
Instantaneous mortality (z)						-0.75										NA			
Annual mortality (A)						52.9													
Total score:		15		13		10		8		8			9				10		9
Assessment rating:		Excellent		Good		Good		Fair		Fair			Fair				Fair		Fair

*No age data collected, value carried over from years with age data

ND - data collected, but no amenable for use

swdshlag.d02, 08, 15

swdshlbg.D02 - D17

Table 49. Redear population assessments from 2006 - 2017 at Shanty Hollow Lake (scoring based on statewide assessment).

	2006		2007		2008		2009		2010		2011	2012		2013	2014	2015		2017	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		Value	Score			Value	Score	Value	Score
Mean length age-3 at capture	7.2*	2	*7.2	2	7.8	3	7.8*	3	7.8*	3	ND	7.8*	3	ND	ND	7.5	2	7.5*	2
Years to 8.0 in	3.9	4	3.9	4	3.7	4	3.7	4	3.7	4	ND	3.7	4	ND	ND	3.7	4	3.7	4
CPUE ≥8.0 in	8.7	3	2.9	2	11.7	3	6.0	2	2.0	2	ND	9.6	3	ND	ND	16.0	3	6.4	2
CPUE ≥10.0 in	0.0	1	0.0	1	0.0	1	0.0	1	0.0	1	ND	0.0	1	ND	ND	0.7	2	0.0	1
Instantaneous mortality (z)																			
Annual mortality (A)																			
Total score:		10		9		11		10		10			11				11		9
Assessment rating:		Good		Fair		Good		Good		Good			Good				Good		Fair

*No age data collected, value carried over from years with age data

ND - data collected

swdshlag.d02, 08, 15

swdshlbg.D02 - D17

Table 50. Length frequency and CPUE (fish/set-night) of channel catfish collected from 8 sets of tandem hoop nets (4 sets with 3 nets each with 72 hour soak time) at Shanty Hollow Lake from 5-11 September 2017.

	Inch class																			
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Channel catfish											1	1			1		2	5	0.6	0.6
Redear sunfish	2	9	6	16	12													45	5.6	1.4

swdshlcc.d17

Table 51. Age frequency and CPUE (fish/set-night) of channel catfish collected from 8 tandem hoop net sets at Shanty Hollow from 5-11 September 2017.

	Inch class										Std.
Age	15	16	17	18	19	20	21	Total	Percent	CPUE	error
0+								0			
1+								0			
2+								0			
3+	1	1						2	40	0.3	0.3
4+					1		2	3	60	0.4	0.4
Total	1	1	0	0	1	0	2	5	100.0		
%	20	20	0	0	20	0	0	100			

swdshlcc.D17, swdshlag.D17

Table 52. Length frequency and CPUE (fish/set-night) of channel catfish collected from 8 sets of tandem hoop nets (4 sets with 3 nets each with 72 hour soak time) at Spurlington Lake from 12-18 September 2017.

	Inch class																										
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Total	CPUE	Std err
Channel catfish												1		2				1				1	1	1	7	0.9	0.5
Redear sunfish	2	8	16	19	7	3	1																		56	7.0	3.1
Bluegill	23	65	13	7	1																				109	13.6	4.1

swdsplcc.d17

Table 53. Age frequency and CPUE (fish/set) of channel catfish collected from 8 tandem hoop net sets at Spurlington Lake from 12-18 September 2017.

	Inch class																Std.
Age	15	16	17	18	19	20	21	22	23	24	25	26	27	Total	Percent	CPUE	error
0+														0			
1+	1													1	14.3	0.1	0.1
2+			1											1	14.3	0.1	0.1
3+			1											1	14.3	0.1	0.1
4+							1						1	2	28.6	0.3	0.2
5+											1			1	14.3	0.1	0.1
6+												1		1	14.3	0.1	0.1
Total	1	0	2	0	0	0	1	0	0	0	1	1	1	7	100.0		
%	14.3	0	28.6	0	0	0	14.3	0	0	0	14.3	14.3	14.3	100			

swdsplcc.D17, swdsplag.D17

Table 54. Relative weight (Wr) for each length group of largemouth bass collected by nocturnal electrofishing at Fagan Branch Lake on November 27, 2017. Standard errors are in parentheses.

	Length group		
	8.0-11.9 in	12.0-14.9 in	>15.0 in
Wr	79(1)	79(1)	86(5)
N	72	21	9

swdlclwr.D17

CENTRAL FISHERIES DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions for 2017 are summarized in Table 1.

Taylorsville Lake (3,050 acres)

Spring diurnal electrofishing was completed in April 2017 to assess the black bass population. Three sections (Big Beech Creek, Ashes/Jacks Creek, and Van Buren area) of Taylorsville Lake were sampled for 7.5 hours (2.5 hours per section; 30-minute runs). Length distribution and CPUE for largemouth bass are presented in Tables 2 and 3. The catch rate of bass collected in 2017 (171.1 fish/hr) was higher than the lake's historical average of 116.3 fish/hr. Catch rate for keeper bass (≥15.0 in) was 46.9 fish/hr; higher than the lake average (18.5 fish/hr) and was the highest catch rate recorded for harvestable-size fish. Big Beech Creek area recorded the highest catch rate for largemouth bass. The PSD for largemouth bass was 82, which was higher than the lake's average of 56 (Table 4). Additionally, the RSD_{15} value was 32; higher than the lake's average of 22. The largemouth bass population assessment score, based on spring electrofishing data, was 16 ("Good"), which is equal to the average rating at Taylorsville Lake (Table 5).

Length frequency, relative weights, and index of year class strength at age-0 and age-1 of largemouth bass based on September electrofishing are presented in Tables 6–8. Average body condition for largemouth bass was good in 2017 (W_r =92), but was slightly lower than the historical average (W_r =96) (Table 7). Catch rate of age-0 largemouth bass in the fall of 2017 (46.2 fish/hr) was higher than the lake's historic average of 42.1 fish/hr (Table 8). The year class strength model indicated above average recruitment for young-of-the-year largemouth bass in 2017, therefore no largemouth bass fingerlings were stocked during 2017. However, 989 6- to 8-inch largemouth bass were stocked into Taylorsville Lake due to a bass removal from Beaver Lake. Largemouth bass fingerlings have been stocked almost annually since 2000 at rates ranging from 5.0 fish/acre to 10.0 fish/acre and from 1985 to 1992 at various rates. The need for stocking and the numbers stocked in reservoirs are based (since 2004) on results of the age-0 year class strength sampled in early September and the predicted age-1 year class strength the following spring.

Trap netting effort for crappie (Table 9) resulted in the collection of 614 white crappie and 181 black crappie. Crappie were sampled with trap nets during 48 net-nights. PSD and RSD_{10} values are shown in Table 10. Age and growth determinations along with age frequency for black and white crappie were completed using otoliths and are shown in Tables 11-14. Age studies indicated both white and black crappie reach 9.0 in between age 2 and age 3. The crappie population assessment scores (Tables 15 and 16) rated both white and black crappie as "Fair". Historically, the crappie population at Taylorsville Lake has been very cyclic with peaks occurring every 7 to 9 years. In an effort to help recruitment on the lake, white crappie were stocked from 2009 through 2013. Significant spawns have occurred in both 2013 and 2015, however the 2016 and 2017 spawn appeared to be poor based off trap net data. Body condition of white and black crappie in the fall of 2017 were acceptable, but the black crappie are lower than expected for Taylorsville Lake (Table 17).

Fall gill netting for hybrid striped bass and white bass was conducted in October 2017 (Tables 18–26). A total of 125 hybrid striped bass were collected in 2017 compared to 167 in 2016, 47 in 2015, and 90 in 2014, Hybrid striped bass were captured in 8 net-nights (4 nets for 2 nights) for a CPUE of 12.5 (± 3.6) fish/nn. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorsville Lake appeared to be negatively correlated with the amount of tailwater discharge (due to rainfall) and fishing pressure. It is theorized that above-normal discharge leads to escapement of hybrid striped bass but has little effect on the white bass density in the lake. Additionally, a late fall water quality issue with low oxygen in the lower portion of Taylorsville Lake may be causing additional stress on the hybrid striped bass. Age and growth studies were completed for hybrid striped bass using otoliths (Tables 19 and 20). Data indicate hybrid striped bass reached 15.0 in between one to two years. This is good growth for hybrid striped bass at Taylorsville Lake. The relative weight (W_r) index for hybrid striped bass (85) continues to show below average body condition at Taylorsville Lake

(Table 21). The average W_r for Taylorsville Lake is 86. The population assessment for hybrid striped bass was rated at "Fair", an average rating for hybrid striped bass at Taylorsville Lake (Table 22). Annual stocking rates for hybrid striped bass have been 20 fish/acre (1.4 to 2.0 in) for the last 15 years. Taylorsville Lake was stocked with 61,206 (20.1 fish/acre; 1.5 in) hybrid striped bass in June 2017. The 2017 hybrid striped bass stocking in Taylorsville Lake included both crosses of hybrid striped bass (30,588 reciprocal cross hybrids (no OTC mark) and 30,618 original cross hybrid striped bass (OTC marked)). Data for white bass collected during fall 2017 gillnetting studies are presented in Tables 18 and 23-26. White bass comprised about 17% of the *Morones* sampled, compared to 35% in 2016, 27% in 2015, and 47% in 2014, Age and growth studies indicated white bass reach 12.0 in by age 3 (Tables 23 and 24). Relative weight values (W_r=93) revealed acceptable body condition for all sizes of white bass (Table 25). The white bass population assessment was rated "Poor", an average rating for white bass at Taylorsville Lake (Table 26).

Saugeye were collected during fall gill netting conducted in October. A total of 40 saugeye were collected ranging from the 9.0 -19.0 inch class (Table 18). Taylorsville Lake was stocked with 115,261 (37.8 fish/acre; 1.7 in) saugeye in 2017. This was the third stocking of saugeye into Taylorsville Lake.

Summer diurnal low-pulse electrofishing was completed in July 2017 to assess the blue catfish population. Two sections (Lower Lake: Big Beech Creek and Ashes/Jacks Creek and Upper Lake: Chowning Lane and Van Buren areas) of Taylorsville Lake were sampled for 3.0 hours (15-minute runs). Two hundred and fifty-one blue catfish were collected in the lower section compared to 399 blue catfish collected in the upper section of the lake (Table 27). The number of blue catfish collected in 2017 (216.7 fish/hr) was significantly higher than the lake's historic average of 122.8 fish/hr and the second highest catch rate of blue catfish since blue catfish have been stocked into Taylorsville Lake (Table 28). Relative weight values revealed good body condition for all sizes of blue catfish (Table 29). A total of 23,540 (7.7 fish/acre) blue catfish (6.0-9.0 in) were stocked in Taylorsville Lake during April 2017. Additionally, another 27,520 (9.0 fish/acre) blue catfish (5.0-18.0 in) were stocked in Taylorsville Lake during October 2017.

Dissolved oxygen and temperature profiles were completed from April through November at Taylorsville Lake. Three sites were sampled during 2017, including Big Beech Creek near Settlers Marina (no wake buoy line; Table 30), the mouth of Ashes and Jack's Creek (no ski buoy line; Table 31), and VanBuren / Chowning Lane Area (no ski buoy line; Table 32). The thermocline became well established from June through September. Dissolved oxygen levels suitable for fish (≥ 4 mg/l) could generally be found from 0-12 ft deep during the summer months. There was a decline in oxygen throughout the water column in the lower portions of Taylorsville Lake during November. These late season declines in oxygen may be a result of decomposition from significant blooms of bluegreen algae that occurred during the summer months at Taylorsville Lake. Lake temperatures peaked during the month of August in the mid 80-degree range.

Herrington Lake (2,410 acres)

Spring diurnal electrofishing studies were completed in April 2017 to monitor the black bass population. Upper, middle, and lower sections were sampled for a total of 7.5 hours (2.5 hours per section). Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 33. Largemouth bass (94.8%) dominated the black bass fishery, followed by spotted bass (5.1%) and smallmouth bass (0.1%). Numbers of largemouth bass collected in 2017 (114.0 fish/hr) was comparable to the lake's historic average of 113.8 fish/hr (Table 34). Fluctuations in the overall catch rates over the past couple of years seem to be related to lake level during sampling. The higher the lake level the lower the catch rate of bass at Herrington Lake. The lake level during the 2017 spring electrofishing sample was low, which may have led to a slight increase in the catch rate for largemouth bass. Catch rate for keeper bass (≥12.0 in) was 47.1 fish/hr, comparable to the lake's historical average (44.9 fish/hr). Overall, black bass catch rates were comparable in all three sections. The PSD for largemouth bass was 54, comparable to the lake's average of 56 (Table 35). Additionally, the RSD_{15} value was 19, which is lower than the lake average of 24. The largemouth bass population assessment score, based on spring electrofishing data, was 16 ("Good"), which is the average rating for Herrington Lake (Table 36). Length frequency, relative weights and index of year class strength at age-0 and age-1 of largemouth bass based on September electrofishing at Herrington Lake are presented in Tables 37-39. Largemouth bass condition (W_r =91) was slightly lower than the lake's historical average (W_r =92) (Table 38). The year class strength model for

Herrington Lake indicated a below average recruitment year for young-of-year largemouth bass based on age-1 CPUE (Table 39). Age-0 CPUE (26.0 fish/hr) was less than the lake average (36.4 fish/hr). Herrington Lake was stocked with 40,112 (16.6 fish/acre) largemouth bass (4.1-4.7 in) in 2017.

Gill netting for hybrid striped bass and white bass was completed in October and November 2017. During the 30 net-night sampling period, 156 hybrid striped bass and 76 white bass were collected (Table 40). Otoliths were taken from both species for age and growth determinations. Results of these studies indicated excellent growth rates for both hybrids (Tables 41-42) and white bass (Tables 45-46). Hybrid striped bass continue to reach 15.0 in between age 1 and 2 (Table 41), as they have historically. Of the hybrid striped bass sampled, 60% were age-1+ or older (Table 42). Condition of hybrid striped bass in 2017 (W_r =95) was higher than the lake's historical average (W_r =93) (Table 43). The population assessment for hybrid striped bass indicated a "Fair" population (Table 44). White bass age and growth determinations showed they reached 12.0 in between age-1 and age-2 (Table 45). Of the white bass sampled, 91% were age-1+ and older (Table 46). The white bass population assessment indicated a "Fair" population, which is an average rating (Table 47). Body condition of white bass (W_r=93) was lower than the lake's historical average (W_r=96) (Table 48). Herrington Lake was stocked with 51,150 (21.2 fish/acre; 1.5 in) hybrid striped bass in June 2017. The hybrid striped bass stocking was divided into 25,635 reciprocal cross hybrids (no mark) and 25,515 original cross hybrids (OTC marked).

Dissolved oxygen and temperature profiles were completed from April through November at Herrington Lake. Three sites were sampled at Herrington Lake during 2017, including the mouth of Cane Run (no wake buoy line; Table 49), near Gwynn Island Marina (no wake buoy line; Table 50), and near King's Mill Marina (no wake buoy line; Table 51). The thermocline appeared in May and became established during the months of June through October. However, near the dam at the Cane Run sample site a layer of dissolved oxygen > 4.0 ppm was observed below a layer of insufficient oxygen (<4 ppm) during June, July, and August. Dissolved oxygen levels suitable for fish (≥ 4 mg/l) could generally be found from 0-14 ft deep during the summer months. Lake temperatures peaked during the month of July in the low 80-degree range.

Guist Creek Lake (317 acres)

Spring nocturnal electrofishing studies were completed for length frequency, CPUE and population assessment for largemouth bass in April 2017 (Table 52). Total largemouth bass catch rate (176.3 fish/hr) was higher than the lake average of 163.7 fish/hr (Table 53). The PSD for largemouth bass was 65 compared to the lake average of 66 (Table 54). The RSD_{15} was 43 compared to the lake average of 41. The population assessment gave a rating of "Excellent", an above average rating observed at Guist Creek Lake (Table 55). Fall largemouth bass sampling was conducted for relative weights, age and growth, and index of year class strength at age-0 and age-1 (Tables 56-59). Relative weights indicated good body condition for bass, especially for bass over 15.0 in (Table 58). Mean length of age-0 largemouth bass (5.0 in) was significantly larger than in recent years and catch rate of age-0 largemouth bass (75.3 fish/hr) was higher than the average recruitment (avg. = 47.3 fish/hr; Table 59). Therefore, largemouth bass were not stocked into Guist Creek Lake in 2017.

Gill netting was completed in October for hybrid striped bass (Table 60). Four nets were fished for two nights (8 net-nights) in similar sites as in past years. A total of 48 hybrid striped bass were captured compared to 31 in 2014, 51 in 2011, 32 in 2010 and 26 in 2009. Age and growth studies were completed using otoliths. Calculations indicated hybrid striped bass continued to reach 15.0 in between age 1 and age 2, and 20.0 in between age 2 and age 3 (Tables 61-62). Relative weights of these hybrid striped bass continue to be below average (W_r = 83) for their size (Table 63). The population assessment indicated a rating of "Poor", below the average population rating of "Fair" for Guist Creek Lake (Table 64). Guist Creek Lake was stocked with 19,098 (60.2 fish/acre; 1.6 in) hybrid striped bass in June 2017

Saugeye were collected during the spring largemouth bass sample (Table 52). Sampling yielded 32 saugeye (10.7 fish/hr) ranging in size from the 8.0- to 23.0-in size class. Additionally, saugeye were collected during fall electrofishing (Table 65). Sampling yielded 37 saugeye (24.7 fish/hr) ranging in size from the 8.0- to 24.0-in size class. Gill netting for 8 net-nights was completed in October for saugeye (Table 60). A total of 123 saugeye were captured from the 9.0- to 24.0-in classes. Age and growth studies were completed using otoliths. Calculations indicated that on average saugeye reach 15.0 in between age 1 and age 2, and 20.0 in by age 3 (Tables 66). All five stocked year classes were represented in this sample (Table 67). Guist Creek Lake was stocked with 15,850 (50.0 fish/acre; 1.8 in) saugeye in 2017. This was the fifth year of saugeye stocking into Guist Creek Lake.

Guist Creek Lake was stocked with 3,167 (10.0 fish/acre; 5.0-10.0 in) channel catfish in March 2017.

A.J. Jolly Lake (175 acres)

Spring diurnal electrofishing was completed in April 2017 to assess the black bass population (Table 68). Results indicated largemouth bass catch rates (131.6 fish/hr) were greater than the lake's historical average (85.5 fish/hr) (Table 69). The PSD for largemouth bass was 48 and the RSD_{15} was 26 (Table 70). The population assessment indicated a "Good" bass population, the average rating since 2010 (Table 71). Fall diurnal electrofishing was conducted for relative weights and to index year class strength of age-0 largemouth bass in October (Tables 72-74). Relative weights indicated acceptable body condition (W_r = 89) (Table 73). Fall sampling indicated an above average number of age-0 bass, (37.5 fish/hr; average= 24.1 fish/hr) and above average size of age-0 bass (5.4 in; average=4.6 in) (Table 74). Largemouth bass were not stocked during 2017.

A.J. Jolly Lake was stocked with 8,750 (50.0 fish/acre; 1.8 in) saugeye in 2017. This was the fifth year of saugeye stocking. Saugeye were collected during the spring largemouth bass sample (Table 68). Sampling yielded 42 saugeye (16.8 fish/hr) ranging in size from the 7.0- to 21.0-in size class. Additionally, saugeye were collected during the fall largemouth bass sample (Table 72). Sampling yielded 74 saugeye (37.0 fish/hr) ranging in size from the 4.0- to 23.0-in size class.

Channel catfish were sampled in October using tandem hoop nets at A.J. Jolly in 2017. Length frequency results for channel catfish showed a size distribution between the 8.0 and 22.0-in size classes (Table 75). The PSD and RSD_{24} for channel catfish was 19 and 0, respectively (Table 76). Relative weights indicated good body condition for channel catfish (W_r = 95) (Table 77). Overall, catch rates at A.J. Jolly remain lower than the lake average of 38.3 fish/hr (Table 78). A.J. Jolly Lake was stocked with 1,750 (10.0 fish/acre; 5.0 – 10.0 in) channel catfish in March 2017.

On May 31, 2017 a total of 218 common carp were removed from AJ Jolly Lake. The average weight of a common carp removed from AJ Jolly Lake was 3.3 lbs. Therefore, it was estimated that 720 lbs of common carp were removed from AJ Jolly Lake. The seven-year total for common carp removed from AJ Jolly Lake is 1,954 fish at an estimated weight of 6,266.7 lbs (3.2 lbs average weight per fish).

A creel survey conducted during 2016 and 2017 by the AJ Jolly Nature Resource Committee resulted in 30 completed creel cards. From this very small sample size, the average trip length was 4.5 hrs with 55% of anglers fishing from a boat and 45% of anglers' bank fishing. The most sought after species was catfish (40%) followed by fishing for anything (33%).

An angler attitude survey was conducted at AJ Jolly Lake through both an online survey during 2016 and an onsite survey conducted in both 2016 and 2017 by the AJ Jolly Nature Resource Committee in conjunction with the Campbell County Fiscal Court. A total of 92 surveys were completed. The survey reflected that 60.5% of all anglers were satisfied with the fishing at AJ Jolly compared to the 14.2% of anglers that were dissatisfied. Overall, 94.1% of anglers were satisfied with the current size and creel limits. The majority of anglers (58.5%) stated that they would prefer AJ Jolly to be managed for a balanced bass and bluegill fishery. Seventy-four percent of anglers are satisfied with the current facilities at AJ Jolly compared to 3.5% of anglers that were dissatisfied.

Beaver Lake (158 acres)

During March, April, and June, an effort was made to reduce the crowded largemouth bass population at Beaver Lake. Two thousand three hundred eighty-seven (2,387; 15.1 fish/acre) largemouth bass were removed from Beaver Lake during three separate events with fish transported to Boltz, Kinman, Taylorsville, and 4 FINS lakes. Largemouth bass ranging in size from 4.0 to 13.0 in (<8.0 in = 1,758 (73.6%); 8.0-10.9 in = 439 (18.4%); 11.0-13.0 in = 190 (8.0%)) were removed from Beaver Lake.

A spring diurnal electrofishing sample was completed in April 2017 to assess the black bass population (Table 79). The CPUE for all sizes was 480.0 fish/hr, greater than the lake average of 249.9 fish/hr (Table 80). The PSD and RSD_{15} for largemouth bass were 20 and 2, respectively, compared to the current lake average of 28 and 4 (Table 81). The population assessment score indicated a "Good" bass population (Table 82), which is the average assessment rating for Beaver Lake. Fall diurnal electrofishing was conducted for relative weights and the index of age-0 year class strength (Tables 83 – 85). The relative weight index continues to reflect below expected average weights for most length groups of largemouth bass ($W_r = 83$); which is lower than the lake average of 85 (Table 84). Fall sampling indicated above average numbers of age-0 bass, (227.3 fish/hr; average = 130.7 fish/hr) and the average size of largemouth bass (4.8 in) was higher than the lake's average of 4.2 in (Table 85).

Spring diurnal electrofishing was completed in March and May 2017 to assess the panfish populations; however, only the May sampling results were used in the assessment tables to remain consistent with reported historical data (Tables 86-92). Length frequency results showed the majority of bluegill were in the 6.0- to 7.0-in range (Table 86). The PSD for bluegill was 66 compared to the lake average of 31 (Table 88). The RSD_8 was 4, compared to the lake average of 1. CPUE for all length groups of bluegill was 402.4 fish/hr; considerable higher than the lake average of 250.5 fish/hr (Table 89). Redear sunfish PSD and RSD_9 were 74 and 37, respectively (Table 88). The population assessment for bluegill indicated an "Excellent" population rating, which is above average for Beaver Lake (Table 90). The catch rate of redear sunfish ≥8.0 in was 7.2 fish/hr and was significantly lower than the lake average of 23.4 fish/hr (Table 91). Additionally, catch rates for all sizes were significantly lower than the lake's average catch rate (68.5 fish/hr) for all sizes. The population assessment indicated an "Excellent" redear sunfish fishery (Table 92). Age and growth studies on bluegill and redear sunfish showed that bluegill reach 6.0 in and redear sunfish reach 8.0 in between age 2 and 3 (Table 93-94). Relative weights for bluegill and redear sunfish were collected during the fall diurnal electrofishing sample. Overall, relative weight data for bluegill was fair to poor while the body condition of redear sunfish was good (Table 95). A total of 31,800 (201.3 fish/acre; 1.0-2.0 in) redear sunfish were stocked during September 2017.

Diurnal electrofishing studies to evaluate the crappie population were completed at Beaver Lake in October 2017. A total of 10 crappie (7 black crappie and 3 white crappie) were collected in 1.5 hr of electrofishing (Table 96).

Channel catfish were sampled in October 2017 using tandem hoop nets. Length frequency results for channel catfish showed a size distribution between the 12.0 and 24.0-in size classes (Table 97). The PSD and RSD_{24} for channel catfish was 65 and 1, respectively (Table 98). Relative weights indicated fair body condition for channel catfish ($W_r = 87$), which was lower than the average for the lake ($W_r = 88$) (Table 99). Overall, catch rates at Beaver Lake remain lower than the lake average of 44.7 fish/hr (Table 100).

Beaver Lake was scheduled to be lowered about 8 feet from November 2017-February 2018 in an effort to crowd the fish, assist with a habitat placement and allow for winter rye to be planted on the exposed shoreline. A total of 1,550 lbs of winter rye was planted, which should assist in suspending nutrients and providing additional shoreline fish habitat. However, a malfunction occurred with the valve on the control structure resulting in the valve being closed in December 2017. At that point the lake was down 3.5 feet returning to normal pool by the first week of February.

No applications of aquatic herbicides were completed at Beaver Lake in 2017. No liquid fertilizer applications have been made since 2001. Finally, no gizzard shad were collected at Beaver Lake in 2017.

Benjy Kinman Lake (88 acres)

A spring nocturnal electrofishing sample was completed in April 2017 to assess the black bass population (Table 101). The CPUE for all sizes was 120.0 fish/hr, compared to the lake average of 124.5 fish/hr (Table 102). The PSD and RSD_{15} for largemouth bass were 29 and 5, respectively (Table 103). The population assessment score indicated a "Fair" bass population (Table 104). Fall largemouth bass sampling was conducted for relative weights, age and growth, and index of year class strength at age-0 and age-1 in September 2017 (Tables 105-108). Relative weights indicated below average body condition for bass ($W_r = 84$) with larger fish exhibiting better condition compared to smaller length groups (Table 106). The better condition of larger fish is due to the gizzard shad forage base. Age and growth studies on largemouth bass show that largemouth bass reach 12.0 in between age 3 and 4 (Table 107). CPUE for both age-0 and age-0 ≥5.0 in were collected for the fourth time at Benjy Kinman Lake (Table 108). Largemouth bass (140 fish; 11.0-13.0 in) removed from Beaver Lake were stocked into Benjy Kinman Lake in March 2017.

Diurnal electrofishing studies to evaluate the crappie population were completed in October 2017. A total of 24 crappie (2 white crappie and 22 black crappie) were collected in 1.5 hrs of electrofishing (Table 109). Age and growth studies of white crappie indicated they reach 9.0 in between age 3 and 4 (Table 110). Additionally, age and growth studies showed black crappie growth to be slow (Table 111). Relative weights indicated below average body condition for both white crappie ($W_r = 87$) and black crappie ($W_r = 81$) (Table 112).

Benjy Kinman Lake was stocked with 880 (10.0 fish/acre; 5.0 -15.0 in) channel catfish in February 2017.

A total of eighteen rough fish removal events took place from May 2017- March 2018 resulting in a total of 922 bigmouth buffalo, smallmouth buffalo, common carp, river carpsucker, and longnose gar being removed from Benjy Kinman Lake. The average weight of removed rough fish was 8.3 lbs. Therefore, it was estimated that 7,670 lbs of rough fish were removed from Benjy Kinman Lake. The four-year total for rough fish removed from Benjy Kinman Lake is 3,390 fish at an estimated weight of 24,226 lbs (7.1 lbs average weight per fish).

A soil test was completed during the fall at Kinman Lake that resulted in a soil pH level of 5.3. Based on the pH it was recommended to apply 5 tons/acre of agricultural lime. Therefore, during December 121 tons of agricultural lime was washed into the upper third of Kinman Lake. Additional liming is planned for the remainder of the lake next year.

Kinman Lake was lowered 2 feet from October 2017-February 2018 in an effort to crowd the fish, assist with rough fish removal and allow for winter rye to be planted on the exposed shoreline. A total of 650 lbs of winter rye was planted, which should assist in suspending nutrients as it decomposes while providing additional shoreline fish habitat.

Boltz Lake (92 acres)

Spring nocturnal electrofishing was completed in April 2017 to assess the black bass population (Table 113). Results indicated largemouth bass catch rates (218.5 fish/hr) were higher than the lake's historical average (192.0 fish/hr; Table 114). The PSD for largemouth bass was 30 compared to the lake average of 43 (Table 115). The RSD_{15} was 9, lower than the lake average of 17. The population assessment indicated a "Good" bass population (Table 116). Fall diurnal electrofishing was conducted for length frequency, relative weights and index of age-0 year class strength in September (Tables 117-119). Relative weights indicated acceptable body condition ($W_r = 91$), higher than the lake's average relative weight of 90 (Table 118). Fall sampling indicated above average numbers of age-0 bass, (164.0 fish/hr; average= 58.1 fish/hr) and the average size (4.3 in) was comparable to the lake's average size of 4.2 in (Table 119). Largemouth bass were stocked in Boltz Lake from a bass removal project completed at Beaver Lake during March 2017. A total of 629 largemouth bass (6.8 fish/acre) were stocked that ranged from the 4.0- to 10.0-in size class.

Saugeye were collected during the spring largemouth bass sample (Table 113). Sampling yielded 23 saugeye (11.5 fish/hr) ranging in size from the 10.0- to 15.0-in size class. Saugeye were stocked into Boltz Lake for the third time during 2017. A total of 4,600 saugeye (50.0 fish/acre) were stocked at an average size of 1.8 in.

Fall relative weight index reflected average condition for bluegill ($W_r = 89$; lake average $W_r = 90$) (Table 120).

Redear sunfish (18,400 fish; 200.0 fish/acre) were stocked in September 2017 that averaged 1.0-2.0 in.

Boltz Lake was stocked with 2,158 (23.5 fish/acre; 5.0 – 10.0 in) channel catfish in 2017.

A total of 16 common carp averaging 9.63 lbs/fish were removed from Boltz Lake in June 2017. In total, 573 common carp (estimated 4,654 lbs) have been removed from Boltz Lake since 2008.

Currently, Boltz Lake does not have a population of gizzard shad.

Bullock Pen Lake (134 acres)

Spring nocturnal electrofishing was completed in May 2017 to assess the black bass population (Table 121). The total catch rate of largemouth bass (204.5 fish/hr) was much higher than the lake's average catch rate of 140.2 fish/hr (Table 122). The PSD for largemouth bass was 78, higher than the lake average of 70 (Table 123). The RSD_{15} for largemouth bass was 42, higher than the lake average of 40. The population assessment for largemouth bass was rated "Good"; the same rating since 2012 (Table 124). Fall diurnal electrofishing was conducted in September to determine for length frequency, relative weights and index of age-0 year class strength for largemouth bass (Tables 125-127). Relative weights indicated acceptable body condition for bass ($W_r = 92$), but were lower than the lake's average ($W_r = 94$). Larger fish exhibited better condition compared to smaller length groups, which is a function of the shad forage base (Table 126). Age-0 CPUE (32.7 fish/hr) was higher than the lake average (21.1 fish/hr); therefore, no largemouth bass were stocked in 2017 (Table 127).

Saugeye were collected during the spring largemouth bass sample. Twelve saugeye (6.0 fish/hr) were collected ranging in size from the 15.0- to 21.0-in class (Table 121).

Bullock Pen Lake was stocked with 2,196 (16.4 fish/acre; 5– 10 in) channel catfish in March 2017.

During 2017, KDFWR was able to purchase and take sole ownership of the property adjacent to the boat ramp at Bullock Pen Lake.

Corinth Lake (96 acres)

Spring nocturnal electrofishing was completed in April 2017 to assess the black bass population (Table 128). The total catch rate of largemouth bass (380.5 fish/hr) was higher than the lake's average catch rate of 241.9 fish/hr (Table 129). The PSD for largemouth bass was 17, lower than the lake average of 21 (Table 130). The RSD_{15} for largemouth bass was 8, equal to the lake average. The population assessment for largemouth bass was rated "Good"; the average rating since 2005 (Table 131). Fall diurnal electrofishing for largemouth bass was conducted to determine length frequency, year class strength and relative weight (Tables 132-134). Relative weights of largemouth bass continue to be below average, except for largemouth bass ≥15.0 in. The overall relative weight in 2017 ($W_r = 82$) was less than the average relative weight observed at Corinth Lake ($W_r = 84$; Table 133). The year class strength model indicated that 2017 was a below average recruitment year for young-of-year largemouth bass (Table 134). Age-0 CPUE (35.3 fish/hr) remained below the lake average (87.9 fish/hr); however, largemouth bass were not stocked into Corinth Lake in 2017.

Spring diurnal electrofishing for bluegill and redear sunfish was completed in May 2017 to obtain length frequency, CPUE and population assessment data (Table 135). Bluegill PSD (65) was significantly higher than the lake average of 32 (Table 136). The bluegill catch rate (264.0 fish/hr) continued to increase and was higher than the lake's average (239.6 fish/hr; Table 137). The population assessment indicated a "Good" population, which is the average rating (Table 138). The redear sunfish catch rate (203.2 fish/hr) continued to increase and was higher than the lake's average (73.3 fish/hr; Table 139). Redear sunfish PSD was 64, higher than the lake average of 56 (Table 136). Catch rate for redear sunfish ≥8.0 in was 43.2 fish/hr; remaining higher than the lake average of 29.8 fish/hr (Table 139). The population assessment for redear sunfish continues to be rated as "Good" (Table 140). Relative weights indicated fair condition for bluegill (89) and good condition for redear sunfish (93; Table 141).

Channel catfish were sampled in October at Corinth Lake using tandem hoop nets. Length frequency results for channel catfish showed a size distribution between the 9.0 and 23.0-in size classes (Table 142). The PSD and RSD_{24} for channel catfish was 21 and 0, respectively (Table 143). Relative weights indicated "Good" body condition for channel catfish ($W_r = 92$) (Table 144). Overall, catch rates at Corinth Lake remain lower than the lake average of 53.4 fish/hr (Table 145). Corinth Lake was stocked with 1,275 (20.3 fish/acre; 5.0 -10.0 in) channel catfish in March 2017.

One hundred gallons of fertilizer was applied in May 2017.

Elmer Davis Lake (149 acres)

Spring diurnal electrofishing studies were conducted in April 2017 for PSD, length frequency and CPUE for largemouth bass (Table 146). The total catch rate (279.5 fish/hr) was lower than the historical lake average of 306.4 fish/hr (Table 147). Largemouth bass PSD and RSD_{15} were 59 (average = 30) and 14 (average = 8), respectively (Table 148). The population assessment indicated an "Excellent" bass population, better than the ten-year average rating of "Good" (Table 149). Fall electrofishing evaluated largemouth bass relative weight and index of year class strength (Tables 150-152). Largemouth bass relative weight (W_r =86) was less than the historical lake average (W_r =87; Table 151). The year class strength model indicated that 2017 was an above average year for young-of-year largemouth bass. Age-0 CPUE (366.4 fish/hr) was higher than the lake average (142.7 fish/hr) (Table 152).

Diurnal spring electrofishing for length frequency, CPUE, and population assessment were conducted for bluegill and redear sunfish in May 2017 (Table 153). The total bluegill catch rate (194.4 fish/hr) remains lower than the lake average of 255.9 fish/hr (Table 155). The PSD value for bluegill (54) was higher than the lake average of 35 (Table 154). Likewise, the RSD_8 (1) remains lower than the lake average of 2. The population assessment for bluegill was "Fair", the average rating since 2009 (Table 156). The total catch rate of redear sunfish (48.0 fish/hr) was lower than the lake average of 71.3 fish/hr (Table 157). The PSD for redear sunfish was 98 compared to the lake average of 55. The RSD_9 was 18 compared to the lake average of 17 (Table 154). The redear sunfish population assessment indicated a "Good" population, which is equal to the average lake rating (Table 158). Relative weight index reflects average condition for both bluegill (W_r = 95) and redear sunfish (W_r = 96); however both species are below the lake averages of 96 and 102, respectively (Table 159). A total of 36,300 (243.6 fish/acre; 1.0-2.0 in) redear sunfish were stocked during September 2017

Elmer Davis Lake was stocked with 3,290 (22.1 fish/acre; 7.0-10.0 in) channel catfish in March 2017.

The shad eradication project completed in December 2016 appears to have been successful. Multiple shocking events have been completed specifically looking for gizzard shad, including standard sampling, which have resulted in no gizzard shad being detected. This will continue to be monitored during 2018.

KDFWR Engineering Division attempted to pump grout into the hillside at the site of a leak discovered in the cove adjacent to the dam ramp. After refilling, it appears that the grouting made little or no impact on the leak. This leak will continue to be monitored.

Kincaid Lake (183 acres)

Spring nocturnal electrofishing studies were conducted in April 2017 for PSD, length frequency and CPUE for largemouth bass (Table 160). Total catch rate (221.0 fish/hr) was higher than the lake average of 216.1 fish/hr (Table 161). Largemouth bass PSD and RSD_{15} were 79 (average = 68) and 53 (average = 44), respectively (Table 162). The population assessment indicated an "Excellent" bass population (Table 163). Fall diurnal electrofishing for relative weights, age and growth and index of year class strength at age 0 were conducted in September (Tables 164-167). Largemouth bass growth rates at Kincaid Lake indicated bass are reaching harvestable size (12.0 in) between age 3 and age 4 (Table 165). Additionally, largemouth bass were reaching 15.0 in between age 5 and age 6. Relative weights of largemouth bass length groups were about average for Kincaid Lake (2017 W_r = 93; lake average = 92) (Table 166). Age-0 CPUE (29.3 fish/hr) was lower than the lake average (37.3 fish/hr) (Table 167). Largemouth bass were not stocked into Kincaid Lake in 2017.

Channel catfish were sampled in October using tandem hoop nets at Kincaid Lake. Channel catfish collected were distributed from the 8.0- to 24.0-in size classes (Table 168). Channel catfish were collected at 71.3

fish/set-night in 2017, which is higher than the lake average of 62.0 fish/set-night (Table 169). The PSD and RSD_{24} for channel catfish were 33 and 2, respectively (Table 170). Relative weights of channel catfish were acceptable ($W_r = 90$) (Table 171). Kincaid Lake was stocked with 2,427 (13.3 fish/acre; 5.0-10.0 in) channel catfish in March 2017.

McNeely Lake (51 acres)

Diurnal fall electrofishing for largemouth bass in October 2017 was completed to collect length frequency and relative weight values (Table 172). Relative weights were at acceptable levels ($W_r = 88$), just below the lake average ($W_r = 89$; Table 173). CPUE for age-0 bass (177.6 fish/hr) was higher than the lake average of 123.2 fish/hr (Table 174). Largemouth bass were not stocked into McNeely Lake in 2017.

Bluegill and redear sunfish were sampled in May 2017 for length frequency, CPUE and population assessment (Table 175). Catch rate for bluegill (260.8 fish/hr) was lower than the lake average catch rate of 336.0 fish/hr (Table 177). The bluegill PSD was 66 compared the lake average of 40 (Table 176). RSD_8 was 2, compared to the lake average of 0.4. The population assessment for bluegill has remained “Excellent” since 2013 (Table 178). The total catch rate for redear sunfish (74.4 fish/hr) was higher than the lake average (56.6 fish/hr; Table 179). The PSD for redear sunfish was 61 compared to the lake average of 46 and the RSD_9 was 9 compared to the lake average of 8 (Table 176). The redear sunfish fishery was rated “Good”, which has been the average rating since 2005 (Table 180). Relative weights and age and growth for bluegill and redear sunfish were collected during the fall diurnal electrofishing sample. Age and growth studies showed that bluegill continue to reach 6.0 in between age 2 and 3 (Table 181). Redear sunfish reach 6.0 in between age 1 and 2, and 8.0 in by age 3 (Table 182). Overall, condition for both bluegill (96) and redear sunfish (98) was good (Table 183).

Channel catfish were not sampled at McNeely Lake in 2017. McNeely Lake was stocked with 1,275 (25.0 fish/acre; 5.0 -10.0 in) channel catfish in March 2017.

Currently, McNeely Lake does not contain a population of gizzard shad.

Lincoln Homestead Lake

Length frequency, relative abundance and CPUE of fish collected by electrofishing at Lincoln Homestead Lake (Washington Co.) in April 2017 are shown in Table 184. Largemouth bass were collected from the 4.0- to 15.0-in size classes and bluegill from the 3.0- to 8.0-in size classes. Trophy size (≥10.0 in) redear sunfish were sampled, with crappie present up to 12.0 in.

Reformatory Lake

Length frequency, relative abundance and CPUE of fish collected by electrofishing at Reformatory Lake (Oldham Co.) in May 2017 are shown in Table 185. Largemouth bass were collected from the 3.0- to 20.0-in size classes, bluegill from the 3.0- to 7.0-in size classes and redear sunfish from the 4.0- to 10.0-in size classes. Other species observed included white crappie, black crappie, yellow bass, channel catfish and flathead catfish.

Reformatory Lake was stocked with 1,047 (19.4 fish/acre; 5.0 -15.0 in) channel catfish in February 2017.

Table 1. Yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Beaver Lake	BLG/RES	3/29	1000	shock	Overcast/light breeze	55	Full	54	good	good sample
Lincoln Homestead	LMB/BLG/RES	4/5	1030	shock	---	--	Full	---	Good	good sample
Herrington Lake (Cane Run)	Black Bass	4/11	1030	shock	Cloudy/light breeze	61	733.34	42	good	good sample
Benjy Kinman Lake	LMB	4/11	1800	Shock	---	60	Full	38	good	nocturnal sample
Herrington Lake (Gwinn Island)	Black Bass	4/12	1000	shock	Mostly sunny/cool	62	733.34	30	good	good sample
Herrington Lake (Kings Mill)	Black Bass	4/17	1030	shock	Cloudy/calm winds	68	733.34	38	good	good sample
Guist Creek Lake	LMB/Saugeye	4/17	1030	shock	---	68	High	26	good	lake above normal/debris
Beaver Lake	LMB	4/18	1030	shock	Overcast/breezy	65	Full	73	good	good
Boltz Lake	LMB/Saugeye	4/18	1800	shock	Calm/clear	68	Full	60	good	nocturnal sample
Elmer Davis Lake	LMB	4/19	1030	shock	Partly sunny/breezy	69	~6 ft low	39	good	lake level low due to drawdown for shad eradication complete in December, lake refilling
AJ Jolly Lake	LMB/Saugeye	4/19	1030	shock	Cloudy	66	Full	6	muddy	FINS sampled
Kincaid Lake	LMB	4/20	1100	shock	Mostly cloudy	70	Full	23	good	good sample
Taylorsville Lake (Van Buren)	LMB	4/24	1030	shock	Clear/sunny	68	547.2	27	good	good sample
Corinth Lake	LMB	4/25	1800	shock	Clear	66	Full	72	good	nocturnal sample/ filamentous algae very abundant
Taylorsville Lake (Ashes/Jacks)	LMB	4/25	1030	shock	Partly cloudy/light winds	65	547.0	60	good	good sample
Taylorsville Lake (Big Beech)	LMB	4/26	1030	shock	High clouds/breezy	69	547.0	40	good	good sample
Bullock Pen Lake	LMB/Saugeye	5/1	1030	shock	Mostly cloudy/very windy	69	Full/Spilling	22	good	good sample
Reformatory Lake	LMB/BLG/RES	5/2	1030	shock	Mostly sunny/very windy	64	Full/Spilling	22	stained	good sample
Beaver Lake	BLG/RES	5/15	1030	shock	Sunny/calm	74	Full	60	good	good sample
McNeely Lake	BLG/RES	5/15	1030	shock	Sunny/calm	71	Full	78	good	good sample
Elmer Davis Lake	BLG/RES	5/16	1030	shock	Sunny/breezy	75	Full/Spilling	---	good	good sample
Corinth Lake	BLG/RES	5/19	1030	shock	---	76	Full	72	good	good sample
Taylorsville Lake (Lower Lake)	Blue catfish	7/11	1000	shock	Cloudy/light breeze	82	547.0	---	good	good sample
Taylorsville Lake (Upper Lake)	Blue catfish	7/12	1000	shock	---	82	547.0	---	good	good sample
Benjy Kinman Lake	LMB	9/6	1030	shock	Sunny/cool	72	Full	36	tea colored	good sample
Bullock Pen Lake	LMB	9/7	1000	shock	Partly cloudy	70	Full	36	good	good sample
Boltz Lake	LMB/BLG	9/8	1030	shock	Sunny/cool	70	Full/Spilling	40	good	good sample
Kincaid Lake	LMB	9/11	1100	shock	Overcast	70	Full	34	good	good sample
Guist Creek Lake	LMB	9/12	1030	shock	Cloudy/very breezy	67	Full	28	good	good sample
Beaver Lake	LMB/BG/RES	9/15	1030	shock	Mostly sunny	67	Full	31	good	good sample

Table 1 (cont.).

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Elmer Davis Lake	LMB/BG/RES	9/15	1030	shock	---	---	Full	---	good	good sample
Corinth Lake	LMB/BG/RES	9/18	1030	shock	Cloudy	72	Full	88	good	good sample
Taylorsville Lake (Ashes/Jacks)	LMB	9/20	1030	shock	Sunny/warm	79	547.0	31	good	good sample
Taylorsville Lake (Big Beech)	LMB	9/21	1030	shock	Sunny	80	547.0	30	good	good sample
Taylorsville Lake (Van Buren)	LMB	9/22	1030	shock	Sunny	77	547.0	24	good	good sample
Herrington Lake (Kings Mill)	Black bass	9/25	1030	shock	Sunny	78	740.1	35	good	good sample
Herrington Lake (Gwinn Island)	Black bass	9/26	1030	shock	Clear/hot	78	740.1	---	good	good sample
McNeely Lake	LMB/BLG/RES	9/27	1030	shock	Sunny/clear	72	Full	28	good	good sample
Herrington Lake (Cane Run)	Black bass	9/28	1030	shock	Sunny/clear	78	740.1	57	good	good sample
Benjy Kinman Lake	Crappie	10/3	1030	shock	Mostly sunny	71	Full	---	good	good sample
Beaver Lake	Crappie	10/4	1030	shock	Sunny	---	Full	---	good	good sample
AJ Jolly Lake	LMB/Saugeye	10/4	1030	Shock	Sunny	71	Full	25	Good	good sample
Corinth Lake	Channel catfish	10/9	1030	hoop net	---	---	Full	---	good	good sample
Guist Creek Lake	Saugeye	10/11	1030	shock	Cloudy	70	~2 ft high	---	good	good sample
AJ Jolly Lake	Channel/Blue catfish	10/12	1000	hoop net	Cloudy	69	Full	18	good	FINS sampled
Kincaid Lake	Channel catfish	10/12	1100	hoop net	---	---	Full	---	good	good sample
Beaver Lake	Channel catfish	10/13	1100	hoop net	---	--	Full	---	good	good sample
Herrington	Morones	10/17 10/18 10/19 10/20	1000 1000 1000 1000	gillnet	Mostly sunny Mostly sunny Mostly sunny Mostly sunny	66 66 66 66	739.4 738.6 737.5 736.1	---	good	good sample
Taylorsville	Morones/ crappie	10/24 10/25 10/26 10/27	1000 1000 1000 1000	gillnet trap net	Sunny Sunny Sunny Overcast	63 63 63 63	547.1 547.1 547.2 547.2	---	good	good sample
Guist Creek Lake	Morones/ Saugeye	11/8 11/9	1000	gillnet	Sunny/cool	58	Full	---	good	Good sample

Table 2. Length distribution and CPUE (fish/hr) of black bass and saugeye collected in 7.5 hours of 30-minute electrofishing runs in Taylorsville Lake in April 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Van Buren																				
Largemouth bass	10	20	19	12	15	16	9	9	26	33	43	53	51	27	7	7	1	1	359	143.6 (11.0)
Smallmouth bass							1												1	0.4 (0.4)
Saugeye							1			3			1		1				6	2.4 (2.0)
Ashes Creek																				
Largemouth bass	8	9	12	14	18	9	3	19	39	75	81	56	47	28	17	10	6	2	453	181.2 (9.1)
Saugeye									2	1			3						6	2.4 (1.1)
Big Beech Creek																				
Largemouth bass	3	11	7	3	8	10	9	25	30	60	87	70	65	39	21	20	2	1	471	188.4 (14.7)
Saugeye									2				3	3					8	3.2 (1.2)
Total																				
Largemouth bass	21	40	38	29	41	35	21	53	95	168	211	179	163	94	45	37	9	4	1,283	171.1 (7.5)
Smallmouth bass							1												1	0.1 (0.1)
Saugeye							1		4	4			7	3	1				20	2.7 (0.8)

Dataset = cfdpstvl.d17

Table 3. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Taylorsville Lake from 1984-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1984	50.4 (1.8)	88.0 (6.0)	6.0 (2.2)	0.0 (0.0)	0.0 (0.0)	144.4 (5.6)
1985	0.8 (0.6)	43.8 (5.4)	74.8 (9.2)	3.4 (1.0)	0.0 (0.0)	122.2 (14.4)
1986	1.8 (0.2)	11.2 (1.4)	21.0 (1.8)	24.4 (3.0)	0.0 (0.0)	59.0 (5.4)
1987	3.6 (0.6)	5.4 (0.6)	9.2 (1.0)	29.2 (2.6)	0.3 (0.1)	48.0 (3.8)
1988	3.2 (0.8)	8.4 (1.2)	6.0 (1.0)	19.6 (3.0)	0.2 (0.1)	37.2 (4.8)
1989	58.6 (15.6)	33.4 (5.8)	22.2 (3.4)	13.8 (3.0)	0.0 (0.0)	128.2 (24.0)
1990	57.0 (8.4)	54.2 (6.8)	22.8 (2.6)	21.8 (3.4)	0.5 (0.2)	154.4 (15.0)
1991	26.0 (2.8)	37.2 (2.8)	22.8 (2.1)	11.8 (1.4)	0.1 (0.1)	98.6 (5.2)
1992	58.5 (5.5)	42.6 (2.5)	36.9 (2.9)	17.6 (1.6)	0.1 (0.1)	155.6 (7.3)
1993	21.0 (3.6)	53.2 (4.8)	36.4 (13.8)	14.8 (1.9)	0.1 (0.1)	128.3 (8.6)
1994	25.1 (3.0)	39.9 (3.6)	40.7 (5.1)	15.0 (1.5)	0.1 (0.1)	122.3 (9.8)
1995	28.2 (3.5)	69.6 (3.9)	20.3 (1.3)	11.6 (1.4)	0.0 (0.0)	129.6 (6.8)
1996	16.2 (2.4)	41.0 (3.9)	49.8 (3.2)	16.0 (3.2)	0.1 (0.1)	122.6 (9.8)
1997	33.2 (6.3)	43.4 (4.0)	46.4 (1.8)	15.2 (1.8)	0.1 (0.1)	138.3 (7.7)
1998	20.0 (3.0)	26.4 (2.7)	30.5 (2.6)	21.7 (2.6)	0.4 (0.2)	98.7 (7.2)
1999	19.1 (2.8)	38.7 (3.2)	20.9 (3.0)	22.7 (2.6)	0.4 (0.39)	101.3 (7.1)
2000	17.7 (3.3)	33.1 (3.9)	16.1 (2.6)	10.5 (1.5)	0.5 (0.2)	77.5 (6.1)
2001	32.4 (4.1)	44.1 (3.7)	27.6 (3.6)	15.5 (2.7)	0.3 (0.2)	119.6 (8.3)
2002	33.7 (4.4)	22.3 (2.2)	12.8 (2.2)	9.6 (1.8)	0.5 (0.2)	78.4 (7.0)
2003	19.5 (2.9)	58.5 (4.8)	24.9 (2.2)	15.2 (2.1)	0.8 (0.4)	118.1 (9.2)
2004	14.1 (2.5)	26.7 (2.7)	42.9 (3.4)	13.2 (1.6)	0.3 (0.3)	96.9 (5.2)
2005	35.5 (5.9)	35.7 (4.9)	40.3 (4.3)	34.3 (3.4)	0.5 (0.4)	145.7 (12.7)
2006	20.3 (4.0)	39.6 (3.7)	20.3 (3.7)	16.5 (2.7)	0.3 (0.2)	96.7 (11.0)
2007	13.5 (2.5)	35.5 (4.1)	33.7 (3.6)	14.4 (2.4)	0.3 (0.2)	97.1 (9.1)
2008	13.9 (2.9)	30.1 (2.8)	33.6 (3.1)	22.5 (3.2)	0.0 (0.0)	100.1 (8.9)
2009	15.9 (3.5)	32.9 (3.6)	22.3 (2.5)	13.6 (2.1)	0.1 (0.1)	84.7 (6.9)
2010	45.7 (8.3)	36.3 (2.7)	49.7 (5.1)	16.4 (1.8)	0.3 (0.2)	148.1 (12.4)
2011	Sampling was not conducted due to extreme weather and lake conditions.					
2012	27.9 (4.0)	59.1 (6.0)	36.9 (3.0)	14.5 (1.2)	0.3 (0.2)	138.4 (8.6)
2013	19.6 (2.1)	49.9 (4.6)	42.0 (4.5)	22.1 (2.9)	0.4 (0.2)	133.6 (10.5)
2014	17.1 (2.8)	40.5 (7.6)	35.1 (4.1)	21.3 (2.3)	0.5 (0.3)	114.0 (13.4)
2015	18.5 (3.9)	39.3 (5.3)	32.7 (3.2)	19.3 (2.7)	0.3 (0.2)	109.9 (11.7)
2016	15.9 (2.5)	59.2 (4.8)	98.8 (6.6)	44.8 (3.4)	0.9 (0.4)	218.7 (13.2)
2017	22.5 (2.7)	27.2 (2.5)	74.4 (4.7)	46.9 (3.6)	0.5 (0.3)	171.1 (7.5)

Dataset = cfdpstvl.d17– .d84

Table 4. PSD and RSD$_{15}$ values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2017; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD$_{15}$
Big Beech	Largemouth bass	439	83 (± 4)	34 (± 2)
Ashes Creek	Largemouth bass	392	82 (± 4)	28 (± 4)
Van Buren	Largemouth bass	283	79 (± 5)	33 (± 5)
Total	Largemouth bass	1,114	82 (± 2)	32 (± 3)

Dataset = cfdpstvl.d17

Table 5. Population assessment for largemouth bass collected during spring electrofishing at Taylorsville Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	12.9*	21.2	74.4	46.9	0.5				
	Score	3	2	4	4	3			16	Good
2016	Value	12.9*	24.6	98.8	44.8	0.9				
	Score	3	3	4	4	3			17	Excellent
2015	Value	12.9*	16.8	32.7	19.3	0.3				
	Score	3	2	4	3	2			14	Good
2014	Value	12.9	23.6	35.1	21.3	0.5				
	Score	3	3	4	4	3			17	Excellent
2013	Value	13.1*	17.2	42.0	22.1	0.4				
	Score	3	2	4	4	2			15	Good
2012	Value	13.1*	28.1	39.9	14.5	0.3				
	Score	3	3	4	3	2			15	Good
2011	Value	Sampling was not conducted due to extreme weather and lake conditions.								
	Score									
2010	Value	13.1	49.5	49.7	16.4	0.3	0.574	43.7		
	Score	3	4	4	3	2			16	Good
2009	Value	12.9*	14.6	22.3	13.6	0.1				
	Score	3	2	2	3	1			11	Fair
2008	Value	12.9*	12.2	33.6	22.5	0.0				
	Score	3	2	4	4	1			14	Good
2007	Value	12.9*	10.3	33.7	14.4	0.3				
	Score	3	1	4	3	2			13	Good
2006	Value	12.9	17.5	20.3	16.5	0.3	0.824	56.1		
	Score	3	2	2	3	2			12	Fair
2005	Value	12.6*	38.3	40.3	34.3	0.5				
	Score	3	3	4	4	3			17	Excellent
2004	Value	12.6*	14.9	42.9	13.2	0.3				
	Score	3	2	4	3	2			14	Good
2003	Value	12.6*	21.2	24.9	15.2	0.8				
	Score	3	2	3	3	3			14	Good
2002	Value	12.6	34.8	12.8	9.6	0.5	0.495	39.0		
	Score	3	3	1	2	3			12	Fair
2001	Value	10.8	20.5	27.6	15.5	0.3	0.539	41.7		
	Score	1	2	3	3	2			11	Fair
2000	Value	10.1	14.1	16.1	10.5	0.5	0.455	36.6		
	Score	1	2	1	2	3			9	Fair

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 6. Length distribution and CPUE (fish/hr) of largemouth bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Taylorsville Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Van Buren																			
Largemouth bass		26	28	14	3	7	22	11	6	5	4	6	3	1	1			137	91.3 (9.0)
Ashes Creek																			
Largemouth bass	5	30	30	14	4	15	29	18	12	10	16	23	12	3	2		1	224	149.3 (15.4)
Big Beech Creek																			
Largemouth bass	6	23	22	10	8	12	19	11	9	1	3	10	14	4		3		155	103.3 (11.4)
Total																			
Largemouth bass	11	79	80	38	15	34	70	40	27	16	23	39	29	8	3	3	1	516	114.7 (9.0)

Dataset = cfdwrtvl.d17

Table 7. Numbers of fish and the relative weight (W_r) for each length group of largemouth bass collected at Taylorsville Lake on 19-22 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Van Buren	33	93 (1)	15	95 (2)	5	99 (6)	53	94 (1)
	Ashes	40	93 (1)	30	93 (2)	16	98 (3)	86	94 (1)
	Big Beech	37	89 (2)	14	87 (2)	17	84 (3)	68	87 (1)
	Total	110	92 (1)	59	92 (1)	38	92 (2)	207	92 (1)

Dataset = cfdwrtvl.d17

Table 8. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Taylorsville Lake. Age-1 CPUE and standard error could not be calculated in 2010 due to prolonged flood conditions in spring.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1 (natural)	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.6	1.3	63.6	11.7	13.3	1.0	34.8	4.3
2002	Total	5.3	0.1	29.1	4.8	18.7	3.5	21.2	2.8
2003	Total	5.4	0.1	32.2	5.4	19.1	3.4	14.9	2.5
2004	Total	4.4	0.1	50.0	6.2	15.1	3.6	38.3	6.2
2005	Total	4.9	0.1	31.8	4.2	15.3	2.5	17.5	3.8
2006	Total	4.9	0.1	54.7	4.9	25.8	2.9	10.3	2.0
2007	Total	4.4	0.1	22.4	3.2	6.7	1.8	12.2	2.6
2008	Total	5.5	0.1	20.9	3.9	16.7	3.5	14.6	3.1
2009	Total	4.9	0.1	90.2	14.5	39.8	6.5	49.5	8.7
2010	Total	5.2	0.1	45.2	4.9	27.7	3.3	*	*
2011	Total	4.8	0.1	40.4	2.8	17.8	1.6	27.5	3.8
2012	Total	5.1	0.1	54.4	5.3	27.8	3.3	17.2	2.2
2013	Total	4.9	0.1	50.0	6.0	23.8	4.3	23.6	3.7
2014	Total	5.5	0.1	21.1	4.3	15.4	3.0	16.8	3.7
2015	Total	6.0	0.1	14.4	2.1	12.7	2.1	24.6	3.0
2016	Total	5.0	0.1	49.3	7.1	21.3	2.7	25.1	2.6
2017	Total	5.2	0.1	46.2	3.9	26.2	3.7		

Dataset = cfdwrtvl.d17

Table 9. Length distribution and CPUE (fish/nn) of each species of crappie collected at Taylorsville Lake in 48 net-nights in October 2017.

	Inch class														Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	error
White crappie	1	8	3	1	85	266	175	63	9	2		1	614	12.8	2.2
Black crappie				1	16	72	67	16	5	4			181	3.8	1.4

Dataset = cfdtntvl.d17

Table 10. PSD and RSD_{10} values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2017.

Species	No. $\geq$ 5.0 in	PSD	RSD_{10}
White crappie	516	85 (± 3)	12 (± 3)
Black crappie	164	91 (± 4)	14 (± 5)

Dataset = cfdtntvl.d17

Table 11. Mean back calculated lengths (in) at each annulus for otoliths from white crappie trap netted and gill netted at Taylorsville Lake in 2017.

		Age			
Year class	No.	1	2	3	4
2016	18	5.1			
2015	72	5.0	8.0		
2014	4	5.3	8.9	10.3	
2013	2	5.7	9.2	11.2	12.5
Mean	96	5.1	8.0	10.6	12.5
Smallest		3.5	6.2	9.2	11.4
Largest		7.3	10.6	12.4	13.6
Std error		0.1	0.1	0.5	1.1
95% ConLo		4.9	7.8	9.7	10.3
95% ConHi		5.2	8.3	11.5	14.6

Intercept value = 0.00
Dataset = cfdagtvl.d17

Table 12. Age frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 48 net-nights at Taylorsville Lake in 2017.

	Inch class														Std
Age	3	4	5	6	7	8	9	10	11	12	14	Total	%	CPUE	err
0+	1	8	3									12	2	0.3	0.1
1+				1	34	40	26	3				104	17	2.2	0.4
2+					51	226	149	57	7			490	80	10.2	1.7
3+								3	2	1		6	1	0.1	0.1
4+										1	1	2	0	0.1	0.1
Total	1	8	3	1	85	266	175	63	9	2	1	614	100	12.8	2.2
(%)	0	1	0	0	14	43	29	10	1			100			

Dataset = cfdtntvl.d17 and cfdagtvl.d17

CPUE of ≥8.0 in white crappie = 10.8 ± 1.8 fish/nn; ≥10.0 in = 1.6 ± 0.2 fish/nn

Table 13. Mean back calculated lengths (in) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2017.

		Age					
Year class	No.	1	2	3	4	5	6
2016	24	5.0					
2015	22	4.8	7.9				
2014	14	4.4	7.7	8.8			
2013	9	4.4	7.9	9.4	10.2		
2012	1	3.9	7.5	9.0	10.0	10.6	
2011	6	4.4	7.4	9.2	9.9	10.5	11.0
Mean	76	4.7	7.8	9.1	10.1	10.5	11.0
Smallest		3.7	6.4	7.9	9.1	9.5	9.8
Largest		7.4	10.9	10.8	12.1	11.4	11.9
Std error		0.1	0.1	0.1	0.2	0.2	0.3
95% ConLo		4.6	7.6	8.8	9.8	10.1	10.3
95% ConHi		4.9	8.0	9.3	10.5	11.0	11.6

Intercept value = 0.00

Dataset = cfdagtvl.d17

Table 14. Age frequency and CPUE (fish/nn) per inch class of black crappie trap netted for 48 net-nights at Taylorsville Lake in 2017.

	Inch class										Std
Age	6	7	8	9	10	11	12	Total	%	CPUE	err
0+								0	0	0	
1+	1	16	14		1	1		33	18	0.7	0.2
2+			32	57	5		1	95	53	2.0	0.8
3+			25	10	3	1		39	22	0.8	0.3
4+					6	1	1	8	4	0.2	0.1
5+						1		1	0	0.1	0.1
6+					2	1	2	5	3	0.1	0.1
Total	1	16	71	67	17	5	4	181	100	3.8	1.4
%	1	9	40	37	9	3	2	100			

Dataset = cfdtntvl.d17 and cfdagtvl.d17

CPUE of ≥8.0 in black crappie = 3.4 ± 1.4 fish/nn; ≥10.0 in = 0.5 ± 0.3 fish/nn

Table 15. Population assessment for white crappie collected during fall trap netting at Taylorsville Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE age-1 and older	Mean length age-2+ at capture	CPUE ≥ 8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2017	Value	12.5	9.3	10.8	2.2	0.3		
	Score	3	2	4	2	1	12	Fair
2016	Value	16.8	11.3	7.9	16.4	0.4		
	Score	4	4	4	4	1	17	Excellent
2015	Value	5.6	10.5	3.5	4.4	16.9		
	Score	2	4	3	3	4	16	Good
2014	Value	2.9	10.9	2.2	2.5	0.4		
	Score	2	4	2	2	1	11	Fair
2013	Value	1.7	10.2	1.4	1.3	6.7		
	Score	1	3	1	2	4	11	Fair
2012	Value	0.7	10.1	0.6	0.5	1.1		
	Score	1	3	1	1	2	8	Poor
2011	Value	0.7	11.0	0.6	0.6	1.0		
	Score	1	4	1	1	2	9	Fair
2010	Value	0.4	9.5	0.3	0.4	1.0		
	Score	1	2	1	1	2	7	Poor
2009	Value	0.02	9.6*	0.02	0.02	0.2		
	Score	1	3	1	1	1	7	Poor
2008	Value	0.1	9.6*	0.1	0.1	0.1		
	Score	1	3	1	1	1	7	Poor
2007	Value	0.3	9.6*	0.3	0.0	0.04		
	Score	1	3	1	1	1	7	Poor
2006	Value	0.9	9.6	0.9	0.0	0.04		
	Score	1	3	1	1	1	7	Poor
2005	Value	3.2	9.6	1.5	2.7	0.0		
	Score	2	3	2	2	1	10	Fair
2004	Value	1.7	10.3	1.0	1.4	1.4		
	Score	1	3	1	2	2	9	Fair
2003	Value	1.8	10.1*	1.7	1.0	0.5		
	Score	1	3	2	2	2	10	Fair
2002	Value	1.6	10.1	1.5	0.6	0.7		
	Score	1	3	2	1	2	9	Fair
2001	Value	4.5	9.4	4.3	2.6	0.1		
	Score	2	2	3	2	1	10	Fair
2000	Value	6.5	8.6	6.3	0.5	0.5		
	Score	2	2	4	1	2	11	Fair

* Age data not collected

Table 16. Population assessment for black crappie collected during fall trap netting at Taylorsville Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE age-1 and older	Mean length age-2 at capture	CPUE ≥8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2017	Value	3.8	9.4	3.4	0.7	0		
	Score	3	3	3	2	1	12	Fair
2016	Value	4.8	9.0	3.0	2.1	0.1		
	Score	3	2	3	3	1	12	Fair
2015	Value	8.6	9.2	2.0	6.0	1.2		
	Score	3	3	3	4	3	16	Good
2014	Value	6.3	9.3	2.4	5.2	0.9		
	Score	3	3	3	4	2	15	Good
2013	Value	4.5	9.1	4.1	0.9	2.2		
	Score	3	3	4	2	4	16	Good
2012	Value	9.8	9.6	1.7	9.3	0..9		
	Score	4	3	3	4	2	16	Good
2011	Value	0.8	9.8	0.5	0.5	2.5		
	Score	1	4	1	1	4	11	Fair
2010	Value	3.2	8.4	1.3	3.1	0.5		
	Score	2	2	2	3	2	11	Fair
2009	Value	0.2	9.8*	0.1	0.2	0.4		
	Score	1	4	1	1	2	9	Fair
2008	Value	0.6	9.8	0.5	0.2	0.4		
	Score	1	4	1	1	2	9	Fair
2007	Value	1.7	9.2	1.0	1.4	0.02		
	Score	1	3	2	2	1	9	Fair
2006	Value	3.3	9.5	3.3	0.1	0.5		
	Score	2	3	3	1	2	11	Fair
2005	Value	5.8	9.0	4.5	1.3	0.04		
	Score	3	2	4	2	1	12	Fair
2004	Value	12.0	9.3	1.2	11.7	1.2		
	Score	4	3	2	4	3	16	Good
2003	Value	1.3	10.3	1.1	1.0	1.3		
	Score	1	4	2	2	3	12	Fair
2002	Value	2.2	10.2	1.6	1.8	0.1		
	Score	2	4	3	3	1	13	Good
2001	Value	1.8	10.1	1.5	1.5	0.1		
	Score	2	4	2	3	1	12	Fair
2000	Value	0.8	9.6	0.7	0.5	0.2		
	Score	1	3	2	1	1	8	Poor

* Age data not collected

Table 17. Number of fish and the relative weight (Wr) for each length group of crappie at Taylorsville Lake in October 2017.

		Length group							
Species	Area	5.0–7.9 in		8.0–9.9 in		≥10.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White crappie	Total	37	87 (1)	71	98 (1)	37	95 (1)	145	95 (1)
Black crappie	Total	17	83 (1)	40	90 (1)	25	86 (2)	82	87 (1)

Dataset = cfdtntvl.d17

Table 18. Length distribution and CPUE (fish/nn) of white bass, hybrid striped bass, and saugeye collected during 10 net-nights of gill netting in Taylorsville Lake in October 2017: numbers in parentheses are standard errors.

	Inch class																						
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Total	CPUE
White bass	1	5	7		4	6	2		1													26	2.6 (1.0)
Hybrid striped bass	1	4	12	8			4	9	9	5	2	3	7	1	6	13	15	13	11	1	1	125	12.5 (3.6)
Reciprocal		3	8	4			1	4	5	2		1	3	1	5	11	12	13	10		1	84	8.4 (2.7)
Original	1	1	4	4			3	5	4	3	2	2	4		1	2	3		1	1		41	4.1 (1.1)
Saugeye				2	14	5			2	7	8	1		1								40	4.0 (2.4)

Dataset = cfdgntvl.d17

Table 19. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2017.

		Age						
Year class	No.	1	2	3	4	5	6	7
2016	36	9.1						
2015	11	9.7	14.7					
2014	6	7.0	14.5	18.8				
2013	37	10.6	15.3	19.0	21.2			
2012	13	8.1	15.1	18.4	20.5	22.1		
2011	4	6.5	14.5	18.7	20.7	22.3	23.4	
2010	1	11.3	17.8	20.2	22.6	23.4	25.0	25.6
Mean	108	9.4	15.1	18.8	21.0	22.2	23.7	25.6
Smallest		5.6	11.0	15.4	17.9	19.4	22.9	25.6
Largest		12.1	17.8	20.9	23.3	24.3	25.0	25.6
Std error		0.2	0.1	0.2	0.2	0.3	0.4	
95% ConLo		9.0	14.8	18.6	20.6	21.6	23.0	
95% ConHi		9.7	15.4	19.1	21.3	22.8	24.4	

Intercept Value = 0.00
Dataset = cfdagtvl.d17

Table 20. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 10 net-nights at Taylorsville Lake in 2017.

	Inch class																								Std
Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Total	%	CPUE	err
0+	1	4	12	8																		25	20	2.5	1.2
1+							4	9	9	4	2											28	22	2.8	1.5
2+										1		3	7									11	9	1.1	0.4
3+															1	5						6	5	0.6	0.3
4+														1	4	6	11	10	6			38	30	3.7	1.4
5+															1	2	4	2	3	1		13	10	1.3	0.5
6+																		1	3			4	3	0.4	0.1
7+																					1	1	1	0.1	0.1
Total	1	4	12	8			4	9	9	5	2	3	7	1	6	13	15	13	12	1	1	126	100	12.5	3.6
%	1	3	10	6			3	7	7	4	2	2	6	1	5	10	12	10	9	1	1	100			

Dataset = cfdagtvl.d17 and cfdgntvl.d17

Table 21. Number of fish and the relative weight (W_r) for each length group of hybrid striped bass collected at Taylorsville Lake in October 2017.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	20	88 (1)	22	85 (1)	78	85 (1)	120	85 (1)

Dataset = cfdgntvl.d17

Table 22. Population assessment for hybrid striped bass collected during fall gill netting at Taylorsville Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE (excluding age-0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age-1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.0	18.0	7.8	2.8	-	-		
	Score	3	3	3	2			11	Good
2016	Value	12.2	16.8	9.5	3.2	-	-		
	Score	3	2	3	2			10	Good
2015	Value	5.1	18.0	3.4	1.8	-	-		
	Score	2	3	2	2			9	Fair
2014	Value	10.9	17.5	3.0	8.4	-	-		
	Score	3	3	2	4			12	Good
2013	Value	3.5	18.3	1.5	2.0	-	-		
	Score	2	3	1	2			8	Fair
2012	Value	2.2	17.0	0.8	1.3	-	-		
	Score	1	2	1	2			6	Poor
2011	Value	11.5	16.4	3.1	7.9	-	-		
	Score	3	2	2	3			10	Good
2010	Value	3.8	16.7	1.0	2.9	-	-		
	Score	2	2	1	2			7	Fair
2009	Value	11.4	15.7	0.9	10.4	1.104	66.9%		
	Score	3	1	1	4			9	Fair
2008	Value	0.6	17.1	0.4	0.2	0.370	30.9%		
	Score	1	2	1	1			5	Poor
2007	Value	16.8	16.2	10.8	6.0	0.798	55.0%		
	Score	3	1	3	3			10	Good
2006	Value	8.5	16.8	0.8	8.0	1.262	71.7%		
	Score	3	2	1	3			9	Fair
2005	Value	1.1	15.2	0.4	0.6	0.437	35.4%		
	Score	1	1	1	1			4	Poor
2004	Value	4.6	16.0	1.0	3.6	0.964	61.9%		
	Score	2	1	1	2			6	Poor
2003	Value	9.4	16.6	6.6	2.6	1.522	78.2%		
	Score	3	2	3	2			10	Good
2002	Value	22.8	15.8	10.1	12.4	0.658	48.2%		
	Score	4	1	3	4			12	Good
2001	Value	13.3	16.0	2.0	11.1	1.437	76.2%		
	Score	3	1	1	4			9	Fair
2000	Value	9.9	15.9	5.9	3.1	1.263	71.1%		
	Score	3	1	3	2			9	Fair

Table 23. Mean back calculated lengths (in) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2017.

		Age			
Year class	No.	1	2	3	4
2016	10	7.5			
2015	2	6.2	9.1		
2014	1	7.6	10.7	11.7	
2013	1	6.3	11.4	12.4	13.7
Mean	14	7.3	10.1	12.0	13.7
Smallest		4.6	7.4	11.7	13.7
Largest		8.9	11.4	12.4	13.7
Std error		0.3	0.9	0.3	
95% ConLo		6.6	8.3	11.4	
95% ConHi		7.9	11.8	12.7	

Intercept Value = 0.00

Dataset = cfdagtvl.d17

Table 24. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 10 net-nights at Taylorsville Lake in 2017.

	Inch class												Std
Age	6	7	8	9	10	11	12	13	14	Total	%	CPUE	err
0+	1	5	6							12	46	1.2	0.7
1+			1		4	5	1			11	42	1.1	0.4
2+						1				1	4	0.1	0.0
3+							1			1	4	0.1	0.1
4+									1	1	4	0.1	0.1
Total	1	5	7		4	6	2		1	26	100	2.6	1.0
%	4	19	27		15	23	8		4	100			

Dataset = cfdagtvl.d17 and cfdgntvl.d17

Table 25. Number of fish and the relative weight (W_r) for each length group of white bass collected at Taylorsville Lake in October 2017.

		Length group							
Species	Area	6.0–8.9 in		9.0–11.9 in		≥12.0 in		Total	
		No.	W_r	No.	W_r	No.	W_r	No.	W_r
White bass	Total	13	94 (2)	10	93 (2)	3	85 (0.3)	26	93 (2)

Dataset = cfdgntvl.d17

Table 26. Population assessment for white bass collected during fall gill netting at Taylorsville Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE (excluding age-0)	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age-1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	1.4	10.5	0.3	1.1				
	Score	1	1	1	1			4	Poor
2016	Value	3.4	12.0	1.5	1.0				
	Score	2	1	2	1			6	Poor
2015	Value	3.2	12.5	0.8	1.3				
	Score	1	2	1	1			5	Poor
2014	Value	4.5	11.3*	0.5	4.5				
	Score	2	1	1	3			7	Fair
2013	Value	1.4	11.3*	0.0	1.4	-	-		
	Score	1	1	1	1			4	Poor
2012	Value	3.3	11.3	0.5	2.2	1.037	64.5		
	Score	2	1	1	2			6	Poor
2011	Value	18.4	11.9	5.0	8.9	1.506	77.8		
	Score	4	1	3	4			12	Good
2010	Value	11.0	12.1	1.8	7.8	1.920	85.3		
	Score	3	1	2	4			10	Good
2009	Value	1.3	NS	0.1	1.1	1.030	64.3		
	Score	1	1	1	1			4	Poor
2008	Value	2.0	12.1	0.3	1.6	1.157	68.6		
	Score	1	1	1	2			5	Poor
2007	Value	6.4	11.7	0.8	4.6	1.102	66.8		
	Score	2	1	1	3			7	Fair
2006	Value	4.3	11.7	0.8	3.0	1.040	64.6		
	Score	2	1	1	2			6	Poor
2005	Value	5.0	11.6	1.2	1.8	1.054	65.2		
	Score	2	1	1	2			6	Poor
2004	Value	8.6	11.4	0.1	7.3	2.030	86.9		
	Score	3	1	1	4			9	Fair
2003	Value	6.9	11.7	2.0	3.5	0.944	61.1		
	Score	2	1	2	3			8	Fair
2002	Value	5.9	11.8	1.3	2.6	1.113	67.1		
	Score	2	1	2	2			7	Fair
2001	Value	23.5	12.1	6.8	14.9	0.971	62.1		
	Score	4	1	3	4			12	Good
2000	Value	20.8	12.2	8.1	7.4	0.766	53.5		
	Score	4	1	4	4			13	Good

* Age data not collected because no fish were captured at this age

Table 27. Length distribution and CPUE (fish/hr) of blue catfish collected in 3.0 hours of 15-minute electrofishing runs for blue catfish in Taylorsville Lake in July 2017; numbers in parentheses are standard errors.

	Inch class																									
Area	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	26	29	31	34	35	37	38	Total	CPUE
Upper	2	16	41	33	31	60	68	31	34	15	14	20	9	6	8	5	1	1		1	1		2			399	266.0 (48.3)
Lower	2	33	42	27	35	27	28	18	12	7	5	3	3	1	1		1	1	1		1	1		1	1	251	167.3 (29.4)
Total	4	49	83	60	66	87	96	49	46	22	19	23	12	7	9	5	2	2	1	1	2	1	2	1	1	650	216.7 (30.8)

Dataset = cfdpstvl.d17

Table 28. Electrofishing CPUE (fish/hr) for each length group of blue catfish collected from Taylorsville Lake from 2007-2017; numbers in parentheses are standard errors.

	Length group				
Year	<12.0 in	12.0-19.9 in	20.0-29.9 in	>30.0 in	Total
2007	32.8 (10.9)	188.8 (25.8)	14.4 (4.2)	0.0	236.0 (36.5)
2008		No Sample			
2009	6.8 (3.1)	96.1 (19.9)	16.3 (4.7)	0.0	119.1 (24.3)
2010	25.9 (12.2)	73.4 (13.5)	16.2 (4.2)	0.7 (0.4)	116.1 (21.2)
2011	3.9 (3.1)	14.0 (2.9)	8.1 (5.0)	1.1 (0.6)	27.1 (5.9)
2012	28.3 (9.1)	58.3 (15.7)	15.0 (4.7)	2.3 (1.2)	104.0 (22.8)
2013	4.0 (1.6)	42.0 (6.5)	11.0 (2.6)	3.0 (0.9)	60.0 (8.2)
2014	31.1 (11.3)	119.4 (21.1)	11.4 (2.5)	5.2 (1.7)	167.1 (27.5)
2015	31.4 (16.0)	47.1 (16.6)	4.6 (2.1)	1.9 (1.0)	84.9 (24.6)
2016	35.3 (15.4)	53.0 (21.5)	6.7 (2.7)	1.7 (1.2)	96.7 (31.5)
2017	87.3 (23.7)	118.0 (21.2)	9.0 (5.5)	2.3 (1.3)	216.7 (30.8)

Dataset = cfdpstvl.d17-.d07

Table 29. Numbers of fish and the relative weight (W_r) for each length group of blue catfish collected at Taylorsville Lake on 11 and 12 July 2017; standard errors are in parentheses.

		Length group							
Species	Area	12.0-19.9 in		20.0–29.9 in		≥30.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Blue catfish	Upper	175	96 (1)	22	93 (1)	3	112 (6)	200	96 (1)
	Lower	99	98 (1)	5	99 (5)	4	113 (8)	108	99 (1)
	Total	274	97 (1)	27	94 (1)	7	113 (5)	308	97 (1)

Dataset = cfdpstvl.d17

Table 30. Dissolved oxygen and temperatures collected from Big Beech Creek, near Settler’s Marina, at Taylorsville Lake during 2017.

	April 4		May 3		June 6		July 6		August 2		September 5		October 2		November 2	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	9.56	57.6	12.64	69.2	12.59	78.3	11.24	81.4	11.51	85.9	6.39	75.6	8.47	73.9	2.61	61.8
2	9.58	57.5	12.80	69.0	12.84	78.5	11.13	81.6	11.03	84.5	6.35	75.7	8.47	73.9	2.56	61.7
4	9.58	57.5	12.85	68.6	12.78	78.6	10.93	81.6	10.21	84.1	6.32	75.7	8.22	73.5	2.46	61.6
6	9.58	57.4	12.61	68.1	12.48	78.6	9.94	81.5	9.26	83.7	6.25	75.8	7.87	73.5	2.37	61.5
8	9.52	57.2	11.28	67.8	12.40	78.6	9.32	81.4	8.59	83.5	6.23	75.8	7.57	73.4	2.36	61.4
10	9.51	56.9	10.85	67.4	11.62	78.5	5.53	81.0	8.37	83.5	6.24	75.8	7.39	73.3	2.36	61.4
12	9.50	56.6	10.63	67.2	0.54	75.7	4.02	80.5	6.59	83.3	6.17	75.8	7.30	73.2	2.34	61.4
14	9.54	56.4	10.10	67.1	0.24	73.0	0.91	79.3	3.24	82.5	6.13	75.8	7.26	73.2	2.35	61.4
16	9.48	56.3	9.40	66.8	0.20	71.0	0.37	78.2	2.89	82.3	5.91	75.8	6.88	73.1	2.34	61.4
18	9.31	56.0	9.16	66.7	0.18	69.6	0.23	76.4	1.06	80.6	5.75	75.8	6.90	73.0	2.32	61.4
20	8.87	55.8	7.72	65.7	0.16	68.1	0.20	75.1	0.28	78.2	4.26	74.8	5.02	72.9	2.33	61.4
22	8.87	55.5	5.00	61.6	0.15	66.7	0.18	73.6	0.20	75.8	3.64	73.2	3.74	72.4	2.33	61.4
24	8.60	55.1	4.67	60.5	0.14	65.4	0.17	73.0	0.18	74.6	0.63	72.0	2.73	72.1	2.33	61.4
26	8.07	54.5	4.39	59.2	0.14	64.7	0.16	72.6	0.17	73.5	0.37	71.4	1.40	71.8	2.33	61.4
28	7.30	52.9	4.25	58.5	0.16	63.8	0.15	72.1	0.16	72.7	0.25	70.9	0.2	71.4	2.34	61.3
30	6.80	51.2	4.12	57.8	0.14	63.1	0.15	71.6	0.14	71.7	0.22	69.6	0.17	70.5	2.34	61.3
35	6.45	50.3	3.97	57.1	0.12	62.3	0.14	70.3	0.14	69.6	0.19	68.8	0.15	68.4	2.34	61.3
40	6.00	49.7	2.64	55.9	0.11	61.6	0.12	66.4	0.12	66.9	0.19	67.4			2.27	60.7
45											0.17	65.1				

Table 31. Dissolved oxygen and temperatures collected from the mouth of Ashes and Jack’s Creek at Taylorsville Lake during 2017.

	April 4		May 3		June 6		July 6		August 2		September 5		October 2		November 2	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	12.27	57.8	12.69	68.4	15.25	78.3	10.80	81.2	10.90	85.6	6.37	75.5	7.57	73.9	2.22	61.6
2	12.27	57.7	12.61	68.4	15.36	78.6	10.77	81.3	10.56	84.6	6.33	75.6	7.58	74.0	2.11	61.6
4	11.46	56.8	12.93	68.1	15.28	78.6	10.31	81.2	10.13	84.7	6.19	75.6	7.62	73.8	2.04	61.5
6	11.38	56.8	12.79	67.8	14.90	78.6	8.48	81.0	9.92	83.8	6.00	75.7	7.51	73.6	1.95	61.5
8	10.90	56.3	11.78	67.1	14.78	78.6	4.77	80.8	9.41	83.7	5.83	75.7	7.28	73.6	1.91	61.5
10	10.21	55.8	11.64	66.7	14.67	78.6	2.12	80.3	8.60	83.5	5.51	75.7	7.19	73.6	1.88	61.5
12	9.86	55.5	11.15	66.1	5.02	76.7	0.98	79.2	3.97	83.0	4.76	75.5	6.57	73.4	1.85	61.5
14	9.56	55.2	10.32	65.6	0.67	73.9	0.52	78.2	1.68	82.2	3.23	75.2	6.50	73.3	1.83	61.4
16	9.58	54.9	9.67	65.0	0.30	73.3	0.26	76.7	0.63	81.7	2.56	75.0	5.15	73.0	1.80	61.4
18	9.20	54.4	9.31	64.9	0.22	71.6	0.22	75.7	0.37	81.0	1.65	7.43	3.58	72.6	1.76	61.4
20	8.45	54.0	9.08	64.8	0.19	70.9	0.20	74.9	0.29	78.9	1.22	74.0	1.06	72.4	1.77	61.4
22	8.40	53.8	8.81	64.7	0.16	67.5	0.19	74.0			0.51	73.4	0.25	72.0	1.76	61.4
24	7.99	53.1	8.70	64.6	0.15	66.5	0.18	73.0			0.28	73.0	0.16	71.2	1.76	61.4
26	7.68	52.6	7.24	63.7	0.19	65.0	0.18	72.4	0.21	76.3	0.21	72.5	0.15	71.0	1.76	61.4
28	7.70	52.1	5.40	59.8	0.27	64.1	0.16	72.0			0.19	71.8	0.15	70.6	1.78	61.4
30	7.58	51.7	5.21	59.3	0.34	63.5	0.16	71.2	0.18	71.9	0.18	71.2	0.14	70	1.79	61.4
35	7.35	50.9	5.11	57.8	0.16	62.5	0.15	69.2	0.16	69.9	0.16	69.5	0.14	69.0	1.28	61.3
40	6.60	50.2					0.13	64.7	0.15	66.9	0.15	67.7	0.13	69.6	0.24	60.9
45													0.12	65.6	1.12	60.5
50															1.68	60.1
55															0.47	59.6
60															0.24	59.4

Table 32. Dissolved oxygen and temperatures collected from the VanBuren/Chowning Lane Area at Taylorsville Lake during 2017.

	April 4		May 3		June 6		July 6		August 2		September 5		October 2		November 2	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	13.55	59.6	11.73	70.2	13.43	78.8	10.13	81.1	8.46	84.2	6.76	75.4	7.44	76.4	6.86	60.6
2	13.39	59.6	12.13	68.6	13.45	78.8	10.15	81.2	8.30	84.2	6.74	75.4	7.91	75.8	6.83	60.4
4	13.16	59.6	11.32	67.9	13.34	78.7.	9.94	81.2	8.20	84.2	6.72	75.4	7.27	74.8	6.78	60.2
6	12.60	59.3	7.86	67.1	9.16	78.0	9.68	81.2	7.32	84.3	6.57	75.4	4.59	73.1	6.65	60.0
8	11.83	59.0	6.74	66.9	3.06	77.2	8.45	81.2	3.04	82.3	6.36	75.4	4.77	72.9	6.56	59.8
10	11.40	58.8	6.88	66.7	1.11	76.1	5.92	80.7	3.77	82.4	6.75	74.4	4.76	72.8	6.15	59.4
12	11.15	58.7	7.33	66.6	0.32	75.4	1.58	79.9	3.87	82.4	6.97	74.1	3.18	72.7	6.18	59.1
14	10.55	58.3	7.36	66.6	0.27	75.1	0.52	79.3	3.64	82.4	7.20	73.6	1.23	72.5	6.40	58.8
16	9.96	57.8	7.31	66.5	0.27	75.1	0.32	78.3	2.77	82.3	7.06	73.5	0.19	72.2	7.38	57.5
18	9.55	57.6	6.58	66.4	0.18	74.3	0.26	77.3	0.85	81.8	6.51	72.9	0.16	71.6	8.55	55.7
20	6.83	55.8	6.51	66.3	0.14	73.6	0.23	76.1	0.35	80.7	5.30	70.3	0.15	71.3	7.28	54.3
22							0.20	74.9			5.02	69.9	0.15	71.1	9.56	53.5
24							0.19	74.4			4.89	59.6	0.14	70.9	9.51	53.4
26							0.18	73.7			4.76	59.2	0.14	70.6	9.44	53.1
28											4.30	57.9			9.33	52.8
30															9.28	52.7

Table 33. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 7.5 hours of 15-minute electrofishing runs in Herrington Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																					
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Upper																						
Largemouth bass		10	20	36	24	20	17	31	54	22	12	12	17	6	10	5	1	1			298	119.2 (9.3)
Spotted bass						1				1											2	0.8 (0.5)
Smallmouth bass								1													1	0.4 (0.4)
Middle																						
Largemouth bass		8	19	17	28	12	11	15	36	48	21	26	14	10	13	6	4	4	1		293	117.2 (15.6)
Spotted bass	1	1		1	1	1	1	7	10	6	2		1								32	12.8 (3.5)
Lower																						
Largemouth bass	1	6	8	12	9	3	19	38	48	52	27	11	4	5	6	5	7	2		1	264	105.6 (7.9)
Spotted bass		1					2	3	3	2	1										12	4.8 (1.6)
Total																						
Largemouth bass	1	24	47	65	61	35	47	84	138	122	60	49	35	21	29	16	12	7	1	1	855	114.0 (6.5)
Spotted bass	1	2		1	1	2	3	10	13	9	3		1								46	6.1 (1.6)
Smallmouth bass								1													1	0.1 (0.1)

Dataset = cfdpsher.d17

Table 34. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Herrington Lake from 1994-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	Total
1994	4.9 (0.9)	30.1 (4.4)	21.5 (2.6)	17.9 (1.8)	2.1 (0.5)	74.4 (5.4)
1995	8.8 (2.3)	20.0 (4.4)	25.6 (4.0)	20.4 (1.4)	3.2 (0.7)	74.8 (9.6)
1996	9.5 (2.4)	24.4 (3.9)	20.3 (2.8)	26.5 (2.6)	3.1 (0.7)	80.9 (6.7)
1997	15.6 (2.3)	19.9 (3.4)	27.3 (2.6)	22.0 (1.7)	2.9 (0.6)	84.8 (6.1)
1998	37.2 (3.8)	45.3 (4.1)	30.9 (2.5)	21.3 (2.2)	1.9 (0.6)	134.8 (7.2)
1999	43.2 (5.2)	69.1 (6.6)	40.4 (3.9)	21.6 (2.4)	1.1 (0.3)	174.3 (14.3)
2000	15.6 (3.9)	53.5 (6.6)	26.9 (2.2)	12.3 (1.4)	0.3 (0.2)	108.3 (10.8)
2001	37.1 (6.7)	40.1 (6.3)	34.1 (4.5)	12.5 (1.5)	0.5 (0.3)	123.9 (15.3)
2002	19.5 (2.6)	32.1 (4.7)	25.5 (3.5)	24.0 (2.2)	1.6 (0.5)	101.1 (9.7)
2003	20.8 (4.4)	23.9 (2.4)	30.1 (2.8)	17.9 (1.7)	1.2 (0.4)	92.7 (4.2)
2004	29.6 (5.5)	64.8 (12.2)	38.7 (5.7)	29.7 (3.4)	1.5 (0.4)	162.8 (23.9)
2005	70.9 (9.7)	59.6 (7.1)	23.5 (3.0)	22.3 (3.4)	0.8 (0.4)	176.3 (15.4)
2006	24.7 (4.8)	36.7 (4.8)	38.4 (3.8)	19.3 (1.8)	0.4 (0.2)	119.1 (9.2)
2007	78.1 (10.4)	68.8 (7.3)	20.0 (2.5)	17.3 (2.3)	0.5 (0.3)	184.3 (17.1)
2008	31.3 (2.9)	39.7 (4.6)	29.5 (3.0)	22.1 (3.1)	1.5 (0.5)	122.7 (8.6)
2009	5.3 (1.2)	9.4 (1.1)	15.3 (2.2)	10.8 (1.4)	0.4 (0.2)	40.6 (4.4)
2010	41.5 (4.4)	34.0 (4.4)	28.7 (3.2)	25.1 (2.3)	0.9 (0.3)	129.2 (10.2)
2011	24.5 (3.7)	22.7 (2.0)	10.9 (1.3)	10.8 (1.5)	0.3 (0.2)	68.9 (1.4)
2012	69.6 (10.1)	70.7 (10.9)	40.9 (4.6)	14.8 (2.1)	1.1 (0.5)	196.0 (23.7)
2013	11.7 (2.2)	29.6 (4.0)	18.5 (2.7)	12.9 (1.9)	1.5 (0.6)	72.8 (7.0)
2014	30.1 (4.1)	20.5 (2.0)	28.5 (2.7)	18.0 (2.4)	1.3 (0.4)	97.2 (6.4)
2015	32.9 (3.4)	16.8 (2.2)	20.9 (1.9)	17.6 (2.5)	0.8 (03)	88.3 (6.1)
2016	32.8 (4.7)	43.1 (5.5)	16.4 (1.9)	17.7 (2.1)	1.1 (0.4)	110.0 (9.0)
2017	26.4 (3.0)	40.5 (4.4)	30.8 (3.6)	16.3 (1.6)	1.2 (0.4)	114.0 (6.5)

Dataset = cfdpsher.d17- .d94

Table 35. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2017; confidence intervals are in parentheses.

Area	Species	No. >8.0 in	PSD	RSD_{15}
Lower	Largemouth bass	228	53 (± 7)	13 (± 4)
Middle	Largemouth bass	221	67 (± 6)	24 (± 6)
Upper	Largemouth bass	208	41 (± 7)	19 (± 5)
Total	Largemouth bass	657	54 (± 4)	19 (± 3)

Dataset = cfdpsher.d17

Table 36. Population assessment for largemouth bass collected during spring electrofishing at Herrington Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	13.4*	31.1	30.8	16.3	1.2				
	Score	4	3	3	3	3			16	Good
2016	Value	13.4*	59.2	16.4	17.7	1.1				
	Score	4	4	2	3	3			16	Good
2015	Value	13.4	36.8	20.9	17.6	0.8				
	Score	4	3	2	3	3			15	Good
2014	Value	13.8*	33.9	28.5	18.0	1.3				
	Score	4	3	3	3	4			17	Excellent
2013	Value	13.8*	15.1	18.5	12.9	1.5				
	Score	4	2	2	2	4			14	Good
2012	Value	13.8*	111.7	40.9	14.8	1.1				
	Score	4	4	4	3	3			18	Excellent
2011	Value	13.8	18.7	10.9	10.8	0.3	0.539	41.7%		
	Score	4	2	1	2	2			11	Fair
2010	Value	13.7*	49.6^	28.7	25.1	0.9				
	Score	4	4	3	4	3			18	Excellent
2009	Value	13.7*	6.2^	15.3	10.8	0.4				
	Score	4	1	1	2	2			10	Fair
2008	Value	13.7*	34.6^	29.5	22.1	1.5				
	Score	4	3	3	4	4			18	Excellent
2007	Value	13.7	96.5	20.0	17.3	0.5	0.485	38.4%		
	Score	4	4	2	3	3			16	Good
2006	Value	13.7*	25.1^	38.4	19.3	0.4				
	Score	4	3	4	3	2			16	Good
2005	Value	13.7*	72.1^	23.5	22.3	0.8				
	Score	4	4	3	4	3			18	Excellent
2004	Value	13.7*	33.5^	38.7	29.7	1.5				
	Score	4	3	4	4	4			19	Excellent
2003	Value	13.7	20.9	30.1	17.9	1.2	0.498	39.2%		
	Score	4	2	3	3	3			15	Good
2002	Value	11.7*	16.7^	25.5	24.0	1.6				
	Score	2	2	3	4	4			15	Good
2001	Value	11.7	28.2	34.1	12.5	0.5	0.455	36.6%		
	Score	2	3	4	2	3			14	Good
2000	Value	11.0	13.1	26.9	12.3	0.3	0.620	46.2%		
	Score	1	2	3	2	2			10	Fair

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 37. Length distribution and CPUE (fish/hr) of black bass collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Lower																				
Largemouth bass	1	6	6		3	3	6		9	2	7	9	4	2		2			60	40.0 (9.7)
Spotted bass		1	2		4	3	2	3	3		1		1						20	13.3 (6.4)
Middle																				
Largemouth bass		10	8	11	3	1	5	8	9	14	10	6	5	1	2		1		94	62.7 (4.2)
Spotted bass				2				1	3		1	1							8	5.3 (1.7)
Smallmouth bass			1																1	0.7 (0.7)
Upper																				
Largemouth bass	1	6	19	20	17	5	5	14	11	6	12	5	10	5	1	2			139	92.7 (3.2)
Smallmouth bass		1				1								1					3	2.0 (0.9)
Total																				
Largemouth bass	2	22	33	31	23	9	16	22	29	22	29	20	19	8	3	4	1		293	65.1 (6.3)
Spotted bass		1	2	2	4	3	2	4	6		2	1	1						28	6.2 (2.51)
Smallmouth bass		1	1			1								1					4	0.9 (0.4)

Dataset = cfdwrher.d17

Table 38. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Herrington Lake on 25-28 September 2017. Standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	17	89 (2)	20	95 (2)	4	95 (2)	41	92 (1)
	Middle	32	86 (1)	21	92 (2)	4	99 (2)	57	89 (1)
	Upper	32	90 (1)	25	92 (2)	8	98 (5)	65	92 (1)
	Total	81	89 (1)	66	93 (1)	16	98 (2)	163	91 (1)

Dataset = cfdwrher.d17

Table 39. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Herrington Lake.

Year class	Area	Age-0		Age-0		Age-0 ≥5.0 in		Age-1 (natural)	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.5	0.1	18.3	2.9	5.9	0.9	16.7	2.2
2002	Total	4.6	0.2	9.8	2.0	4.9	1.2	20.9	4.3
2003	Total	4.6	0.1	51.1	6.0	27.3	5.3	33.5	6.0
2004	Total	4.9	0.1	15.6	3.0	9.0	2.1	72.1	9.5
2005	Total	5.3	0.1	24.2	5.1	16.9	4.5	25.1	4.9
2006	Total	4.8	0.1	40.9	5.8	20.4	4.3	96.5	11.6
2007	Total	5.1	0.1	8.0	2.5	5.3	1.9	34.6	3.0
2008	Total	5.1	0.1	25.8	4.9	13.8	3.7	6.2	1.2
2009	Total	4.7	0.1	109.8	16.2	55.1	15.5	49.6	5.4
2010	Total	5.8	0.1	22.0	3.4	17.6	3.3	26.6	3.6
2011	Total	5.8	0.1	54.5	7.8	43.8	6.7	111.7	17.7
2012	Total	5.4	0.1	33.6	6.2	21.8	4.9	11.3	2.1
2013	Total	4.5	0.1	49.1	4.9	19.3	3.1	33.9	4.3
2014	Total	4.7	0.1	36.9	6.0	20.0	3.5	38.4	3.9
2015	Total	5.2	0.1	67.8	10.3	44.8	7.9	59.7	7.8
2016	Total	5.4	0.1	24.9	3.6	16.7	2.8	39.1	4.2
2017	Total	5.0	0.1	26.0	4.2	13.3	3.5		

Dataset = cfdwrher.d17

Table 40. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 30 net-nights of gill netting in Herrington Lake in October and November 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE
White bass	2	3	2		1	3	16	29	12	4	4								76	2.5 (0.5)
Hybrid striped bass	1	6	9	37	7	3					8	13	4	25	31	9	2	1	156	5.2 (1.0)
Reciprocal	1		4	23	5	1					6	9		18	25	9	1	1	103	3.4 (0.8)
Original		6	4	12	1	2					2	4	4	7	6		1		49	1.6 (0.3)

Dataset = cfdgnher.d17

Table 41. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2017.

		Age			
Year class	No.	1	2	3	4
2016	18	14.4			
2015	56	14.9	19.5		
2014	4	10.3	18.3	21.1	
2013	2	12.4	18.1	21.6	22.8
Mean	80	14.5	19.3	21.3	22.8
Smallest		7.2	17.3	20.5	22.5
Largest		16.5	21.7	22.0	23.1
Std error		0.2	0.1	0.2	0.3
95% ConLo		14.2	19.1	20.8	22.2
95% ConHi		14.8	19.6	21.7	23.5

Intercept Value = 0.00
Dataset = cfdagher.d17

Table 42. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 30 net-nights at Herrington Lake in 2017.

	Inch class																					Std
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	%	CPUE	err
0+	1	6	9	37	7	3													63	40	2.1	0.6
1+											8	13	1						22	14	0.7	0.2
2+													3	25	29	7	1		65	42	2.2	0.6
3+															2	2			4	3	0.1	0.0
4+																	1	1	2	1	0.1	0.0
Total	1	6	9	37	7	3					8	13	4	25	31	9	2	1	156	100	5.2	1.0
%	1	4	6	24	4	2					5	8	3	16	20	6	1	1	100			

Dataset = cfdagher.d17 and cfdgnher.d17

Table 43. Number of fish and the relative weight (W_r) for each length group of hybrid striped bass collected at Herrington Lake in October and November 2017.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	59	96 (1)	3	96 (1)	93	94 (1)	155	95 (1)

Dataset = cfdgnher.d17

Table 44. Population assessment for hybrid striped bass collected during fall gill netting at Herrington Lake from 2000-2017 (scoring based on statewide assessments).

Year		CPUE (excluding age-0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age-1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	3.1	21.1	3.1	0.7				
	Score	1	4	2	1			8	Fair
2016	Value	4.3	20.1	4.2	4.0				
	Score	2	4	2	3			11	Good
2015	Value	2.8	21.2	1.9	1.1				
	Score	1	4	1	2			8	Fair
2014	Value	2.8	20.9	2.8	1.6				
	Score	1	4	2	2			9	Fair
2013	Value	1.8	20.6	1.8	0.8	-	-		
	Score	1	4	1	1			7	Fair
2012	Value	1.1	19.6	1.0	0.8	-	-		
	Score	1	4	1	1			7	Fair
2011	Value	5.3	19.7	5.3	3.7	-	-		
	Score	2	4	3	3			12	Good
2010	Value	5.3	20.0	4.7	4.9	1.211	70.2		
	Score	2	4	2	3			11	Good
2009	Value	2.7	19.3	2.7	2.1	1.109	66.3		
	Score	1	4	2	2			9	Fair
2008	Value	6.0	20.2	6.0	3.6	0.912	59.8		
	Score	2	4	3	2			11	Good
2007	Value	6.2	20.6	4.9	5.6	1.122	67.4		
	Score	2	4	3	3			12	Good
2006	Value	1.3	21.4	1.3	4.0	0.633	46.9		
	Score	1	4	1	3			9	Fair
2005	Value	0.4	19.5	0.4	0.3	NA	NA		
	Score	1	4	1	1			7	Fair
2004	Value	2.5	20.8	2.2	0.1	NA	NA		
	Score	1	4	2	1			8	Fair
2003	Value	3.1	19.8	2.9	1.1	0.601	45.2		
	Score	1	4	2	2			9	Fair
2002	Value	8.2	20.8	7.0	3.6	0.770	53.7		
	Score	3	4	3	2			12	Good
2001	Value	4.7	20.1	4.7	0.8	NA	NA		
	Score	2	4	2	1			9	Fair
2000	Value	8.9	18.9	8.9	5.5	1.282	72.3		
	Score	3	4	3	3			13	Good

Table 45. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2017.

		Age					
Year class	No.	1	2	3	4	5	6
2016	11	10.4					
2015	14	9.1	12.5				
2014	28	8.2	12.6	14.0			
2013	6	9.5	12.0	13.7	15.3		
2012	2	9.0	12.6	14.9	16.0	16.9	
2011	1	8.6	12.2	13.7	15.1	16.1	17.0
Mean	62	9.0	12.5	14.0	15.4	16.6	17.0
Smallest		5.5	9.3	11.0	13.3	16.1	17.0
Largest		12.7	14.3	15.8	17.1	17.3	17.0
Std error		0.1	0.1	0.2	0.4	0.4	
95% ConLo		8.5	12.3	13.6	14.6	15.9	
95% ConHi		9.3	12.8	14.3	16.2	17.3	

Intercept Value = 0.00
Dataset = cfdagher.d17

Table 46. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 30 net-nights at Herrington Lake in 2017.

	Inch class														Std
Age	7	8	9	10	11	12	13	14	15	16	17	Total	%	CPUE	err
0+	2	3	2									7	9	0.2	0.1
1+					1	2	8					11	14	0.4	0.1
2+						1	5	8	2			16	21	0.5	0.1
3+							3	19	8	2		32	43	1.1	0.2
4+								1	2	1	2	6	8	0.2	0.1
5+										1	1	2	3	0.1	0.0
6+											1	1	1	0.0	0.0
Total	2	3	2		1	3	16	28	12	4	4	75	100	2.5	0.5
%	3	4	3		1	4	21	38	16	5	5	100			

Dataset = cfdagher.d17 and cfdgnher.d17

Table 47. Population assessment for white bass collected during fall gill netting at Herrington Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE (excluding age-0)	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age-1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	2.3	14.1	2.3	0.4				
	Score	1	4	2	1			8	Fair
2016	Value	5.2	13.3	4.4	1.0				
	Score	2	2	3	1			8	Fair
2015	Value	5.7	13.9	4.8	5.3				
	Score	2	4	3	3			12	Good
2014	Value	0.9	14.0	0.8	0.3				
	Score	1	4	1	1			7	Fair
2013	Value	2.2	14.1	2.2	0.3	-	-		
	Score	1	4	2	1			8	Fair
2012	Value	9.8	13.7	5.9	5.4	0.975	62.3		
	Score	3	4	3	3			13	Good
2011	Value	10.8	13.7	9.2	4.4	0.877	58.4		
	Score	3	4	4	3			14	Excellent
2010	Value	7.9	13.6	4.0	6.2	1.351	74.1		
	Score	3	3	3	3			12	Good
2009	Value	3.4	13.1	2.3	2.7	0.900	59.3		
	Score	2	2	2	2			8	Fair
2008	Value	6.7	13.3	5.8	2.1	0.717	51.2		
	Score	2	2	3	2			9	Fair
2007	Value	5.6	13.6	3.8	2.9	0.722	51.4		
	Score	2	3	3	2			10	Good
2006	Value	1.9	13.9	1.3	0.9	*	*		
	Score	1	4	2	1			8	Fair
2005	Value	2.1	13.5	2.0	0.2	0.371	31.0		
	Score	1	3	2	1			7	Fair
2004	Value	10.1	13.9	6.7	9.2	0.726	51.6		
	Score	3	4	3	4			14	Excellent
2003	Value	2.5	14.1	1.9	0.6	0.381	31.7		
	Score	1	4	2	1			8	Fair
2002	Value	2.9	14.1	2.4	2.0	0.841	56.9		
	Score	1	4	2	2			9	Fair
2001	Value	1.9	14.0	1.8	1.1	0.418	34.2		
	Score	1	4	2	1			8	Fair
2000	Value	3.5	13.9	2.8	2.0	0.741	52.4		
	Score	2	4	2	2			10	Good

Table 48. Number of fish and the relative weight (Wr) for each length group of white bass collected at Herrington Lake in October and November 2017.

		Length group							
Species	Area	6.0–8.9 in		9.0–11.9 in		≥12.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White bass	Total	5	99 (2)	3	103 (7)	68	92 (1)	76	93 (1)

Dataset = cfdgnher.d17

Table 49. Dissolved oxygen and temperatures collected at the mouth of Cane Run at Herrington Lake during 2017.

	April 4		May 3		June 7		July 5		August 9		September 7		October 5		November 14	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	15.03	59.4	10.33	68.3	12.09	77.4	9.85	82.3	8.28	79.8	6.17	75.4	7.77	74.0	5.20	62.7
2	15.03	59.4	10.49	68.3	12.11	77.5	9.51	82.1	8.26	77.8	6.14	75.5	7.82	74.0	5.19	62.9
4	15.03	59.1	10.54	68.3	12.14	77.5	9.65	81.9	8.25	79.8	6.12	75.6	7.84	73.9	5.16	63.0
6	15.05	58.9	10.51	68.3	12.17	77.5	9.51	81.6	8.28	79.7	6.08	75.6	7.84	73.9	5.15	63.0
8	14.95	58.2	10.58	68.2	12.16	77.5	9.40	81.4	8.33	79.7	6.04	75.6	7.82	73.8	5.13	63.0
10	14.75	57.9	10.58	68.2	12.16	77.4	9.29	81.3	8.36	79.7	5.99	75.6	7.83	73.7	5.10	63.1
12	14.66	57.7	10.57	68.2	11.91	77.2	9.08	81.3	8.36	79.7	5.97	75.6	7.88	73.7	5.08	63.1
14	14.47	57.6	10.57	68.2	5.75	72.9	7.50	80.3	8.35	79.7	5.94	75.6	7.93	73.7	5.07	63.1
16	14.38	57.4	10.55	68.2	3.46	71.6	3.77	78.0	7.47	79.6	5.90	75.6	7.95	73.6	5.06	63.1
18	14.38	57.4	10.42	68.1	1.05	69.2	2.34	76.8	4.32	79.0	5.88	75.6	7.96	73.6	5.05	63.1
20	14.39	57.4	10.26	68.1	0.83	68.3	1.16	75.3	2.56	78.7	5.85	75.6	7.30	73.6	5.04	63.1
22	14.36	57.4	8.90	66.8	0.68	67.2	0.31	73.9	0.85	77.7	5.78	75.6	6.47	73.5	5.03	63.1
24	14.29	57.2	8.12	65.0	0.66	66.4	0.23	72.1	0.25	76.4	5.77	75.6	5.47	73.4	5.00	63.1
26	14.16	57.1	6.48	61.4	0.67	65.9	0.20	70.2	0.20	74.9	5.61	75.6	4.89	73.4	5.00	63.1
28	13.84	56.7	6.63	59.8	0.63	65.1	0.19	68.9	0.19	74.3	5.63	75.6	4.52	73.4	5.00	63.2
30	12.95	55.7	6.86	59.1	0.63	64.3	0.17	68.1	0.18	73.9	5.00	75.5	2.91	73.2	4.99	63.2
35	12.10	54.3	7.10	57.9	0.56	62.9	0.16	66.3	0.16	72.9	4.05	74.8	1.17	72.9	4.98	63.2
40	10.72	52.1	7.31	57.2	1.12	60.8	0.15	64.4	0.15	69.8	1.32	73.8	0.32	72.4	4.97	63.2
45	10.50	51.4	7.52	56.2	2.41	58.8	0.14	62.7	0.14	67.0	0.22	72.4	0.18	71.5	4.95	63.2
50	10.30	51.1	7.52	55.1	3.45	57.4	0.13	61.0	0.13	64.8	0.36	71.1	0.16	70.5	4.94	63.2
55	10.09	50.8	7.51	53.5	4.13	56.6	0.18	58.8	0.13	63.4	0.17	69.8	0.15	69.6	4.92	63.2
60	9.86	50.6	7.72	52.3	4.86	55.5	1.43	57.5	0.12	61.8	0.15	68.3	0.14	69.0	4.91	63.2
65	9.75	50.4	8.09	51.4	5.23	54.3	2.63	56.3	0.12	60.2	0.14	66.1	0.14	68.2	4.89	63.2
70	9.53	50.3	8.11	51.1	6.07	53.1	3.49	55.3	0.11	58.8	0.13	64.6	0.13	66.7	4.88	63.2
75	9.46	50.2	8.00	50.8	6.54	55.1	4.10	54.3	0.10	57.6	0.13	63.1	0.13	64.6	4.87	63.2
80	9.31	50.1	7.78	50.6	6.48	54.5	4.75	53.2	0.17	56.2	0.12	61.7	0.12	62.7	4.85	63.2
85	9.17	50.1	7.74	50.5	6.56	51.2	5.41	52.4	2.40	55.2	0.12	60.4	0.11	61.5	4.84	63.2
90	9.11	50.1	7.80	50.4	6.61	50.8	5.88	51.4	3.43	53.8	0.11	59.2	0.11	60.1	4.85	63.2
95	9.00	50.1	7.80	50.3	6.64	50.6	6.03	50.9	3.80	53.0	0.11	58.1	0.10	59.0	4.85	63.2
100	8.86	50.1	7.70	50.2	6.65	50.5	6.02	50.8	4.90	52.4	0.11	56.8	0.10	57.8	4.86	63.1
110	8.03	49.8	7.38	50.0	6.58	50.4	5.92	50.5	4.35	51.3	0.23	55.2	0.09	56.5	3.09	62.0
120	7.40	49.5	6.92	49.8	6.58	50.1	6.04	50.3	4.64	50.8	1.89	53.8	0.24	54.6	0.24	61.2
130	6.94	49.1	6.94	49.5	6.31	49.9	5.98	50.1	4.90	50.4	3.38	52.5	1.24	53.5	0.47	60.1
140	6.62	48.9	5.55	49.2	5.94	49.7	5.77	49.9	4.63	50.2	3.75	51.4	2.08	52.3	0.63	59.2
150	6.18	48.6	4.48	49.0	4.98	49.5	5.11	49.6	3.74	50.0	3.74	50.7	1.77	51.3	0.18	58.4
160	5.80	48.1	3.28	48.7	3.75	49.0	3.81	49.4	2.03	49.9	3.06	50.4	0.65	50.9	0.15	57.8

Table 50. Dissolved oxygen and temperatures collected near Gwinn Island Marina at Herrington Lake during 2017.

	April 4		May 3		June 7		July 5		August 9		September 7		October 5		November 16	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	7.72	59.7	9.70	67.0	13.37	78.0	9.94	81.2	8.85	81.2	6.75	75.6	8.18	74.4	2.84	61.4
2	7.78	59.5	9.74	66.9	13.51	78.1	9.93	81.3	8.86	80.6	6.63	75.7	8.16	74.2	2.73	61.5
4	7.78	59.2	9.53	66.7	13.79	78.1	9.86	81.3	8.89	80.7	6.61	75.7	7.87	73.7	2.66	61.6
6	7.74	59.0	9.40	66.6	13.97	78.0	10.13	81.2	8.55	80.2	6.16	75.7	7.76	73.5	2.62	61.6
8	7.74	59.0	9.29	66.6	13.97	78.0	10.20	81.2	8.17	80.0	5.64	75.5	7.85	73.5	2.61	61.7
10	7.75	58.8	9.03	66.3	13.69	77.9	9.97	81.2	8.11	79.9	5.42	75.5	7.85	73.5	2.58	61.7
12	7.57	58.5	8.82	66.1	11.92	77.7	6.42	80.3	8.08	79.9	5.04	75.3	7.81	73.5	2.57	61.7
14	7.42	58.1	8.78	66.1	4.84	74.9	2.00	79.1	8.01	79.8	5.05	75.3	7.77	73.5	2.54	61.7
16	7.32	57.7	8.87	65.7	1.01	72.6	0.82	78.2	8.00	79.8	5.04	75.3	7.55	73.4	2.52	61.8
18	7.29	56.5	7.62	64.7	1.85	70.8	0.41	77.2	7.26	79.7	5.04	75.3	7.02	73.4	2.50	61.8
20	7.30	56.0	4.35	62.4	2.30	69.6	0.25	76.5	6.02	79.6	5.05	75.2	6.44	73.4	2.48	61.8
22	7.32	55.8	3.55	61.9	1.97	68.6	0.18	75.1	3.01	78.8	5.04	75.2	5.76	73.4	2.46	61.8
24	7.39	55.0	3.08	61.0	0.96	67.4	0.16	73.8	0.25	76.8	4.85	75.2	3.36	73.3	2.45	61.8
26	7.75	54.5	3.03	60.6	0.36	66.6	0.15	73.0	0.22	75.7	4.43	75.2	0.69	73.1	2.44	61.8
28	8.18	52.6	3.02	60.2	0.20	66.6	0.14	71.3	0.20	74.7	3.77	74.6	0.55	72.9	2.42	61.8
30	8.27	52.2	3.14	59.1	0.17	65.1	0.13	70.0	0.20	74.2	1.13	74.4	0.51	72.8	2.40	61.8
35	8.31	51.1	3.36	58.2	0.15	63.5	0.11	67.0	0.19	74.0	5.56	74.0	0.60	72.5	2.38	61.9
40	8.26	50.7	3.68	57.3	0.14	61.6	0.11	64.6	0.17	72.3	6.73	73.4	1.01	72.0	2.35	61.9
45	8.10	50.5	4.06	56.5	0.13	60.0	0.10	62.6	0.16	69.7	4.70	71.8	0.62	71.0	2.34	61.9
50	8.02	50.4	4.44	55.5	0.43	58.3	0.10	62.0	0.15	67.1	5.88	70.4	0.23	70.3	2.32	61.9
55	7.95	50.3	5.32	54.2	1.48	56.5	0.09	59.2	0.14	65.4	3.81	69.2	0.18	69.7	2.32	61.9
60	7.82	50.2	6.13	52.2	2.02	55.7	0.08	57.3	0.13	63.4	3.47	68.6	0.17	69.2	2.31	61.9
65	7.70	50.1	5.83	51.2	2.68	54.5	0.35	56.1	0.13	61.3	2.39	68.1	0.16	68.5	2.33	61.9
70	7.58	50.0	5.67	50.9	2.87	53.7	0.76	55.0	0.12	59.9	0.22	65.9	0.16	66.7	2.33	61.9
75	7.32	49.9	5.69	50.7	1.67	52.2	0.65	53.8	0.12	58.8	0.18	63.4	0.15	65.4	2.33	61.9
80	7.41	49.8	5.78	50.5	1.10	51.5	0.15	52.9	0.11	57.7	0.15	61.7	0.14	63.4	2.33	61.9
85	6.82	49.7	5.58	50.4	1.20	51.1	0.07	52.1	0.11	56.6	0.15	60.2	0.14	62.0	2.32	61.9
90	6.62	49.6	5.30	50.3	1.48	50.8	0.06	51.6	0.10	55.5	0.14	58.9	0.13	60.4	2.30	61.9
95	6.32	49.9	3.95	50.1	1.14	50.6	0.05	51.2	0.10	53.7	0.13	58.0	0.13	59.6	2.26	61.9
100			2.87	50.1	0.56	50.4	0.05	51.0	0.09	53.1	0.13	57.5	0.12	58.8	2.21	61.9
110					0.17	50.3	0.05	50.8	0.09	52.4	0.11	55.7	8.18	74.4	2.09	61.9

Table 51. Dissolved oxygen and temperatures collected near Kings Mill Marina at Herrington Lake during 2017.

	April 4		May 3		June 7		July 5		August 9		September 7		October 5		November 16	
Depth	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp	DO	Temp
Surface	9.60	60.4	11.69	69.1	12.08	76.9	10.71	81.5	7.08	80.6	10.29	76.1	10.21	75.5	6.23	56.7
2	9.68	60.0	11.67	69.1	12.10	77.0	10.60	81.1	7.20	80.5	10.09	76.7	9.82	74.5	6.14	56.8
4	9.71	57.8	11.19	68.8	12.12	77.1	10.08	81.0	7.11	79.8	9.90	76.3	8.95	74.1	6.09	56.9
6	9.63	57.4	10.81	68.2	11.98	77.1	9.35	80.9	6.90	79.5	7.73	75.4	7.92	73.8	6.07	56.9
8	9.61	57.1	10.11	68.1	11.31	76.8	7.65	80.2	6.06	79.2	7.27	75.3	6.36	73.7	6.05	56.9
10	9.54	56.9	8.87	67.9	10.87	76.8	6.72	79.7	5.65	79.0	7.07	75.3	5.04	73.6	6.07	56.9
12	9.48	56.7	8.25	67.5	4.93	73.8	5.89	78.3	5.35	78.9	7.00	75.3	4.50	73.5	6.08	56.9
14	9.42	56.6	7.97	67.3	3.53	72.1	5.45	77.3	5.27	78.8	7.01	75.3	4.08	73.5	6.02	56.4
16	9.38	56.5	7.79	67.1	2.71	70.9	5.15	76.8	5.25	78.8	6.98	75.2	3.57	73.4	8.60	49.6
18	9.31	56.4	7.59	67.0	1.91	69.9	4.64	76.2	5.23	78.8	6.97	75.2	3.43	73.4	9.19	47.9
20	9.12	56.1	6.93	66.7	1.36	69.2	4.17	75.5	5.07	78.8	7.18	74.8	3.30	73.3	9.20	47.9
22	8.98	56.0	7.00	66.6	1.11	69.0	3.84	74.7	5.00	78.7	7.24	74.7	2.95	73.3	6.23	56.7
24	8.86	55.9	1.70	60.5	0.34	68.3	3.73	74.4	2.15	78.1	7.21	74.3	2.87	73.2		
26	8.42	55.7	1.69	58.9	0.22	67.7	3.54	74.1	0.40	76.9	7.28	73.5	3.03	73.2		
28			1.49	58.3	0.19	67.3	3.38	73.9	0.27	75.8	6.90	71.4	3.32	73.0		
30			1.12	58.0	0.18	66.7	2.85	73.5	0.23	75.0	6.04	69.7	3.10	72.9		
35					0.16	66.4	0.65	68.6	0.21	74.3	5.93	69.3				

Table 52. Species composition, relative abundance, and CPUE (fish/hr) of black bass and saugeye collected in 3.0 hours of 15-minute nocturnal electrofishing runs in Guist Creek Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Largemouth bass	4	13	16	6	15	59	54	44	37	34	37	43	50	52	30	18	11	4	2		529	176.3 (21.8)
Saugeye					1	3	2	3		3	1	1	10	1	1	1	1	2		2	32	10.7 (1.9)

Dataset = cfdpsgcl.d17

Table 53. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Guist Creek Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	Total
1992	12.0 (2.1)	16.8 (2.7)	38.4 (5.2)	41.2 (4.7)	3.2 (1.0)	108.4 (7.2)
1993	22.7 (2.6)	25.5 (2.7)	23.8 (2.7)	51.6 (5.0)	5.5 (1.1)	123.6 (9.1)
1994	19.2 (2.7)	29.8 (3.7)	19.6 (2.6)	40.2 (3.9)	2.0 (0.5)	108.8 (8.6)
1995	18.2 (3.0)	40.6 (3.8)	23.2 (2.4)	47.2 (5.5)	5.0 (1.3)	129.2 (9.2)
1996	32.6 (5.5)	28.8 (3.6)	44.8 (2.8)	58.2 (5.2)	5.8 (1.1)	164.4 (10.6)
1997				NS		
1998	20.3 (3.1)	45.3 (4.9)	18.7 (3.5)	72.7 (12.3)	5.0 (1.3)	157.0 (14.5)
1999	53.5 (6.9)	56.8 (10.2)	41.7 (6.3)	51.3 (3.4)	8.0 (1.3)	203.3 (19.4)
2000	26.7 (6.1)	19.3 (2.4)	23.0 (2.9)	41.3 (5.4)	3.0 (1.0)	110.3 (7.6)
2001	39.0 (5.3)	42.0 (3.6)	17.3 (2.7)	46.3 (5.2)	1.7 (0.6)	144.7 (10.1)
2002	43.3 (9.9)	32.3 (7.7)	23.3 (3.1)	41.3 (7.8)	2.0 (1.4)	134.3 (18.6)
2003	27.7 (6.7)	96.7 (9.9)	31.0 (4.6)	49.7 (4.0)	2.7 (0.9)	205.0 (19.7)
2004	30.7 (6.0)	62.7 (6.5)	58.0 (7.0)	54.3 (5.9)	3.7 (1.0)	205.7 (17.0)
2005	84.3 (12.2)	67.0 (6.3)	63.0 (5.6)	70.3 (7.5)	4.7 (1.4)	284.7 (25.6)
2006	30.0 (6.6)	69.3 (8.2)	30.3 (3.3)	68.7 (6.4)	3.3 (1.5)	198.3 (19.0)
2007	23.3 (3.0)	59.3 (6.3)	42.0 (4.3)	58.0 (5.5)	3.7 (1.2)	182.7 (11.6)
2008	24.0 (3.6)	19.7 (2.3)	41.3 (5.6)	73.0 (10.3)	4.7 (1.5)	158.0 (12.9)
2009	12.0 (2.7)	23.3 (4.7)	19.3 (3.7)	35.7 (6.0)	4.3 (1.0)	90.3 (11.3)
2010	46.8 (4.1)	25.3 (2.6)	26.3 (2.9)	47.3 (4.6)	3.0 (0.8)	145.8 (8.4)
2011	34.3 (2.6)	67.7 (7.0)	35.0 (3.9)	50.3 (4.7)	5.3 (1.6)	187.3 (9.7)
2012	19.7 (5.2)	81.7 (7.5)	30.0 (4.1)	36.7 (3.8)	4.7 (1.2)	168.0 (7.2)
2013	21.3 (7.0)	44.0 (5.1)	51.0 (5.4)	63.0 (7.4)	5.7 (2.0)	179.3 (11.6)
2014	13.3 (2.4)	43.3 (5.4)	32.7 (4.6)	49.3 (6.8)	4.3 (1.3)	138.7 (15.8)
2015	28.7 (8.4)	86.0 (6.5)	47.0 (4.9)	63.7 (10.2)	3.3 (1.2)	225.3 (22.2)
2016				NS		
2017	13.0 (3.3)	57.3 (7.3)	36.0 (5.0)	70.0 (11.2)	5.7 (1.7)	176.3 (21.2)

Dataset = cfdpsgcl.d17– d92

Table 54. PSD and RSD_{15} values obtained for largemouth bass from spring nocturnal electrofishing samples in Guist Creek Lake in 2017; confidence intervals are in parentheses.

Species	No. >8.0 in	PSD	RSD_{15}
Largemouth bass	490	65 (± 4)	43 (± 4)

Dataset = cfdpsgcl.d17

Table 55. Population assessment for largemouth bass collected during spring electrofishing at Guist Creek Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	12.5	12.7	36.0	70.0	5.7				
	Score	4	2	3	4	4			17	Excellent
2015	Value	12.2*	13.0	47.0	63.7	3.3				
	Score	4	1	3	4	3			15	Good
2014	Value	12.2*	3.7	32.7	49.3	4.3				
	Score	4	1	2	4	4			15	Good
2013	Value	12.2	17.0	51.0	63.0	5.7				
	Score	4	2	4	4	4			18	Excellent
2012	Value	11.0*	13.3	30.0	36.7	4.7				
	Score	3	1	2	4	4			14	Good
2011	Value	11.0*	16.4	34.7	50.7	5.7				
	Score	3	2	2	4	4			15	Good
2010	Value	11.0*	31.5^	26.3	47.3	3.0				
	Score	3	2	2	4	3			14	Good
2009	Value	11.0	6.7	19.3	35.7	4.3	0.341	28.9		
	Score	3	1	1	4	4			13	Good
2008	Value	11.5*	8.1^	41.3	73.0	4.7				
	Score	4	1	3	4	4			16	Good
2007	Value	11.5*	15.5^	42.0	58.0	3.7				
	Score	4	1	3	4	3			15	Good
2006	Value	11.5*	15.2^	30.3	68.7	3.3				
	Score	4	1	2	4	3			14	Good
2005	Value	11.5	21.4	63.0	70.3	4.7	0.510	40.0		
	Score	4	2	4	4	4			18	Excellent
2004	Value	10.2*	22.1^	58.0	54.3	3.7				
	Score	2	2	4	4	3			15	Good
2003	Value	10.2*	16.3^	31.0	49.7	2.7				
	Score	2	2	2	4	3			13	Good
2002	Value	10.2*	23.8^	23.3	41.3	2.0				
	Score	2	2	2	4	3			13	Good
2001	Value	10.2	25.7	17.3	46.3	1.7	0.289	25.1		
	Score	2	2	1	4	2			11	Fair
2000	Value	10.0	16.8	23.0	41.3	3.0	0.161	14.9		
	Score	1	2	2	4	3			10	Good

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 56. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Guist Creek Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	7	51	27	23	7	13	36	37	17	32	30	24	14	15	16	8	4	4	5	1	371	247.3 (20.8)

Dataset = cfdwrgcl.d17

Table 57. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected in the fall from Guist Creek Lake in 2017.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2016	31	6.0							
2015	18	6.1	10.0						
2014	13	5.3	9.5	12.5					
2013	8	5.0	8.8	12.2	14.2				
2012	1	4.0	7.7	9.9	11.4	12.8			
2011	4	5.7	9.2	12.5	14.2	15.7	16.6		
2010	3	6.3	10.4	13.4	15.4	17.0	18.4	19.1	
2009	1	5.5	9.8	13.2	15.5	16.2	16.7	17.3	17.8
Mean	79	5.8	9.6	12.4	14.3	15.9	17.3	18.7	17.8
Smallest		3.4	6.4	9.9	11.4	12.8	14.3	17.3	17.8
Largest		8.8	11.8	15.1	16.3	17.8	19.0	19.9	17.8
Std Error		0.1	0.2	0.2	0.4	0.6	0.6	0.6	
95% ConLo		5.5	9.3	11.9	13.6	14.8	16.2	17.4	
95% ConHi		6.0	9.9	12.9	15.1	17.0	18.4	19.9	

Intercept value = 0.00
Dataset = cfdaggcl.d17

Table 58. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Guist Creek Lake on 12 September 2017. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	63	92 (1)	47	92 (1)	50	96 (1)	160	93 (1)

Dataset = cfdwrgcl.d17

Table 59. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Guist Creek Lake.

Year class	Area	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.6	0.1	19.5	4.0	0.0		25.7	5.3
2001	Total	3.9	0.1	65.3	14.0	1.0	0.5	23.8	6.7
2002	Total	4.7	0.1	47.3	7.6	19.3	2.8	16.3	3.3
2003	Total	4.0	0.1	30.7	8.2	6.0	2.0	22.1	4.8
2004	Total	4.0	0.1	40.7	6.0	0.7	0.7	21.4	4.2
2005	Total	4.5	0.1	24.5	4.4	5.0	2.0	15.2	4.5
2006	Total	3.9	0.1	50.7	8.5	10.0	4.2	15.5	2.2
2007	Total	3.8	0.2	12.7	4.2	2.7	1.7	8.1	2.0
2008	Total	3.2	0.1	139.3	23.6	0.7	0.7	6.7	2.4
2009	Total	3.7	0.1	51.3	9.8	0.7	0.7	31.5	3.1
2010	Total	4.9	0.1	41.3	4.2	18.7	2.0	16.4	1.6
2011	Total	4.4	0.1	34.7	13.2	7.3	3.9	13.3	4.2
2012	Total	4.1	0.1	46.0	7.9	7.3	3.2	21.3	7.0
2013	Total	4.0	0.1	38.7	7.0	6.7	2.7	3.7	1.0
2014	Total	4.0	0.1	27.3	5.2	3.3	0.7	13.0	6.4
2015	Total	5.0	0.1	49.3	5.1	28.0	2.3	---	
2016	Total	5.0	0.1	56.0	8.6	29.3	7.4	11.0	3.0
2017	Total	4.1	0.1	75.3	20.3	18.7	4.3		

Table 60. Length distribution and CPUE (fish/nn) of hybrid striped bass collected during 8 net-nights of gill netting in Guist Creek Lake in November 2017: numbers in parentheses are standard errors.

	Inch class																							
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Total	CPUE
Hybrid striped bass	2	3	8	2							5	6	1	4	5	1	4	2	1	3			1	48	6.0 (1.3)
Saugeye			6	13	15	3	2	8	13	19	7	4	6	4	3	6	11	3						123	15.4 (4.3)

Dataset = cfdgngcl.d17

Table 61. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Guist Creek Lake in 2017.

		Age							
Year class	No.	1	2	3	4	5	6	7	8
2016	1	11.1							
2015	15	9.2	15.6						
2014	8	9.8	16.0	20.3					
2013	2	7.9	15.0	19.9	22.2				
2012	5	9.3	15.8	19.9	22.8	24.4			
2011	1	9.0	14.6	19.6	22.8	24.6	25.7		
2009	1	7.5	14.5	20.9	22.6	24.4	26.1	27.3	28.1
Mean	33	9.3	15.6	20.1	22.6	24.4	25.9	27.3	28.1
Smallest		6.6	12.7	18.3	21.8	23.8	25.7	27.3	28.1
Largest		12.3	18.3	21.7	23.6	25.2	26.1	27.3	28.1
Std Error		0.3	0.2	0.2	0.2	0.2	0.2		
95% ConLo		8.7	15.2	19.7	22.3	24.1	25.5		
95% ConHi		9.8	16.1	20.5	23.0	24.8	26.3		

Intercept Value = 0.00
Dataset = cfdaggcl.d17

Table 62. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 8 net-nights at Guist Creek Lake in 2017.

	Inch class																							Std
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	29	Total	%	CPUE	Err
0+	2	3	8	2																		15	31	1.9	0.4
1+											1											1	2	0.1	0.1
2+											4	6	1	3	1							15	31	1.9	0.8
3+														1	4	1	3					9	18	1.1	0.3
4+																	1	1				2	4	0.3	0.1
5+																		1	1	2		4	9	0.5	0.3
6+																				1		1	2	0.1	0.1
8+																					1	1	2	0.1	0.1
Total	2	3	8	2							5	6	1	4	5	1	4	2	1	3	1	48	100	6.0	1.3
%	4	6	17	4							10	13	2	8	10	2	8	4	2	6	2	100			

Dataset = cfdaggcl.d17 and cfdgngcl.d17

Table 63. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Guist Creek Lake in October 2017.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	13	85 (2)	0		33	82 (2)	46	83 (1)

Dataset = cfdgngcl.d17

Table 64. Population assessment for hybrid striped bass collected during fall gill netting at Guist Creek Lake from 2000-2017 (scoring based on statewide assessment).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Total score	Assessment rating
2017	Value	4.1	15.6	4.1	0.1		
	Score	2	1	2	1	6	Poor
2014	Value	3.6	17.3	3.0	0.6		
	Score	2	3	2	1	8	Fair
2011	Value	6.3	17.6	5.9	0.3		
	Score	2	3	3	1	9	Fair
2010	Value	4.0	13.2	1.0	2.9		
	Score	2	1	1	2	6	Poor
2009	Value	2.0	18.5	2.0	1.3		
	Score	1	3	1	2	7	Fair
2008	Value	0.9	16.8	0.8	0.1		
	Score	1	2	1	1	5	Poor
2007	Value	8.8	18.4	8.3	0.5		
	Score	3	3	3	1	10	Good
2006	Value	3.4	17.1	3.1	0.3		
	Score	1	2	2	1	6	Poor
2005	Value	3.3	14.9	2.9	0.3		
	Score	1	1	2	1	5	Poor
2004	Value	3.6	17.4	2.5	0.9		
	Score	2	3	2	1	8	Fair
2003	Value	3.5	18.0	3.3	0.3		
	Score	2	3	2	1	8	Fair
2002	Value	4.3	17.2	3.5	0.8		
	Score	2	2	2	1	7	Fair
2001	Value	2.3	17.1	1.5	0.8		
	Score	1	2	1	1	5	Poor
2000	Value	15.6	17.2	9.0	6.4		
	Score	3	2	3	3	11	Good

*Years not represented in table indicate that no sample was completed

Table 65. Length distribution and CPUE (fish/hr) of saugeye collected in 1.5 hours of 15-minute electrofishing runs in Guist Creek Lake in October 2017; numbers in parentheses are standard errors.

	Inch class																	
Species	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE
Saugeye	1	3	5				3	4	9	4	2		1		2	2	1	37	24.7 (5.0)

Dataset = cfdwrgcl.d17

Table 66. Mean back calculated lengths (in.) at each annulus for otoliths from saugeye collected in the fall from Guist Creek Lake in 2017.

		Age			
Year	No.	1	2	3	4
2016	36	11.0			
2015	24	10.9	15.4		
2014	5	11.0	17.7	21.3	
2013	12	10.4	15.4	19.7	22.1
Mean	77	10.9	15.7	20.1	22.1
Smallest		8.5	11.7	18.1	20.3
Largest		13.0	19.0	22.2	23.3
Std Error		0.1	0.3	0.3	0.2
95% ConLo		10.6	15.2	19.6	21.7
95% ConHi		11.1	16.2	20.7	22.6

Intercept value = 0.00
Dataset = cfdaggcl.d17

Table 67. Age frequency and CPUE (fish/nn) per inch class of saugeye gill netted for 8 net-nights at Guist Creek Lake in 2017.

	Inch class																			Std
Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	%	CPUE	Err
0+	6	13	15	2													36	29	4.5	1.8
1+				1	2	7	12	12	6								40	32	4.9	1.7
2+						1	1	7	1	4	6	4	2	2			28	23	3.5	1.1
3+														3	2	1	6	5	0.8	0.2
4+													1	2	9	2	14	11	1.7	0.4
Total	6	13	15	3	2	8	13	19	7	4	6	4	3	7	11	3	123	100	15.4	4.3
%	5	11	12	2	2	7	11	15	6	3	5	3	2	5	9	2	100			

Dataset = cfdaggcl.d17 and cfdgngcl.d17

Table 68. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass and saugeye collected in 2.5 hours of 15-minute electrofishing runs in A.J. Jolly Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	4	12	27	31	12	20	44	33	29	20	23	12	15	15	14	11	6	1		329	131.6 (10.5)
Saugeye					6	6	5	7	2	1	2		2	1	3	2	3		2	42	16.8 (2.7)

Dataset = cfdpsajj.d17

Table 69. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from A.J. Jolly Lake from 1996-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1996	18.5 (2.8)	13.5 (1.7)	24.0 (5.7)	9.5 (2.5)	0.0	65.5 (7.4)
1997	11.6 (1.9)	37.2 (3.8)	19.6 (2.1)	20.4 (2.6)	0.8 (0.5)	88.8 (4.7)
1998	11.5 (1.9)	42.5 (8.0)	24.5 (2.4)	25.5 (3.5)	2.0 (1.1)	104.0 (11.6)
1999	5.0 (2.4)	21.0 (6.1)	32.0 (6.5)	26.0 (4.5)	4.0 (1.3)	84.0 (13.7)
2000	27.0 (5.4)	25.0 (4.3)	9.5 (1.5)	20.0 (3.3)	1.5 (0.7)	81.5 (7.9)
2001	35.5 (5.9)	48.5 (5.7)	12.0 (2.4)	26.0 (5.2)	2.0 (1.1)	122.0 (13.5)
2002	10.0 (2.1)	44.5 (8.2)	9.5 (1.5)	18.0 (3.1)	0.5 (0.5)	82.0 (10.5)
2003	14.5 (4.3)	40.5 (4.2)	19.0 (4.3)	7.5 (2.2)	0.0	81.5 (7.7)
2004*						
2005	55.5 (10.4)	19.5 (4.0)	12.5 (1.8)	7.0 (2.0)	0.0	94.5 (14.9)
2006	28.0 (6.9)	23.5 (3.5)	5.5 (2.0)	2.5 (1.1)	0.0	59.5 (7.6)
2007	31.6 (4.4)	36.8 (5.9)	15.2 (2.3)	14.0 (2.8)	0.0	97.6 (11.2)
2008	7.2 (1.4)	14.8 (4.1)	14.8 (2.7)	8.0 (3.1)	0.0	44.8 (6.2)
2009	15.6 (2.4)	19.6 (2.6)	12.8 (2.9)	12.8 (2.7)	2.0 (0.9)	60.8 (7.7)
2010	12.4 (2.6)	22.8 (4.0)	20.8 (3.8)	21.2 (3.7)	1.6 (0.9)	77.2 (8.9)
2011	26.8 (5.0)	12.8 (3.3)	12.4 (2.9)	20.4 (3.4)	0.8 (0.8)	72.4 (10.1)
2012	35.6 (6.0)	32.4 (6.9)	19.6 (2.4)	20.0 (4.8)	0.4 (0.4)	107.6 (14.5)
2013	11.6 (2.6)	23.2 (3.7)	24.0 (5.1)	17.2 (2.9)	1.6 (0.9)	76.0 (9.9)
2014	13.6 (2.8)	21.2 (2.9)	16.0 (3.2)	24.0 (5.1)	2.0 (0.9)	74.8 (9.1)
2015	43.2 (6.8)	24.8 (5.1)	12.4 (2.2)	15.2 (4.2)	0.8 (0.5)	95.6 (7.4)
2016	18.0 (3.4)	30.0 (4.2)	19.6 (4.2)	27.2 (9.8)	1.2 (0.9)	94.8 (16.3)
2017	34.4 (3.9)	50.4 (6.7)	22.0 (3.6)	24.8 (2.4)	0.4 (0.4)	131.6 (10.5)

Dataset = cfdpsajj.d96 – d17

*No spring sample collected in 2004

Table 70. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in A.J. Jolly Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	243	48 (± 6)	26 (± 6)

Dataset = cfdpsajj.d17

Table 71. Population assessment for largemouth bass collected during spring electrofishing at A.J. Jolly Lake from 2010-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	12.3*	30.0	22.0	24.8	0.4				
	Score	4	3	2	3	2			14	Good
2016	Value	12.3*	5.2	19.6	27.2	1.2				
	Score	4	1	2	4	2			13	Good
2015	Value	12.3	38.8	12.4	15.2	0.8				
	Score	4	3	1	3	2			13	Good
2014	Value	11.9*	8.0	16.0	24.0	2.0				
	Score	4	2	2	3	3			14	Good
2013	Value	11.9*	10.4	24.0	17.2	1.6				
	Score	4	2	2	3	3			14	Good
2012	Value	11.9*	27.2	19.6	20.0	0.4				
	Score	4	3	2	3	2			14	Good
2011	Value	11.9	26.0	12.4	20.4	0.8				
	Score	4	3	1	3	2			13	Good
2010	Value	11.8*	4.0	20.8	21.2	1.6				
	Score	4	1	2	3	3			13	Good

* Age data not collected

Table 72. Length distribution and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs for black bass in A.J. Jolly Lake in October 2017; numbers in parentheses are standard errors.

	Inch class																						
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Largemouth bass	1	20	41	14	12	35	23	11	16	15	21	10	6	6	2	8						241	120.5 (6.7)
Saugeye		5	2	3	4	4	6	8	10	8	2	4	4	3	2		2	3	3		1	74	37.0 (8.6)

Dataset = cfdwrajj.d17

Table 73. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at A.J. Jolly Lake on 5 October 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	85	87 (1)	46	90 (2)	22	93 (1)	153	89 (1)

Dataset = cfdwrajj.d17

Table 74. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at A.J. Jolly Lake.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2004	Total	3.5	0.1	36.7	5.2	2.0	0.9	49.8	9.2
2005	Total	4.3	0.1	16.0	3.7	2.7	1.3	23.7	5.7
2006	Total	4.1	0.2	8.7	2.8	0.7	0.7	28.5	4.5
2007	Total	4.4	0.3	5.6	1.8	2.0	0.9	3.6	1.1
2008	Total	4.6	0.1	29.7	4.4	7.4	2.2	12.0	2.0
2009	Total	4.2	0.2	8.4	2.5	1.3	0.7	4.0	1.9
2010	Total	5.2	0.1	42.4	5.2	26.8	4.1	26.0	4.6
2011	Total	4.9	0.1	22.0	3.6	13.5	4.2	27.2	4.8
2012	Total	4.9	0.1	22.0	3.6	12.0	2.9	10.4	2.2
2013	Total	4.5	0.1	23.0	3.4	6.0	2.3	8.0	2.0
2014	Total	4.5	0.2	19.5	5.9	8.0	2.8	38.8	6.4
2015	Total	4.3	0.1	21.5	5.7	5.5	2.8	5.2	2.1
2016	Total	5.1	0.1	44.0	4.5	25.5	4.8	28.0	2.5
2017	Total	5.4	0.1	37.5	5.4	27.0	3.7		

Table 75. Length composition, relative abundance, and CPUE (fish/set) of channel catfish at A.J. Jolly Lake was collected 9 October 2017. Channel catfish were collected using 5 sets of tandem baited hoop nets (72 hours soak time).

	Inch class																
Species	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	Average per set
Channel catfish	9	40	19	17	7	10	5	7	5		1	3			2	125	25.0 (6.7)
Blue catfish			1	2	4	4	1			1		1		1		15	3.0 (0.7)

Dataset = cfdhnajj.d17

Table 76. PSD and RSD24 values obtained for channel catfish from tandem hoop net samples in A.J. Jolly Lake in 2017; confidence intervals are in parentheses.

Species	No. >stock size	PSD	RSD_{24}
Channel catfish	57	19 (± 10)	0 (± 0)

Dataset = cfdhnajj.d17

Table 77. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at A.J. Jolly Lake in October 2017; standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	48	94 (1)	11	99 (4)			57	95 (1)

Dataset = cfdhnajj.d17

Table 78. CPUE (fish/set) for each length group of channel catfish collected by hoop net from A.J. Jolly Lake from 2007-2017; numbers in parentheses are standard errors.

	Length group			
Year	>12.0 in	>15.0 in	>20.0 in	Total
2007	3.4 (1.4)	0.6 (0.4)	0.0	68.0 (18.7)
2008	9.4 (2.8)	1.6 (0.6)	0.2 (0.2)	75.0 (7.7)
2010	5.6 (2.5)	1.6 (0.9)	0.0	18.0 (3.9)
2011	18.2 (6.1)	3.2 (1.7)	0.2 (0.2)	41.6 (10.0)
2012	2.8 (1.2)	0.2 (0.2)	0.0	8.6 (5.3)
2013	12.4 (3.6)	2.8 (1.0)	0.2 (0.2)	34.2 (13.9)
2014	16.8 (3.7)	7.0 (1.8)	0.0	35.8 (10.9)
2017	8.0 (1.3)	3.6 (0.7)	0.4 (0.2)	25.0 (6.7)

Dataset = cfdhnajj.d17

Kentucky Department of Fish and Wildlife Resources

AJ JOLLY LAKE ANGLER ATTITUDE SURVEY 2016 and 2017

(Based on 92 surveys)

1. Have you completed this survey this year? **14.1%** Yes **85.9%** No

2. In general, what level of satisfaction or dissatisfaction do you have with fishing at AJ Jolly Lake? (n=91)

   23.1% Very satisfied **37.4%** Somewhat satisfied **25.3%** Neutral **9.9%** Somewhat dissatisfied
   4.3% Very dissatisfied

   2a. If you responded with very or somewhat satisfied in question (2) - What is the single most important reason for your Satisfaction? (n=69)

   39.1% Number of fish **23.2%** Size of fish **2.9%** Size Limit **1.5%** Creel Limit **14.5%** Low Angler Pressure
   18.8% Other (close to home, campground, shoreline access, species variation, balanced lake, pleasant atmosphere)

   2b. If you responded with somewhat or very dissatisfied in question (2) - What is the single most important reason for your Dissatisfaction? (n=14)

   85.7% Number of fish **14.3%** Size of fish

3. Are you satisfied with the current size limits and creel limits at AJ Jolly Lake? (n=85)

   94.1% Yes **5.9%** No

   If not, what would you prefer (not sure what the size limits are currently, just not great fishing)

4. In general, what level of satisfaction or dissatisfaction do you have with the current facilities, boat ramp and courtesy dock at AJ Jolly Lake? (n=87)

   44.8% Very satisfied **28.7%** Somewhat satisfied **23.0%** Neutral **3.5%** Somewhat dissatisfied
   0% Very dissatisfied

5. If you were able to choose the type of fisheries management at A.J. Jolly Lake, which of the following scenarios would be your number one choice? (n=89)

   11.2% High numbers of small bluegill (3-5 inches) and low numbers of quality bass (13-20 inches), which could be hard to catch at times. (Quality Bass Management)
   58.5% Average numbers of quality bluegill (hand-sized) and average numbers of quality bass (8-14 inches)l (Balanced Bass and Bluegill Management)
   11.2% High numbers of smaller easily caught bass (generally under the 12 inch size limit) and lower numbers of quality bluegill (hand-size or bigger) (Quality Bluegill Management)
   19.1% Don't fish for bass or bluegill or No Opinion

Table 79. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Beaver Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																		
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	6	217	251	84	34	92	90	105	40	22	9	4	2	1	2			1	960	480.0 (45.1)

Dataset = cfdpsbvr.d17

Table 80. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Beaver Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	7.1 (2.1)	105.3 (8.6)	4.9 (1.1)	19.1 (4.8)	9.3 (3.3)	136.4 (5.6)
1993	22.5 (3.9)	59.5 (5.3)	76.0 (7.9)	13.0 (4.3)	8.5 (2.8)	171.0 (12.2)
1994	22.5 (2.8)	5.5 (2.5)	41.5 (3.3)	28.5 (4.5)	6.5 (2.8)	96.5 (6.9)
1995	73.0 (8.4)	37.5 (5.9)	10.0 (3.8)	34.0 (7.0)	6.0 (2.3)	154.5 (9.9)
1996	81.0 (11.6)	47.0 (6.3)	8.0 (2.0)	37.5 (2.9)	3.0 (0.7)	173.5 (17.8)
1997	84.5 (12.2)	99.5 (16.7)	8.5 (2.1)	42.5 (9.6)	6.0 (3.2)	235.0 (34.1)
1998	36.0 (4.2)	206.5 (17.6)	14.5 (4.8)	30.5 (6.6)	5.5 (1.7)	287.5 (22.8)
1999	42.0 (11.0)	71.5 (7.3)	17.0 (2.6)	22.0 (3.5)	7.5 (1.6)	152.5 (18.1)
2000	56.0 (7.7)	26.5 (5.6)	28.5 (2.2)	24.5 (2.9)	3.0 (1.3)	137.0 (9.8)
2001	142.5 (8.6)	66.5 (8.6)	25.5 (1.5)	39.0 (6.1)	4.0 (1.5)	273.5 (17.1)
2002	55.5 (10.8)	97.0 (13.6)	16.0 (2.1)	32.0 (4.9)	2.5 (1.1)	200.5 (26.8)
2003	142.5 (9.1)	131.5 (12.9)	20.0 (3.0)	18.0 (2.4)	2.0 (0.8)	312.0 (20.4)
2004	154.5 (5.5)	198.0 (15.1)	48.0 (7.5)	17.0 (3.7)	2.0 (0.8)	417.5 (20.3)
2005	68.5 (11.4)	298.0 (22.7)	42.0 (7.7)	15.0 (3.5)	4.5 (1.4)	423.5 (21.6)
2006	115.0 (11.3)	217.5 (36.5)	40.0 (3.7)	10.0 (2.3)	2.5 (1.1)	382.5 (34.9)
2007	30.5 (4.8)	176.5 (31.1)	42.5 (9.6)	10.0 (2.7)	3.0 (1.0)	259.5 (40.4)
2008	44.5 (6.6)	203.5 (22.4)	61.0 (6.0)	8.5 (1.8)	2.0 (0.8)	317.5 (29.4)
2009	14.5 (2.8)	146.5 (28.5)	84.5 (15.6)	3.5 (2.1)	0.5 (0.5)	249.0 (45.3)
2010	76.7 (6.8)	99.8 (8.5)	58.9 (4.5)	2.9 (0.7)	0.2 (0.2)	238.2 (14.3)
2011	23.5 (5.8)	56.0 (8.2)	70.5 (5.9)	6.5 (1.5)	0.0 (0.0)	156.5 (13.7)
2012	97.0 (11.6)	81.5 (6.4)	73.5 (6.8)	14.0 (2.9)	2.5 (1.1)	266.0 (12.5)
2013	60.0 (8.8)	137.3 (12.3)	48.7 (9.3)	16.7 (2.4)	1.3 (0.8)	262.7 (16.4)
2014	73.5 (10.7)	116.0 (12.5)	21.0 (3.3)	14.5 (2.7)	2.0 (1.1)	225.0 (21.2)
2015	64.8 (9.5)	126.5 (19.9)	22.8 (4.1)	12.5 (1.8)	2.8 (0.8)	226.5 (31.3)
2016	106.5 (21.4)	104.0 (13.2)	38.0 (2.4)	15.0 (2.9)	4.5 (1.8)	263.5 (31.0)
2017	279.0 (37.2)	160.5 (16.5)	35.5 (5.1)	5.0 (1.8)	0.5 (0.5)	480.0 (45.1)

Dataset = cfdpsbvr.d17 - .d92

Table 81. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Beaver Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	402	20 (± 4)	2 (± 2)

Dataset = cfdpsbvr.d17

Table 82. Population assessment for largemouth bass collected during spring electrofishing at Beaver Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.8*	279.0	35.5	5.0	0.5				
	Score	3	4	3	1	2			13	Good
2016	Value	10.8*	103.0	38.0	15.0	4.5				
	Score	3	4	3	3	4			17	Excellent
2015	Value	10.8*	46.3	22.8	12.5	2.8				
	Score	3	3	2	2	3			13	Good
2014	Value	10.8	47.3	21.0	14.5	2.0				
	Score	3	3	2	3	3			14	Good
2013	Value	10.7*	50.0	48.7	16.7	1.3				
	Score	2	3	4	3	2			14	Good
2012	Value	10.7*	94.5	73.5	14.0	2.5				
	Score	2	4	4	3	3			16	Good
2011	Value	10.7*	23.4	70.5	6.5	0.0				
	Score	2	3	4	2	1			12	Fair
2010	Value	10.7	76.7	58.9	2.9	0.2	0.293	25.4		
	Score	2	4	4	1	1			12	Fair
2009	Value	10.3*	3.0^	84.5	3.5	0.5				
	Score	2	1	4	1	2			10	Fair
2008	Value	10.3*	23.0^	61.0	8.5	2.0				
	Score	2	3	4	2	3			14	Good
2007	Value	10.3	2.0	42.5	10.0	3.0	0.622	46.3		
	Score	2	1	3	2	3			11	Fair
2006	Value	10.7*	108.3^	40.0	10.0	2.5				
	Score	2	4	3	2	3			14	Good
2005	Value	10.7*	38.7^	42.0	15.0	4.5				
	Score	2	3	3	3	4			15	Good
2004	Value	10.7*	97.6^	48.0	17.0	2.0				
	Score	2	4	4	3	3			16	Good
2003	Value	10.7	133.2	20.0	18.0	2.0	0.540	41.7		
	Score	2	4	2	3	3			14	Good
2002	Value	11.7*	35.4^	16.0	32.0	2.5				
	Score	4	3	2	4	3			16	Good
2001	Value	11.7	47.8	25.5	39.0	4.0				
	Score	4	3	3	4	4			18	Excellent
2000	Value	10.7*	31.5^	30.0	24.5	3.0				
	Score	2	3	3	3	3			14	Good

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 83. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Beaver Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																	
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Largemouth bass	18	197	121	10	10	118	101	67	51	30	14	6		2	2	2	2	751	501.3 (28.7)

Dataset = cfdwrbvr.d17

Table 84. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Beaver Lake on 14 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	99	82 (1)	47	82 (1)	9	92 (2)	155	83 (1)

Dataset = cfdwrbvr.d17

Table 85. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Beaver Lake.

Year class	Area	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.7	0.1	127.3	32.9	6.7	2.2	47.8	5.7
2001	Total	4.6	0.1	139.3	28.1	40.7	13.9	35.4	8.9
2002	Total	4.4	0.1	104.0	7.5	19.3	4.6	133.2	9.3
2003	Total	3.7	0.1	117.3	22.0	0.0		97.6	5.0
2004	Total	3.7	0.1	86.7	17.1	3.3	1.6	38.7	10.7
2005	Total	4.0	0.03	199.3	26.3	18.7	4.1	108.3	10.2
2006	Total	4.3	0.1	8.0	2.7	0.0		2.0	1.1
2007	Total	4.6	0.1	175.3	31.2	46.7	4.6	23.5	4.4
2008	Total	3.4	0.1	21.3	11.9	0.0		4.5	1.4
2009	Total	5.0	0.1	112.7	21.9	56.7	10.7	76.7	6.8
2010	Total	4.0	0.1	38.7	14.1	4.7	2.2	23.4	5.4
2011	Total	4.2	0.05	142.0	23.9	18.0	4.1	94.5	11.1
2012	Total	4.3	0.04	124.6	24.6	17.7	4.0	50.0	7.1
2013	Total	3.8	0.06	78.7	6.2	3.3	2.2	47.3	7.4
2014	Total	4.1	0.06	94.7	15.0	14.0	3.5	46.3	7.6
2015	Total	4.2	0.04	184.5	23.6	28.5	4.4	103.0	20.9
2016	Total	5.6	0.03	370.0	34.9	320.0	25.8	279.0	37.2
2017	Total	4.8	0.03	227.3	23.1	84.0	13.0		

Table 86. Species composition, relative abundance, and CPUE (fish/hr) of bluegill in 1.25 hours of 15-minute electrofishing runs in March 2017 and 1.25 hours of 7.5-minute electrofishing runs in May 2017 at Beaver Lake; numbers in parentheses are standard errors.

	Inch class								
Month	2	3	4	5	6	7	8	Total	CPUE
March	3	35	156	105	78	127	10	514	411.2 (56.0)
May	5	13	87	71	109	200	18	503	402.4 (87.8)
Total	8	48	243	176	187	327	28	1,017	405.3 (60.0)

Dataset = cfdpsbvr.d17

Table 87. Species composition, relative abundance, and CPUE (fish/hr) of redear sunfish in 1.25 hours of 15-minute electrofishing runs in March 2017 and 1.25 hours of 7.5-minute electrofishing runs in May 2017 at Beaver Lake; numbers in parentheses are standard errors.

	Inch Class											
Month	2	3	4	5	6	7	8	9	10	11	Total	CPUE
March	1	1	2	2	6	6	9	1	1	1	30	24.0 (10.2)
May		1	3	1	1	5	2	2	3	2	20	16.0 (2.9)
Total	1	2	5	3	7	11	11	3	4	3	50	18.7 (3.8)

Dataset = cfdpsbvr.d17

Table 88. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Beaver Lake during May 2017. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	498	66 (± 4)	4 (± 2)
Redear sunfish	19	74 (± 20)	37 (± 22)

[a] Bluegill = RSD_8; Redear = RSD_9

Dataset = cfdpsbvr.d17

Table 89. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Beaver Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	Total
1992	1.3 (0.9)	54.2 (10.2)	80.9 (15.1)	0.0	136.4 (24.0)
1993	2.5 (1.1)	47.0 (6.2)	79.5 (10.0)	0.0	129.0 (12.6)
1994	2.5 (1.1)	130.0 (21.0)	20.0 (4.0)	0.0	152.5 (24.2)
1995	2.0 (1.1)	174.0 (18.4)	16.5 (4.7)	0.0	192.5 (17.3)
1996	0.5 (0.5)	184.5 (27.3)	65.5 (11.5)	0.0	250.5 (34.5)
1997	2.5 (1.1)	58.0 (12.6)	86.5 (14.4)	0.5 (0.5)	147.5 (27.4)
1998	0.5 (0.5)	28.0 (4.3)	88.0 (15.0)	0.5 (0.5)	117.0 (19.0)
1999	14.0 (4.5)	13.0 (5.5)	10.5 (3.0)	0.0	37.5 (8.3)
2000	50.0 (12.7)	322.0 (23.1)	32.0 (13.6)	7.5 (3.8)	411.5 (41.2)
2001	19.0 (5.1)	211.5 (16.0)	122.0 (15.2)	0.0	352.5 (20.2)
2002	5.6 (1.7)	175.2 (22.9)	152.8 (27.7)	0.0	333.6 (44.7)
2003	33.6 (6.4)	141.6 (17.5)	128.8 (21.9)	0.0	304.0 (30.1)
2004	36.0 (16.0)	118.4 (32.4)	143.2 (29.3)	0.0	297.6 (56.4)
2005	21.6 (4.5)	109.6 (14.6)	97.6 (19.3)	4.0 (2.2)	232.8 (19.7)
2006	20.1 (4.9)	60.9 (8.6)	55.7 (13.5)	8.3 (2.9)	145.1 (24.7)
2007	12.0 (2.6)	34.4 (4.6)	53.6 (9.5)	2.4 (1.7)	102.4 (10.4)
2008	69.6 (11.1)	112.4 (13.3)	38.0 (6.3)	4.0 (1.4)	224.0 (24.6)
2009	17.2 (5.1)	60.4 (10.0)	40.4 (5.9)	1.6 (0.9)	119.6 (15.3)
2010	35.6 (8.2)	134.8 (10.6)	24.4 (5.9)	4.4 (1.5)	199.2 (17.5)
2011	68.4 (20.3)	299.2 (47.8)	51.6 (8.1)	5.2 (1.9)	424.4 (70.4)
2012	5.6 (2.1)	131.2 (26.1)	59.2 (15.1)	0.0	196.0 (32.1)
2013	1.6 (1.1)	192.8 (16.5)	77.6 (9.8)	1.6 (1.6)	273.6 (23.4)
2014	1.6 (1.6)	252.8 (33.4)	252.8 (56.6)	0.0	507.2 (37.4)
2015	0.0 (0.0)	160.8 (16.6)	212.0 (37.0)	0.0	372.8 (44.9)
2016	33.6 (12.0)	213.6 (30.6)	201.6 (45.1)	1.6 (1.1)	450.4 (81.4)
2017	4.0 (1.8)	136.8 (23.5)	247.2 (66.1)	14.4 (3.5)	402.4 (87.8)

Dataset = cfdpsbvr.d17 - .d92

Table 90. Population assessment for bluegill collected during spring electrofishing at Beaver Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	4.4	2-2+	261.6	14.4	-	-		
	Score	3	4	4	4			15	Excellent
2016	Value	4.7*	3-3+*	203.2	1.6	-	-		
	Score	3	3	4	3			13	Good
2015	Value	4.7	3-3+	212.0	0.0	-	-		
	Score	3	3	4	1			11	Good
2014	Value	4.7*	2-2+	252.8	0.0	-	-		
	Score	3	4	4	1			12	Good
2013	Value	4.7	2-2+	79.2	1.6	-	-		
	Score	3	4	3	3			13	Good
2012	Value	4.8	2-2+	59.2	0.0	-	-		
	Score	4	4	3	1			12	Good
2011	Value	4.7	2-2+	56.8	5.2	0.834	55.6		
	Score	3	4	3	4			14	Excellent
2010	Value	4.5	3-3+	28.8	4.4	0.594	44.8		
	Score	3	3	1	3			10	Good
2009	Value	4.8	3-3+	42.0	1.6	0.723	51.5		
	Score	4	3	2	3			12	Good
2008	Value	4.2	3-3+	42.0	4.0	0.497	39.2		
	Score	2	3	2	3			10	Good
2007	Value	3.7	3-3+	56.0	2.4	0.666	48.6		
	Score	1	3	3	3			10	Good
2006	Value	3.4	3-3+	64.1	8.3	*	*		
	Score	1	3	3	4			11	Good
2005	Value	4.0	3-3+	101.6	4.0	0.340	28.8		
	Score	2	3	4	3			12	Good
2004	Value	3.9	3-3+	143.2	0.0	*	*		
	Score	2	3	4	1			10	Good
2003	Value	3.9	3-3+	128.8	0.0	*	*		
	Score	2	3	4	1			10	Good
2002	Value	3.9	2-2+	152.8	0.0	*	*		
	Score	2	4	4	1			11	Good
2001	Value	4.5	2-2+	122.0	0.0	*	*		
	Score	3	4	4	1			12	Good

* Age data not collected

Table 91. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Beaver Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1992	0.4 (0.4)	10.2 (2.8)	90.2 (12.9)	1.8 (1.0)	0.4 (0.4)	102.7 (13.2)
1993	0.0	2.0 (1.5)	57.0 (10.7)	5.0 (2.0)	0.0	64.0 (12.2)
1994	0.0	6.5 (1.8)	8.0 (2.6)	2.5 (1.3)	0.0	17.0 (4.1)
1995	0.0	2.0 (1.1)	12.5 (3.6)	7.0 (2.7)	0.0	21.5 (5.2)
1996	0.0	6.0 (2.0)	5.5 (2.5)	8.0 (2.6)	0.0	19.5 (5.1)
1997	0.0	13.0 (1.8)	9.0 (2.1)	8.0 (1.7)	0.0	30.0 (1.5)
1998	0.0	3.5 (1.2)	9.0 (2.0)	9.5 (4.6)	0.0	22.0 (5.7)
1999	0.0	0.0	0.5 (0.5)	7.5 (1.8)	2.0 (1.1)	8.0 (2.0)
2000	1.0 (0.7)	5.5 (2.0)	3.5 (1.8)	6.0 (2.0)	1.5 (1.1)	16.0 (3.7)
2001	0.5 (0.5)	34.5 (6.9)	30.0 (6.8)	8.5 (2.9)	0.5 (0.5)	73.5 (10.5)
2002	0.0	49.6 (11.1)	77.6 (18.1)	7.2 (3.9)	0.8 (0.8)	134.4 (27.8)
2003	0.8 (0.8)	21.6 (6.1)	87.2 (15.0)	7.2 (3.3)	0.0	116.8 (20.0)
2004	0.0	38.4 (9.0)	44.0 (8.7)	26.4 (7.4)	0.0	108.8 (17.1)
2005	1.6 (1.1)	46.4 (7.0)	80.8 (12.4)	62.4 (10.8)	0.0	191.2 (22.6)
2006	0.4 (0.4)	46.1 (6.2)	82.2 (6.2)	35.7 (5.7)	0.0	164.4 (13.8)
2007	0.0	25.2 (6.1)	74.0 (13.5)	32.4 (6.6)	0.0	125.3 (23.2)
2008	10.0 (2.7)	15.2 (2.5)	58.4 (12.2)	90.4 (16.5)	0.0	174.0 (26.8)
2009	0.8 (0.6)	23.6 (4.8)	26.8 (4.8)	29.6 (5.8)	0.0	80.8 (11.5)
2010	0.4 (0.4)	21.6 (3.9)	27.6 (4.4)	33.6 (7.0)	1.2 (0.9)	83.2 (10.5)
2011	0.0	13.6 (3.4)	11.2 (2.0)	23.2 (4.9)	0.0	48.0 (6.3)
2012	0.0	5.6 (1.7)	28.8 (4.3)	68.0 (12.9)	9.6 (2.6)	102.4 (14.1)
2013	0.0	6.4 (2.6)	3.2 (1.3)	12.0 (4.7)	2.4 (1.7)	21.6 (5.2)
2014	0.0	3.2 (2.0)	6.4 (1.6)	12.8 (5.4)	4.8 (3.2)	22.4 (3.0)
2015	0.0	1.6 (1.1)	3.2 (1.3)	1.6 (1.1)	0.0	6.4 (1.6)
2016	0.8 (0.8)	4.8 (1.8)	3.2 (1.8)	2.4 (1.7)	0.0	11.2 (2.1)
2017	0.0	4.0 (2.2)	4.8 (2.1)	7.2 (2.8)	4.0 (2.2)	16.0 (2.9)

Dataset = cfdpsbvr.d17 – .d92

Table 92. Population assessment for redear sunfish collected during spring electrofishing at Beaver Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.1	2-2+	7.2	4.0				
	Score	4	4	2	4			14	Excellent
2016	Value	7.0*	3-3+*	2.4	0.0				
	Score	2	4	1	1			8	Fair
2015	Value	7.0	3-3+	1.6	0.0				
	Score	2	4	1	1			8	Fair
2014	Value	8.8*	2-2+	12.8	4.8				
	Score	4	4	3	4			15	Excellent
2013	Value	8.8	2-2+	12.0	2.4				
	Score	4	4	3	4			15	Excellent
2012	Value	7.5	3-3+	68.0	9.6	0.342	29.0		
	Score	2	4	4	4			14	Excellent
2011	Value	7.6	3-3+	23.2	1.6	0.398	32.8		
	Score	3	4	4	3			14	Excellent
2010	Value	7.5	4-4+	33.6	1.2	0.435	35.3		
	Score	2	3	4	3			12	Good
2009	Value	6.7	4-4+	29.6	0.0	0.413	33.9		
	Score	2	3	4	1			10	Good
2008	Value	6.3	4-4+	90.4	0.0	0.243	21.6		
	Score	1	3	4	1			9	Fair
2007	Value	6.4	4-4+	32.4	0.0	0.898	59.3		
	Score	1	3	4	1			9	Fair
2006	Value	5.7	4-4+	35.7	0.0	0.410	33.6		
	Score	1	3	4	1			9	Fair
2005	Value	6.4	4-4+	62.4	0.0	0.373	31.1		
	Score	1	3	4	1			9	Fair
2004	Value	6.6*	4-4+*	26.4	0.0				
	Score	2	3	4	1			10	Good
2003	Value	6.6	4-4+	7.2	0.0				
	Score	2	3	2	1			8	Fair
2002	Value	6.4*	3-3+*	7.2	0.8				
	Score	1	4	2	2			9	Fair
2001	Value	6.4	3-3+	8.5	0.5				
	Score	1	4	2	2			9	Fair

* Age data not collected

Table 93. Mean back calculated lengths (in) at each annulus for otoliths from bluegill collected in the fall from Beaver Lake in 2017.

		Age						
Year	No.	1	2	3	4	5	6	7
2016	25	2.5						
2015	15	2.0	4.4					
2014	2	2.6	5.5	6.8				
2013	3	2.0	4.7	6.5	7.1			
2012	2	2.7	5.1	6.1	6.8	7.1		
2011	2	2.3	4.6	6.0	6.6	7.0	7.4	
2010	1	1.7	3.8	5.9	6.5	6.9	7.4	7.7
Mean	50	2.3	4.6	6.3	6.5	7.0	7.4	7.7
Smallest		1.4	3.3	5.7	6.5	6.9	7.3	7.7
Largest		3.6	5.7	6.9	7.4	7.3	7.4	7.7
Std Error		0.1	0.1	0.1	0.1	0.1	0.1	
95% ConLo		2.1	4.3	6.1	6.6	6.8	7.3	
95% ConHi		2.4	4.8	6.6	7.0	7.1	7.4	

Intercept value = 0.00
Dataset = cfdagbvr.d17

Table 94. Mean back calculated lengths (in) at each annulus for otoliths from redear sunfish collected in the fall from Beaver Lake in 2017.

		Age						
Year	No.	1	2	3	4	5	6	7
2016	14	2.9						
2015	4	5.6	7.8					
2014	1	4.2	8.6	10.1				
2010	1	2.9	5.4	7.0	8.0	9.2	10.0	10.5
Mean	20	3.5	7.5	8.5	8.0	9.2	10.0	10.5
Smallest		2.1	5.0	7.0	8.0	9.2	10.0	10.5
Largest		6.7	8.9	10.1	8.0	9.2	10.0	10.5
Std Error		0.3	0.7	1.5				
95% ConLo		2.9	6.1	5.6				
95% ConHi		4.1	9.0	11.5				

Intercept value = 0.00
Dataset = cfdagbvr.d17

Table 95. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Beaver Lake on 14 September 2017; standard errors are in parentheses.

	Length group									
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in				Total	
Bluegill	75	85 (2)	50	81 (1)	1	62			126	83 (1)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish			18	94 (2)			5	96 (3)	23	94 (2)

Dataset = cfdwrbvr.d17

Table 96. Length distribution and CPUE (fish/hr) of white and black crappie collected in 1.5 hours of 15-minute electrofishing runs for crappie in Beaver Lake in October 2017; numbers in parentheses are standard errors.

	Inch class						
Species	8	9	10	11	12	Total	CPUE
White crappie			1	1	1	3	2.0 (2.0)
Black crappie	2	4		1		7	4.7 (1.9)

Dataset = cfdwrbvr.d17

Table 97. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Beaver Lake sampled on 13 October 2017. Channel catfish were collected using 3 set-nights of baited, tandem hoop nets (72 hours soak time).

	Inch class													Total	Average per set
Species	12	13	14	15	16	17	18	19	20	21	22	23	24		
Channel catfish	1		3	20	15	4	2	6	4	4	5	3	1	68	22.7 (12.2)

Dataset = cfdhnbvr.d17

Table 98. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Beaver Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	68	65 (± 11)	1 (± 1)

Dataset = cfdhnbvr.d17

Table 99. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Beaver Lake in October 2017; standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	24	87 (1)	43	87 (2)	1	105	68	87 (1)

Dataset = cfdhnbvr.d17

Table 100. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Beaver Lake from 2007-2017; numbers in parentheses are standard errors.

	Length group			
Year	≥12.0 in	≥15.0 in	≥20.0 in	Total
2007	35.8 (12.6)	6.2 (2.8)	0.4 (0.2)	36.4 (12.8)
2008	14.0 (4.1)	5.4 (2.0)	0.8 (0.6)	28.2 (8.8)
2009	71.4 (17.2)	21.6 (5.1)	1.6 (0.9)	94.8 (29.1)
2010	40.0 (8.2)	25.6 (5.4)	0.6 (0.2)	41.8 (8.8)
2011	44.8 (14.0)	28.0 (8.7)	1.0 (0.6)	72.8 (24.5)
2015	16.0 (3.5)	14.3 (3.3)	1.7 (0.3)	16.0 (3.5)
2017	22.7 (12.2)	21.3 (11.0)	5.7 (3.2)	22.7 (12.2)

Dataset = cfdhnbvr.d17 - .d07

Table 101. Length distribution and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs for black bass in Benjy Kinman Lake during April 2017; numbers in parentheses are standard errors.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	1	14	22	11	6	33	38	26	35	27	9	9	4	1	1	1		1	1	240	120.0 (18.6)

Dataset = cfdpsbkl.d17

Table 102. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Benjy Kinman Lake during 2015-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
2017	27.0 (7.0)	66.0 (10.7)	22.5 (3.5)	4.5 (1.8)	1.0 (0.7)	120.0 (18.6)
2016	23.0 (7.0)	82.0 (11.5)	15.0 (2.9)	7.0 (2.4)	1.0 (0.7)	127.0 (18.6)
2015	12.0 (2.4)	84.2 (5.1)	17.4 (1.7)	12.9 (1.8)	4.7 (1.0)	126.6 (7.8)

Dataset = cfdpsbkl.d17-.d15

Table 103. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing sample in Benjy Kinman Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	186	29 (± 7)	5 (± 3)

Dataset = cfdpsbkl.d17

Table 104. Population assessment for largemouth bass collected during spring electrofishing at Benjy Kinman Lake for 2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.7	24.0	22.5	4.5	1.0				
	Score	2	3	2	1	2			10	Fair
2016	Value	10.1*	51.1	15.0	7.0	1.0				
	Score	1	3	2	2	2			10	Fair
2015	Value	10.1*	11.1	17.4	12.9	4.7				
	Score	1	2	2	2	4			11	Fair

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

* Age data not collected (data collected in 2014)

Table 105. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Benjy Kinman Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	3	12	66	56	2	7	38	27	19	7	8	4	3	2	1		1		1	1	258	172.0 (25.2)

Dataset = cfdwrbkl.d17

Table 106. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Benjy Kinman Lake on 6 September 2017. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	75	83 (1)	15	87 (2)	6	92 (7)	96	84 (1)

Dataset = cfdwrbkl.d17

Table 107. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected in the fall from Benjy Kinman Lake in 2017.

Year	No.	Age							
		1	2	3	4	5	6	7	8
2016	21	5.8							
2015	8	5.3	8.9						
2014	14	5.4	8.9	10.7					
2013	6	5.4	8.9	10.8	12.3				
2012	4	6.3	9.0	10.3	12.3	13.7			
2011	1	6.5	10.0	12.4	13.4	14.5	15.2		
2010	1	5.1	7.2	9.1	10.7	11.4	11.9	12.4	
2009	1	5.4	9.0	11.3	12.5	14.3	15.0	16.6	17.5
Mean	56	5.6	8.9	10.7	12.3	13.6	14.1	14.5	17.5
Smallest		4.3	7.2	9.1	10.7	11.4	11.9	12.4	
Largest		7.4	10.6	13.1	14.0	14.5	15.2	16.6	
Std Error		0.1	0.1	0.2	0.2	0.4	1.1	2.1	
95% ConLo		5.4	8.7	10.3	11.8	12.8	12.0	10.4	
95% ConHi		5.8	9.1	11.1	12.7	14.4	16.1	18.7	

Intercept value = 0.00
Dataset = cfdagbkl.d17

Table 108. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Benjy Kinman Lake.

Year class	Area	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2014	Total	4.2	0.1	16.0	5.4	2.5	1.3	11.1	2.2
2015	Total	4.0	0.1	78.0	16.2	8.7	2.4	51.1	9.1
2016	Total	4.7	0.1	43.3	6.0	15.3	3.2	24.0	5.9
2017	Total	4.7	0.1	92.7	13.8	38.7	7.4		

Table 109. Length distribution and CPUE (fish/hr) of white and black crappie collected in 1.50 hours of 15-minute electrofishing runs for crappie in Benjy Kinman Lake in October 2017; numbers in parentheses are standard errors.

Species	Inch class					Total	CPUE
	7	8	9	10	11		
White crappie		2				2	1.3 (1.3)
Black crappie	6	10	6			22	14.7 (6.0)

Dataset = cfdwrbkl.d17

Table 110. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie collected in the fall from Benjy Kinman Lake in 2017.

		Age			
Year	No.	1	2	3	4
2016	30	4.5			
2015	7	4.6	7.9		
2014	4	3.7	7.2	8.7	
2013	2	3.8	6.8	8.5	9.3
Mean	43	4.4	7.5	8.6	9.3
Smallest		3.3	6.5	8.1	8.9
Largest		5.6	8.3	8.9	9.6
Std Error		0.1	0.2	0.1	0.3
95% ConLo		4.2	7.2	8.4	8.6
95% ConHi		4.6	7.8	8.9	9.9

Intercept value = 0.00
Dataset = cfdagbkl.d17

Table 111. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie collected in the fall from Benjy Kinman Lake in 2017.

		Age														
Year	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2016	6	4.4														
2015	19	4.7	7.5													
2014	2	4.3	7.4	8.7												
2013	1	3.5	6.4	7.4	8.7											
2012	1	4.2	6.3	7.6	8.6	9.2										
2009	1	3.9	6.2	7.4	8.1	8.5	8.8	9.3	9.6							
2006	1	3.8	5.7	6.4	6.8	7.3	7.7	8.1	8.4	8.8	9.1	9.4				
2004	1	3.4	5.3	6.8	7.6	7.8	8.02	8.1	8.3	8.5	8.7	8.9	9.1	9.3		
2002	1	2.9	4.3	5.2	5.5	5.7	6.0	6.2	6.5	6.8	7.0	7.3	7.5	7.8	8.1	8.3
Mean	33	4.4	7.1	7.3	7.5	7.7	7.6	7.9	8.2	8.0	8.3	8.5	8.3	8.6	8.1	8.3
Smallest		2.7	4.3	5.2	5.5	5.7	6.0	6.2	6.5	6.8	7.0	7.3	7.5	7.8	8.1	8.3
Largest		5.8	8.4	8.9	8.6	9.2	8.8	9.3	9.6	8.8	9.1	9.4	9.1	9.3	8.1	8.3
Std Error		0.1	0.2	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.8		
95% ConLo		4.1	6.7	6.5	6.5	6.5	6.4	6.7	7.0	6.8	7.0	7.3	6.8	7.1		
95% ConHi		4.7	7.5	8.1	8.4	8.9	8.8	9.2	9.5	9.3	9.6	9.8	9.9	10.0		

Intercept value = 0.00
Dataset = cfdagbkl.d17

Table 112. Number of fish and the relative weight (Wr) for each length group of crappie at Benjy Kinman Lake in October/November 2017.

		Length group							
Species	Area	5.0–7.9 in		8.0–9.9 in		≥10.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White crappie	Total	22	82 (1)	19	80 (1)	1	79 (0)	42	81 (1)
Black crappie	Total	8	85 (2)	22	88 (1)	0		30	87 (1)

Dataset = cfdwrbkl.d17

Table 113. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute nocturnal electrofishing runs in Boltz Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																		
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	3	12	26	17	31	51	76	105	43	24	13	6	11	5	9	4		1	437	218.5 (13.0)
Saugeye							4	6		2	7	4							23	11.5 (2.2)

Dataset = cfdpsbol.d17

Table 114. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Boltz Lake from 1991-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1991		43.6 (4.9)	10.8 (2.0)	6.5 (1.2)	0.0 (0.0)	60.8 (6.6)
1993	25.2 (6.4)	70.0 (4.8)	12.0 (2.3)	7.3 (2.2)	0.7 (0.7)	114.8 (8.9)
1994	48.4 (9.5)	45.0 (5.7)	32.4 (6.5)	3.6 (1.4)	1.0 (0.7)	129.6 (9.6)
1995	155.2 (10.8)	50.0 (3.3)	31.5 (3.9)	6.0 (1.7)	1.5 (1.1)	242.4 (10.4)
1997	34.8 (8.6)	183.6 (29.4)	36.8 (4.6)	14.4 (2.2)	1.8 (1.0)	268.8 (38.6)
1998	43.2 (6.0)	172.0 (18.8)	22.4 (3.3)	9.6 (2.2)	2.5 (0.7)	247.2 (24.8)
1999	87.2 (16.6)	369.6 (42.4)	90.4 (16.0)	12.8 (6.8)	4.8 (2.3)	560.0 (31.2)
2000	92.0 (30.4)	148.0 (7.7)	226.4 (18.4)	8.8 (2.9)	0.8 (0.8)	475.2 (16.8)
2001	24.0 (5.2)	212.8 (15.8)	133.6 (13.0)	9.6 (3.5)	0.0 (0.0)	380.0 (26.3)
2002	5.6 (2.7)	101.6 (20.1)	67.2 (11.4)	45.6 (9.2)	0.8 (0.8)	220.0 (27.3)
2003	10.7 (2.9)	39.3 (10.4)	61.3 (12.9)	40.0 (5.0)	0.0 (0.0)	151.3 (25.1)
2004	64.0 (12.9)	38.5 (4.9)	19.5 (4.4)	25.5 (5.9)	2.0 (0.8)	147.5 (22.9)
2005	69.0 (10.1)	39.5 (4.0)	21.0 (2.4)	20.0 (6.2)	0.0 (0.0)	149.5 (8.4)
2006	11.5 (1.4)	48.0 (4.7)	17.0 (3.7)	18.0 (2.9)	1.0 (0.7)	94.5 (9.9)
2007	28.5 (3.8)	37.0 (2.4)	17.0 (3.9)	20.0 (3.9)	1.0 (0.7)	102.5 (11.8)
2008	19.0 (2.2)	43.5 (7.3)	18.5 (2.1)	17.5 (3.0)	4.0 (1.5)	98.5 (7.1)
2009	10.0 (2.5)	39.5 (3.2)	22.0 (3.9)	29.5 (5.1)	4.0 (1.5)	101.0 (8.1)
2010	50.5 (5.6)	51.0 (4.9)	32.5 (4.4)	24.5 (2.4)	4.0 (1.3)	148.5 (10.7)
2011	13.0 (3.8)	55.5 (4.6)	33.0 (5.7)	19.0 (4.2)	3.5 (1.2)	120.5 (7.4)
2012	4.5 (1.2)	35.0 (4.0)	15.5 (2.8)	11.0 (2.5)	2.5 (1.5)	66.0 (4.9)
2013	66.5 (14.6)	67.5 (6.7)	17.5 (2.0)	13.5 (2.6)	2.5 (1.1)	165.0 (13.6)
2014	68.5 (10.5)	73.0 (6.5)	18.5 (3.5)	16.0 (3.6)	2.5 (0.7)	176.0 (17.2)
2015	47.5 (6.9)	79.5 (8.4)	22.0 (4.3)	21.5 (3.5)	2.0 (1.1)	170.5 (14.1)
2016	No Sample					
2017	29.0 (5.5)	131.5 (9.1)	40.0 (4.3)	18.0 (1.5)	0.5 (0.5)	218.5 (13.0)

Dataset = cfdpsbol.d17 - .d91

Table 115. PSD and RSD$_{15}$ values obtained for largemouth bass from spring electrofishing samples in Boltz Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD$_{15}$
Largemouth bass	379	30 (± 5)	9 (± 3)

Dataset = cfdpsbol.d17

Table 116. Population assessment for largemouth bass collected during spring electrofishing at Boltz Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	11.4*	26.0	40.0	18.0	0.5				
	Score	3	3	3	3	2			14	Good
2015	Value	11.4	29.5	22.0	21.5	2.0				
	Score	3	2	2	3	3			13	Good
2014	Value	10.7*	57.0	18.5	16.0	2.5				
	Score	2	3	1	2	3			11	Fair
2013	Value	10.7*	21.5	17.5	13.5	2.5				
	Score	2	2	1	2	3			10	Fair
2012	Value	10.7*	3.5	15.5	11.0	2.5				
	Score	2	1	1	2	3			9	Fair
2011	Value	10.7	8.6	33.0	19.0	3.5	0.378	31.5		
	Score	2	1	2	3	3			11	Fair
2010	Value	10.3	16.7	32.5	24.5	4.0	0.290	25.2		
	Score	2	2	2	3	4			13	Good
2009	Value	10.3*	3.5^	22.0	29.5	4.0				
	Score	2	1	2	3	4			12	Good
2008	Value	10.3*	4.0^	18.5	17.5	4.0				
	Score	2	1	1	3	4			11	Fair
2007	Value	10.3*	20.5^	17.0	20.0	1.0				
	Score	2	2	1	3	2			10	Fair
2006	Value	10.3	7.0	17.0	18.0	1.0	0.358	30.1		
	Score	2	1	1	3	2			9	Fair
2005	Value	10.6*	15.5^	21.0	20.0	0.0				
	Score	2	1	2	3	0			8	Fair
2004	Value	10.6*	51.0^	19.5	25.5	2.0				
	Score	2	3	1	3	3			12	Good
2003	Value	10.6	0.0	61.3	40.0	0.0	0.377	31.4		
	Score	2	0	4	4	0			10	Fair
2002	Value	10.7	0.8	67.2	45.6	0.8	0.334	28.4		
	Score	2	1	4	4	1			12	Good
2001	Value	9.0	0.8	133.6	9.6	0.0	0.349	29.5		
	Score	1	1	4	2	0			8	Fair
2000	Value	10.4	55.0	226.4	8.8	0.8	0.550	42.3		
	Score	2	3	4	2	1			12	Good

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 117. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Boltz Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	106	79	51	10	2	3	18	25	28	36	15	8	7	3		4	1			1	397	264.7 (18.4)

Dataset = cfdwrbol.d17

Table 118. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Boltz Lake on 8 September 2017. Standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	71	89 (1)	48	92 (1)	16	95 (2)	135	91 (1)

Dataset = cfdwrbol.d17

Table 119. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Boltz Lake.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	No. of fish	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	145	4.2	0.04	96.7	11.3	6.7	1.7	25.9	4.4
1998	147	5.0	0.05	98.0	12.0	48.0	5.8	77.7	31.0
1999	170	5.2	0.07	113.3	16.2	68.7	13.0	55.0	24.7
2000	19	3.0	0.27	12.7	6.7	1.3	1.	0.8	0.8
2001	46	3.2	0.09	30.7	6.9	0.7	0.7	0.8	0.8
2002	50	3.7	0.10	28.6	7.4	1.7	1.2	0.0	0.0
2003*	27	3.7	0.15	18.0	4.5	1.3	0.8	7.0	2.2
2004*	80	4.1	0.07	53.3	7.1	6.7	2.7	15.0	3.4
2005*	34	3.9	0.11	22.7	5.0	1.3	0.8	4.0	1.1
2006	90	4.6	0.06	60.0	7.5	18.7	3.7	20.5	3.6
2007	17	4.2	0.21	11.3	2.6	2.0	0.9	4.0	3.6
2008	108	3.6	0.07	72.0	11.9	5.3	1.7	3.5	1.6
2009	51	4.6	0.13	34.0	8.9	13.3	2.0	16.7	3.6
2010	54	4.9	0.11	36.0	5.8	18.0	5.2	8.6	2.7
2011	91	4.7	0.08	60.7	6.7	23.3	4.2	3.5	1.2
2012	127	4.4	0.07	84.7	12.2	18.7	5.6	21.5	4.3
2013*	102	4.4	0.09	68.0	16.2	20.0	6.7	4.0	0.8
2014	58	4.0	0.10	38.7	10.9	4.0	3.3	29.5	5.2
2015	71	4.1	0.07	47.3	3.6	6.0	1.4	---	
2016	104	4.1	0.1	69.3	7.8	15.3	2.8	20.5	5.3
2017	246	4.3	0.1	164.0	18.9	40.7	8.9	---	

*Only includes wild largemouth bass CPUE for age-1 year class; stocked largemouth bass were marked by fin clip and removed from dataset.

Table 120. Number of fish and the relative weight (Wr) for each length group of bluegill collected at Boltz Lake on 8 September 2017 standard errors are in parentheses.

	Length group							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in		Total	
Bluegill	76	92 (2)	50	85 (1)	0		126	89 (1)

Dataset = cfdwrbol.d17

Table 121. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass and saugeye collected in 2.0 hours of 15-minute diurnal electrofishing runs in Bullock Pen Lake, May 2017; numbers in parentheses are standard errors.

	Inch class																					
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	3	19	10	10	4	11	24	16	29	38	56	38	29	36	27	20	14	18	6	1	409	204.5 (13.9)
Saugeye													1			3	2	3	3		12	6.0 (2.1)

Dataset = cfdpsbpl.d17

Table 122. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Bullock Lake from 1991-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1991		36.6	22.8	16.4	1.7 (0.7)	75.2
1994	10.0 (2.3)	17.5 (2.8)	37.6 (3.6)	40.0 (9.9)	2.5 (1.1)	104.0 (12.4)
1995	7.0 (1.6)	36.4 (4.7)	33.2 (4.4)	40.8 (5.6)		117.6 (9.9)
1996	10.5 (2.5)	26.5 (4.6)	26.0 (6.0)	30.5 (6.1)		93.6 (11.6)
1997	18.0 (3.5)	71.6 (8.7)	34.4 (3.3)	34.4 (6.1)	2.0 (0.9)	158.4 (17.3)
1998	18.0 (4.4)	43.6 (4.8)	39.6 (9.2)	33.2 (7.2)	3.5 (1.6)	139.2 (19.2)
1999	14.0 (3.6)	40.4 (4.0)	35.2 (4.0)	38.4 (12.0)	0.5 (0.5)	128.0 (14.0)
2000	14.5 (4.8)	35.5 (5.0)	21.0 (3.1)	42.4 (9.8)	0.5 (0.5)	113.5 (6.5)
2001	9.0 (3.2)	33.5 (4.3)	38.5 (7.2)	66.0 (15.2)	2.5 (1.1)	147.2 (16.4)
2002	6.5 (1.7)	29.5 (3.0)	41.5 (7.2)	54.5 (10.4)	1.5 (0.7)	132.0 (16.5)
2003	9.0 (2.5)	19.5 (2.3)	32.5 (4.1)	56.5 (8.8)	0.5 (0.5)	117.5 (9.8)
2004	6.5 (1.3)	31.5 (3.7)	45.0 (8.5)	57.5 (11.4)	2.5 (1.5)	140.5 (13.4)
2005	9.5 (1.3)	17.0 (2.6)	38.0 (5.8)	63.0 (13.7)	3.5 (1.4)	127.5 (15.5)
2006	13.5 (4.3)	35.5 (6.0)	25.5 (3.9)	62.5 (8.4)	1.0 (0.7)	137.0 (8.7)
2007	17.5 (3.5)	44.5 (6.7)	32.0 (2.8)	44.0 (8.1)	0.5 (0.5)	138.0 (6.1)
2008	9.5 (2.9)	47.5 (5.8)	75.0 (5.7)	62.5 (9.3)	1.5 (1.1)	194.5 (11.7)
2009	5.5 (2.0)	45.5 (7.4)	42.5 (5.0)	54.0 (5.4)	7.5 (1.2)	147.5 (13.8)
2010	33.0 (7.1)	26.8 (3.7)	28.3 (3.4)	44.3 (6.2)	1.8 (0.6)	132.3 (13.9)
2011	22.0 (4.3)	39.0 (5.4)	31.0 (3.3)	43.0 (6.4)	0.5 (0.5)	135.0 (11.2)
2012	25.5 (2.4)	80.5 (7.9)	43.0 (4.1)	63.5 (10.0)	3.0 (1.3)	212.5 (9.4)
2013			No sample			
2014	13.0 (2.7)	61.5 (8.5)	57.0 (6.9)	58.0 (3.2)	4.5 (1.4)	189.5 (14.0)
2015			No sample			
2016			No sample			
2017	23.0 (4.7)	40.0 (4.9)	66.0 (5.9)	75.5 (7.7)	12.5 (3.9)	204.5 (13.9)

Dataset = cfdpsbpl.d17 - .d91

Table 123. PSD and RSD$_{15}$ values obtained for largemouth bass from spring electrofishing samples in Bullock Pen Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD$_{15}$
Largemouth bass	363	78 (± 4)	42 (± 5)

Dataset = cfdpsbpl.d17

Table 124. Population assessment for largemouth bass collected during spring electrofishing at Bullock Pen Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.5*	21.0	66.0	75.5	12.5				
	Score	2	2	4	4	4			16	Good
2014	Value	10.5*	2.5	57.0	58.0	4.5				
	Score	2	1	4	4	4			15	Good
2012	Value	10.5*	9.5	43.0	63.5	3.0				
	Score	2	2	3	4	3			14	Good
2011	Value	10.5	5.1	31.0	43.0	0.5	0.422	34.4		
	Score	2	1	3	4	2			12	Fair
2010	Value	10.2*	6.4^	28.3	44.3	1.8				
	Score	2	1	3	4	3			13	Good
2009	Value	10.2*	0.8^	42.5	54.0	7.5				
	Score	2	1	3	4	4			14	Good
2008	Value	10.2*	2.1^	75.0	62.5	1.5				
	Score	2	1	4	4	2			13	Good
2007	Value	10.2*	3.4^	32.0	44.0	0.5				
	Score	2	1	3	4	2			12	Fair
2006	Value	10.2	2.5	25.5	62.5	1.0	0.238	21.2		
	Score	2	1	3	4	2			12	Fair
2005	Value	10.7*	1.3^	38.0	63.0	3.5				
	Score	2	1	3	4	3			13	Good
2004	Value	10.7*	0.0^	45.0	57.5	2.5				
	Score	2	1	4	4	3			14	Good
2003	Value	10.7	1.8	32.5	56.5	0.5	0.323	27.6		
	Score	2	1	3	4	2			12	Fair
2002	Value	10.9	0.5	41.5	54.5	1.5	0.375	31.2		
	Score	3	1	3	4	2			13	Good
2001	Value	10.0	0.0	38.5	66.0	2.5	0.174	16.0		
	Score	1	1	3	4	3			12	Fair
2000	Value	9.3	6.8	21.0	42.4	0.5	0.186	17.0		
	Score	1	1	2	4	2			10	Fair

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 125. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Bullock Pen Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	5	20	15	9	1	10	12	5	8	21	16	34	27	16	12	12	6	7	8	2	246	164.0 (10.0)

Dataset = cfdwrblp.d17

Table 126. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Bullock Pen Lake on 7 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	46	86 (1)	66	90 (1)	63	98 (1)	175	92 (1)

Dataset = cfdwrblp.d17

Table 127. Indices of year class strength at age 0 and age 1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Bullock Pen Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	Total	3.6	(0.1)	34.0	(11.9)	0.7	(0.7)	3.0	(1.7)
1998	Total	3.5	(0.1)	28.0	(8.4)	1.3	(1.3)	4.0	(0.9)
1999	Total	3.7	(0.1)	30.0	(6.1)	2.0	(1.4)	6.8	(2.6)
2000	Total	3.8	(0.3)	6.3	(1.5)	0.0		0.0	
2001	Total	3.6	(0.2)	12.0	(2.7)	1.3	(0.8)	0.5	(0.5)
2002	Total	3.1	(0.1)	17.3	(4.6)	0.0		1.8	(0.7)
2003	Total	3.3	(0.1)	22.0	(8.1)	0.0		0.0	
2004	Total	4.1	(0.2)	16.0	(3.7)	4.0	(1.5)	*	
2005	Total	3.5	(0.1)	28.0	(8.1)	2.0	(0.9)	2.5	(1.3)
2006	Total	4.2	(0.2)	4.0	(1.5)	0.0		3.4	(1.1)
2007	Total	4.1	(0.2)	6.7	(2.0)	0.7	(0.7)	2.1	(1.1)
2008	Total	4.1	(0.2)	20.7	(5.6)	5.3	(1.7)	0.8	(0.5)
2009	Total	4.5	(0.4)	8.7	(2.4)	4.7	(1.9)	3.7	(1.4)
2010	Total	4.8	(0.1)	42.7	(8.0)	20.0	(3.7)	5.1	(1.6)
2011	Total	3.8	(0.1)	38.0	(4.2)	5.3	(2.0)	9.5	(1.1)
2012	Total	4.0	(0.1)	22.7	(5.2)	1.3	(0.8)	NS	NS
2013	Total	4.0	(0.2)	14.7	(2.0)	1.3	(0.8)	2.5	(0.7)
2014	Total	4.0	(0.2)	16.0	(3.1)	4.0	(1.5)	---	
2017	Total	4.0	(0.1)	32.7	(6.4)	6.0	(2.5)		

*Largemouth bass were stocked, and were not able to be distinguished from the wild age-1 largemouth bass

Table 128. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute nocturnal electrofishing runs in Corinth Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																						
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Largemouth bass	2	26	11	14	161	170	81	119	83	24	18	10	13	7	4	6	2	8	1		1	761	380.5 (39.7)

Dataset = cfdpscor.d17

Table 129. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Corinth Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	31.0 (9.3)	22.5 (5.3)	5.0 (2.6)	0.0 (0.0)	0.0 (0.0)	58.5 (9.8)
1993	34.0 (8.2)	111.3 (11.5)	7.3 (2.4)	2.0 (1.4)	0.0 (0.0)	154.7 (13.5)
1996	53.5 (10.1)	174.5 (16.7)	14.5 (2.0)	4.5 (1.6)	0.0 (0.0)	247.0 (18.1)
1998	15.5 (3.2)	111.5 (9.8)	19.0 (3.0)	4.0 (1.7)	0.5 (0.5)	150.0 (14.4)
1999	137.0 (14.2)	56.5 (5.2)	24.5 (4.3)	3.5 (1.2)	1.0 (0.7)	221.5 (16.4)
2000	312.8 (47.0)	136.0 (18.2)	22.4 (6.5)	4.8 (2.3)	1.6 (1.0)	476.0 (63.7)
2001	127.2 (16.6)	231.2 (8.0)	20.8 (5.1)	9.6 (3.2)	0.0 (0.0)	388.8 (13.5)
2002	40.7 (8.1)	153.3 (21.7)	13.3 (2.9)	16.7 (2.8)	1.3 (1.3)	224.0 (28.7)
2003	58.0 (13.6)	146.0 (16.4)	23.3 (3.8)	6.0 (2.0)	0.7 (0.7)	233.3 (28.2)
2004	23.0 (4.8)	77.5 (5.0)	40.0 (4.3)	5.0 (1.5)	1.0 (1.0)	145.5 (8.0)
2005	45.5 (3.9)	115.0 (9.3)	72.0 (10.0)	20.5 (3.0)	2.5 (1.3)	253.0 (16.0)
2006	15.0 (2.7)	74.5 (6.8)	29.0 (1.3)	34.5 (4.7)	1.5 (0.7)	153.0 (8.8)
2007	88.5 (14.8)	106.0 (7.0)	21.5 (3.4)	22.5 (3.5)	5.5 (2.4)	238.5 (17.6)
2008	52.0 (9.7)	199.0 (17.0)	69.5 (4.8)	37.5 (3.9)	7.5 (1.9)	358.0 (25.2)
2009	30.0 (8.0)	82.5 (11.2)	17.5 (4.5)	27.5 (4.4)	6.0 (2.1)	157.5 (23.4)
2010	77.5 (7.0)	60.0 (8.3)	8.5 (1.6)	21.0 (4.9)	4.0 (1.3)	167.0 (13.6)
2011	90.0 (9.8)	177.0 (11.2)	37.0 (5.2)	33.0 (3.9)	8.5 (2.1)	337.0 (19.3)
2012	32.5 (6.1)	175.0 (15.3)	37.0 (4.9)	23.5 (4.0)	8.5 (2.3)	268.0 (21.2)
2013	24.5 (4.5)	161.0 (15.3)	22.5 (5.4)	24.5 (6.6)	4.5 (1.9)	232.5 (17.3)
2014	33.0 (5.5)	152.5 (9.7)	17.0 (3.8)	15.0 (2.6)	3.0 (1.5)	189.5 (14.0)
2015	93.0 (4.5)	141.0 (3.8)	38.0 (4.1)	16.0 (3.1)	3.5 (1.2)	288.0 (9.0)
2016			No Sample			
2017	107.0 (11.9)	226.5 (24.0)	26.0 (4.4)	21.0 (4.6)	5.0 (2.0)	380.5 (39.7)

Dataset = cfdpscor.d17 – .d92

Table 130. PSD and RSD$_{15}$ values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD$_{15}$
Largemouth bass	547	17 (± 3)	8 (± 2)

Dataset = cfdpscor.d17

Table 131. Population assessment for largemouth bass collected during spring electrofishing at Corinth Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.8*	19.5	26.0	21.0	5.0				
	Score	3	2	3	3	4			15	Good
2015	Value	10.8	29.9	38.0	16.0	3.5				
	Score	3	2	3	2	3			13	Good
2014	Value	11.1*	29.0	17.0	15.0	3.0				
	Score	3	2	1	2	3			11	Fair
2013	Value	11.1*	13.0	22.5	24.5	4.5				
	Score	3	1	2	3	4			13	Good
2012	Value	11.1*	24.5	37.0	23.5	8.5				
	Score	3	2	3	3	4			15	Good
2011	Value	11.1	90.2	37.0	33.0	8.5	0.515	40.2		
	Score	3	4	3	4	4			18	Excellent
2010	Value	11.1*	46.2^	8.5	21.0	4.0				
	Score	3	3	1	3	4			14	Good
2009	Value	11.1*	21.8^	17.5	27.5	6.0				
	Score	3	2	1	3	4			13	Good
2008	Value	11.1*	47.7^	69.5	37.5	7.5				
	Score	3	3	4	4	4			18	Excellent
2007	Value	11.1	86.7	21.5	22.5	5.5	0.498	39.3		
	Score	3	4	2	3	4			16	Good
2006	Value	10.1*	11.1^	29.0	34.5	1.5				
	Score	2	1	2	4	2			11	Fair
2005	Value	10.1*	32.4^	72.0	20.5	2.5				
	Score	2	2	4	3	3			14	Good
2004	Value	10.1*	21.1^	40.0	5.0	1.0				
	Score	2	2	3	2	2			11	Fair
2003	Value	10.1*	54.3^	23.3	6.0	0.7				
	Score	2	3	2	2	1			10	Fair
2002	Value	10.1	35.3	13.3	16.7	1.3	0.688	49.7		
	Score	2	2	1	2	2			9	Fair
2001	Value	8.7	63.4	20.8	9.6	0.0	0.805	55.3		
	Score	1	3	2	2	0			8	Fair
2000	Value	9.1	293.2	22.4	4.8	1.6	0.566	43.2		
	Score	1	4	2	2	2			11	Fair

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 132. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Corinth Lake on 18 September 2017 numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	22	29	2	9	58	22	33	39	35	32	15	5	2	2		1	1	3	310	206.7 (15.7)

Dataset = cfdwrcor.d17

Table 133. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Corinth Lake on 18 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	98	80 (1)	45	85 (1)	9	89 (3)	152	82 (1)

Dataset = cfdwrcor.d17

Table 134. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Corinth Lake.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	Total	4.3	0.1	74.0	12.3	8.0	2.9	293.2	46.0
2000	Total	4.3	0.1	35.3	7.4	3.3	1.9	63.4	10.9
2001	Total	4.6	0.1	112.7	15.6	32.0	6.8	35.3	7.4
2002	Total	4.6	0.1	163.3	13.7	42.0	4.5	54.3	13.4
2003	Total	4.1	0.1	73.7	9.2	4.6	1.8	21.1	5.1
2004	Total	4.0	0.1	74.0	6.2	2.7	1.3	32.4	4.2
2005	Total	4.4	0.1	41.3	2.7	4.7	1.2	11.1	2.7
2006	Total	4.9	0.1	176.5	15.2	78.0	9.9	86.7	14.3
2007	Total	5.1	0.04	152.7	31.2	89.3	28.8	47.7	9.1
2008	Total	5.1	0.1	112.7	15.0	66.0	12.9	21.8	5.4
2009	Total	4.5	0.1	17.3	2.5	2.0	1.4	39.7	3.3
2010	Total	5.9	0.04	140.0	9.9	134.0	8.2	90.2	9.8
2011	Total	4.3	0.1	116.7	22.0	22.0	3.7	24.5	4.9
2012	Total	5.0	0.1	52.9	5.0	26.2	3.0	13.0	4.6
2013	Total	4.2	0.1	170.7	18.6	34.7	7.4	29.0	4.3
2014	Total	3.4	0.04	56.7	8.9	0.0		29.9	2.5
2015	Total	4.4	0.1	35.3	5.7	2.0	1.4	NS	
2016	Total	4.1	0.1	30.0	3.5	1.3	0.8	19.5	4.0
2017	Total	4.1	0.1	35.3	3.9	1.3	0.8		

Dataset = cfdwrcor.d17-.d99

Table 135. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2017; numbers in parentheses are standard errors.

	Inch class									
Species	2	3	4	5	6	7	8	9	Total	CPUE
Bluegill	37	56	23	24	40	138	12		330	264.0 (32.6)
Redear sunfish		6	27	23	39	105	50	4	254	203.2 (26.9)

Dataset = cfdpscor.d17

Table 136. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Corinth Lake during May 2016. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	293	65 (± 5)	4 (± 2)
Redear sunfish	248	64 (± 6)	2 (± 2)

[a] Bluegill = RSD$_8$; Redear = RSD$_9$

Dataset = cfdpscor.d17

Table 137. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Corinth Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	Total
1992	3.0 (1.7)	36.0 (24.9)	49.0 (8.5)	10.0 (5.5)	98.0 (30.4)
1993	2.7 (1.3)	42.0 (13.1)	54.0 (10.9)	20.7 (5.2)	119.3 (26.2)
1996	6.0 (3.9)	75.0 (12.0)	54.5 (14.5)	1.5 (0.8)	137.0 (25.9)
1998	2.0 (1.1)	80.0 (19.4)	50.5 (10.3)	3.0 (1.0)	135.5 (23.7)
1999	42.0 (17.1)	113.0 (16.5)	32.5 (7.2)	17.0 (5.8)	204.5 (26.6)
2000	8.8 (2.5)	270.4 (20.1)	100.8 (12.0)	20.8 (3.6)	400.8 (25.9)
2001	7.2 (4.0)	185.6 (18.0)	140.0 (14.8)	5.6 (2.1)	338.4 (23.5)
2002	2.4 (1.2)	140.0 (16.7)	56.8 (12.1)	0.0	199.2 (26.6)
2003	14.2 (6.2)	164.4 (14.1)	91.6 (10.7)	0.9 (0.9)	271.1 (23.3)
2004	17.6 (4.9)	174.4 (15.9)	61.6 (10.9)	0.0	253.6 (22.7)
2005	12.0 (4.2)	262.4 (32.7)	82.4 (22.2)	0.0	356.8 (47.8)
2006	40.4 (6.0)	211.2 (17.9)	32.8 (6.4)	0.0	284.4 (14.7)
2007	13.2 (2.6)	148.8 (12.1)	98.0 (10.2)	0.0	260.0 (17.9)
2008	4.8 (1.2)	180.4 (13.7)	105.2 (12.4)	0.4 (0.4)	290.8 (18.8)
2009	9.2 (4.0)	151.6 (15.3)	166.8 (19.4)	0.0	327.6 (30.6)
2010	9.4 (2.6)	126.6 (11.1)	55.1 (6.9)	0.0	191.1 (15.5)
2011	32.0 (6.9)	222.8 (16.4)	60.0 (10.5)	0.0	314.8 (27.0)
2012	2.4 (1.2)	240.0 (24.6)	56.8 (6.1)	0.0	299.2 (27.7)
2013	0.8 (0.8)	60.0 (4.7)	106.4 (13.3)	0.0	167.2 (15.7)
2014	4.8 (2.1)	89.6 (14.4)	64.8 (10.4)	4.0 (1.3)	163.2 (23.1)
2015	4.0 (1.3)	106.4 (16.4)	115.2 (24.1)	4.8 (3.2)	230.4 (16.5)
2016	5.6 (1.7)	60.0 (9.2)	135.2 (13.4)	4.0 (2.2)	204.8 (11.2)
2017	29.6 (14.9)	82.4 (17.3)	142.4 (22.8)	9.6 (2.9)	264.0 (32.6)

Dataset = cfdpscor.d17-.d92

Table 138. Population assessment for bluegill collected during spring electrofishing at Corinth Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating
2017	Value	3.8*	2-2+*	152.0	9.6		
	Score	1	4	4	4	13	Good
2016	Value	3.8	2-2+	139.2	4.0		
	Score	1	4	4	3	12	Good
2015	Value	5.5*	3-3+*	120.0	4.8		
	Score	4	3	4	4	15	Excellent
2014	Value	5.5	3-3+	68.8	4.0		
	Score	4	3	3	3	13	Good
2013	Value	4.7*	3-3*	106.4	0.0		
	Score	3	3	4	1	11	Good
2012	Value	4.7	3-3+	56.8	0.0		
	Score	3	3	3	1	10	Good
2011	Value	4.4	3-3+	60.0	0.0		
	Score	3	3	3	1	10	Good
2010	Value	4.0	3-3+	55.1	0.0		
	Score	2	3	2	1	8	Fair
2009	Value	4.8	3-3+	166.8	0.0		
	Score	4	3	4	1	12	Good
2008	Value	4.3	3-3+	105.6	0.4		
	Score	3	3	4	2	12	Good
2007	Value	4.6	3-3+	98.0	0.0		
	Score	3	3	3	1	10	Good
2006	Value	4.1	3-3+	32.8	0.0		
	Score	2	3	2	1	8	Fair
2005	Value	4.0	3-3+	82.4	0.0		
	Score	2	3	3	1	9	Fair
2004	Value	4.1	2-2+	61.6	0.0		
	Score	2	4	3	1	10	Good
2003	Value	4.3	2-2+	92.4	0.9		
	Score	3	4	3	2	12	Good
2002	Value	4.2	2-2+	56.8	0.0		
	Score	2	4	3	1	10	Good
2001	Value	4.3	2-2+	145.6	5.6		
	Score	3	4	4	4	15	Excellent
2000	Value	5.3	2-2+	121.6	20.8		
	Score	4	4	4	4	16	Excellent

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 139. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Corinth Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1992	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
1993	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	2.0 (2.0)	1.3 (1.3)	2.0 (2.0)
1996	0.5 (0.5)	7.0 (2.8)	5.5 (2.7)	10.5 (3.5)	4.0 (1.7)	23.5 (3.9)
1998	0.0 (0.0)	4.0 (0.8)	0.5 (0.5)	19.0 (4.3)	15.5 (3.3)	23.5 (4.0)
1999	0.0 (0.0)	3.7 (1.6)	2.7 (1.1)	5.3 (1.5)	3.2 (1.1)	21.5 (3.5)
2000	0.0 (0.0)	14.4 (4.1)	33.6 (15.8)	52.8 (6.6)	16.8 (4.2)	100.8 (21.9)
2001	1.6 (1.1)	20.8 (5.0)	54.4 (9.2)	72.8 (10.0)	44.0 (8.7)	149.6 (15.6)
2002	0.0 (0.0)	4.0 (1.8)	6.4 (2.0)	82.4 (15.4)	52.0 (8.7)	92.8 (15.9)
2003	0.9 (0.9)	11.6 (3.6)	11.6 (2.4)	28.4 (5.2)	24.9 (5.6)	52.4 (6.1)
2004	0.8 (0.8)	13.6 (1.7)	17.6 (5.2)	19.2 (5.2)	14.4 (3.3)	51.2 (6.8)
2005	0.0 (0.0)	38.4 (4.4)	28.8 (6.4)	31.2 (11.1)	3.2 (1.8)	98.4 (17.3)
2006	0.0 (0.0)	19.6 (3.9)	54.0 (6.6)	7.6 (1.5)	0.4 (0.4)	81.2 (7.2)
2007	0.0 (0.0)	5.2 (1.3)	37.6 (7.1)	21.2 (5.5)	0.0 (0.0)	64.0 (11.7)
2008	0.0 (0.0)	10.4 (2.2)	33.6 (4.5)	27.6 (5.0)	0.0 (0.0)	71.6 (7.9)
2009	0.0 (0.0)	2.4 (1.0)	65.2 (7.6)	38.0 (7.5)	0.4 (0.4)	105.6 (14.1)
2010	0.9 (0.5)	7.1 (1.5)	18.9 (3.0)	12.0 (2.5)	0.0 (0.0)	38.9 (5.0)
2011	1.6 (0.7)	26.0 (4.5)	36.8 (3.0)	20.0 (3.0)	0.0 (0.0)	84.4 (8.0)
2012	0.0 (0.0)	4.8 (2.1)	38.4 (8.4)	24.0 (5.1)	0.0 (0.0)	67.2 (14.2)
2013	0.0 (0.0)	1.6 (1.1)	25.6 (3.7)	29.6 (7.0)	0.8 (0.8)	56.8 (8.6)
2014	0.0 (0.0)	0.8 (0.8)	10.4 (3.8)	33.6 (15.2)	0.8 (0.8)	44.8 (16.0)
2015	0.0 (0.0)	22.4 (3.5)	53.6 (14.6)	42.4 (7.4)	1.6 (1.1)	118.4 (20.0)
2016	0.0 (0.0)	16.8 (4.7)	84.8 (15.5)	33.6 (7.1)	0.0 (0.0)	135.2 (21.4)
2017	0.0 (0.0)	44.8 (12.7)	115.2 (16.3)	43.2 (5.7)	0.0 (0.0)	203.2 (26.9)

Dataset = cfdpscor.d17-.d92

Table 140. Population assessment for redear sunfish collected during spring electrofishing at Corinth Lake from 2002-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2017	Value	7.2*	4-4+*	43.2	0.0		
	Score	2	3	4	1	10	Good
2016	Value	7.2	4-4+	33.6	0.0		
	Score	2	3	4	1	10	Good
2015	Value	8.1*	3-3+*	42.4	1.6		
	Score	4	4	4	3	15	Excellent
2014	Value	8.1	3-3+	33.6	0.8		
	Score	4	4	4	2	14	Excellent
2013	Value	7.8*	3-3+*	29.6	0.8		
	Score	3	4	4	2	13	Good
2012	Value	7.8	3-3+	24.0	0.0		
	Score	3	4	4	1	12	Good
2011	Value	7.8	3-3+	20.0	0.0		
	Score	3	4	3	1	11	Good
2010	Value	7.1	3-3+	12.0	0.0		
	Score	2	4	3	1	10	Good
2009	Value	7.7	3-3+	38.0	0.4		
	Score	3	4	4	2	13	Good
2008	Value	8.0	3-3+	27.6	0.0		
	Score	3	4	4	1	12	Good
2007	Value	7.6	3-3+	21.2	0.0		
	Score	3	4	4	1	12	Good
2006	Value	7.3	3-3+*	7.6	0.4		
	Score	2	4	2	2	10	Good
2005	Value	7.6	3-3+	31.2	3.2		
	Score	3	4	4	4	15	Excellent
2004	Value	9.1*	2-2+*	19.2	14.4		
	Score	4	4	3	4	15	Excellent
2003	Value	9.1*	2-2+*	28.4	24.9		
	Score	4	4	4	4	16	Excellent
2002	Value	9.1	2-2+	82.4	52.0		
	Score	4	4	4	4	16	Excellent

* Age data not collected

Table 141. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Corinth Lake on 18 September 2017; standard errors are in parentheses.

	Length group									
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in				Total	
Bluegill	78	96 (5)	50	78 (1)	0				128	89 (2)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish	24	101 (5)	65	93 (1)	31	86 (1)	0		120	93 (1)

Dataset = cfdwrcor.d17

Table 142. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Corinth Lake collected on 9 October 2017. Channel catfish were collected using 3 set-nights of baited tandem hoop nets (72 hours soak time).

	Inch class															Total	Average per set
Species	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Channel catfish	6	36	35	10	3	3	6	5	3	2	1		1	1	2	114	38.0 (12.2)

Dataset = cfdhncor.d17

Table 143. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Corinth Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥stock size	PSD	RSD_{24}
Channel catfish	72	21 (± 9)	0 (± 0)

Dataset = cfdhncor.d17

Table 144. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Corinth Lake in October 2017; standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	57	92 (1)	15	95 (4)	0		72	92 (1)

Dataset = cfdhncor.d17

Table 145. CPUE (fish/set) for each length group of channel catfish collected by hoop net from Corinth Lake from 2010-2017; numbers in parentheses are standard errors.

	Length group			
Year	≥12.0 in	≥15.0 in	≥20.0 in	Total
2010	21.0 (9.0)	1.7 (0.3)	0.0	92.7 (46.8)
2011	25.0 (12.9)	5.7 (4.2)	0.3 (0.3)	85.7 (59.4)
2012	41.0 (13.6)	14.7 (4.1)	0.3 (0.3)	97.7 (38.1)
2013	3.7 (2.3)	2.3 (1.5)	0.0	6.0 (3.1)
2015	0.0	0.0	0.0	0.0
2017	12.3 (6.6)	7.0 (2.9)	1.3 (1.3)	38.0 (12.2)

Dataset = cfdhncor.d17 - .d10

Table 146. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Elmer Davis Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	9	46	46	17	13	43	35	35	62	75	71	45	19	5	11	7	4	5	8	3	559	279.5 (14.4)

Dataset = cfdpselm.d17

Table 147. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Elmer Davis Lake from 1996-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1996	102.0 (15.3)	163.5 (19.5)	37.0 (6.2)	9.5 (3.4)	4.5 (1.4)	312.0 (32.7)
1997	113.5 (20.1)	252.0 (27.2)	39.0 (5.6)	19.0 (3.7)	5.5 (1.8)	423.5 (43.9)
1998	52.5 (9.5)	93.3 (6.8)	16.8 (2.3)	7.5 (1.7)	3.2 (1.1)	170.1 (15.1)
1999	253.5 (32.9)	47.0 (8.3)	36.0 (6.9)	17.5 (5.5)	2.5 (1.1)	354.0 (45.4)
2000	134.5 (14.7)	136.5 (11.0)	31.5 (6.0)	29.0 (4.4)	2.0 (1.3)	331.5 (21.3)
2001	121.0 (17.0)	220.0 (21.2)	18.5 (2.4)	21.0 (4.1)	0.5 (0.5)	380.5 (24.9)
2002	99.0 (16.3)	124.0 (12.3)	4.0 (1.3)	10.0 (2.7)	0.5 (0.5)	237.0 (26.2)
2003	96.0 (10.2)	189.5 (16.5)	14.5 (3.9)	15.0 (2.7)	3.5 (1.6)	315.0 (25.1)
2004	107.5 (10.0)	123.5 (10.0)	22.0 (3.5)	15.0 (1.7)	3.5 (1.6)	268.0 (17.4)
2005	93.0 (10.6)	197.0 (11.2)	60.0 (10.4)	15.0 (2.4)	3.5 (1.2)	365.0 (27.2)
2006	74.5 (11.5)	123.5 (12.2)	40.5 (7.9)	6.5 (1.8)	1.0 (0.7)	245.0 (15.4)
2007	32.5 (5.8)	137.0 (16.4)	41.5 (10.3)	8.0 (2.8)	1.0 (0.7)	219.0 (28.9)
2008	149.0 (17.9)	188.0 (20.7)	45.0 (5.6)	14.5 (4.0)	2.0 (1.3)	396.5 (35.2)
2009	36.0 (6.0)	192.5 (19.0)	76.0 (9.0)	28.0 (3.8)	6.5 (2.3)	332.5 (30.2)
2010	41.0 (5.0)	147.5 (17.9)	71.5 (12.3)	24.0 (5.0)	3.0 (1.3)	284.0 (33.5)
2011	51.0 (6.2)	152.5 (20.4)	69.5 (8.1)	23.0 (4.5)	3.5 (1.2)	296.0 (30.9)
2012	83.5 (8.8)	197.5 (10.9)	85.5 (7.3)	27.5 (3.7)	4.5 (1.2)	394.0 (12.4)
2013			No Sample			
2014	27.5 (4.1)	113.5 (13.8)	75.0 (14.2)	23.5 (4.0)	4.5 (1.4)	239.5 (31.7)
2015	34.5 (5.5)	119.0 (7.0)	78.5 (8.9)	19.5 (4.9)	4.0 (1.7)	251.5 (18.3)
2016	57.5 (6.3)	113.0 (10.6)	126.0 (7.9)	44.5 (2.8)	8.0 (1.3)	341.0 (18.1)
2017	65.5 (10.6)	87.5 (5.5)	95.5 (5.9)	31.0 (2.8)	8.0 (1.9)	279.5 (14.4)

Dataset = cfdpselm.d17 – .d96

Table 148. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	428	59 (± 5)	14 (± 3)

Dataset = cfdpselm.d17

Table 149. Population assessment for largemouth bass collected during spring electrofishing at Elmer Davis Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	10.7*	60.5	95.5	31.0	8.0				
	Score	2	4	4	4	4			18	Excellent
2016	Value	10.7	46.5	126.0	44.5	8.0				
	Score	2	3	4	4	4			17	Excellent
2015	Value	10.5*	28.0	78.5	19.5	4.0				
	Score	2	3	4	3	4			16	Good
2014	Value	10.5*	8.0	75.0	23.5	4.5				
	Score	2	2	4	3	4			15	Good
2013					No Sample					
2012	Value	10.5	78.0	85.5	27.5	4.5	0.392	32.5		
	Score	2	4	4	4	4			18	Excellent
2011	Value	9.8*	32.4	69.5	23.0	3.5				
	Score	1	3	4	3	3			14	Good
2010	Value	9.8*	29.0^	71.5	24.0	3.0				
	Score	1	3	4	3	3			14	Good
2009	Value	9.8*	18.5^	76.0	28.0	6.5				
	Score	1	2	4	4	4			15	Good
2008	Value	9.8	127.5	45.0	14.5	2.0	0.489	38.6		
	Score	1	4	4	3	3			15	Good
2007	Value	10.5*	26.9^	41.5	8.0	1.0				
	Score	2	3	3	2	2			12	Fair
2006	Value	10.5*	68.1^	40.5	6.5	1.0				
	Score	2	4	3	2	2			13	Good
2005	Value	10.5*	78.1^	60.0	15.0	3.5				
	Score	2	4	4	3	3			16	Good
2004	Value	10.5	94.4	22.0	15.0	3.5	0.481	38.2		
	Score	2	4	2	3	3			14	Good
2003	Value	10.3*	57.5^	14.5	15.0	3.5				
	Score	2	4	2	3	3			14	Good
2002	Value	10.3*	80.6^	4.0	10.0	0.5				
	Score	2	4	1	2	2			11	Fair
2001	Value	10.3	52.8	18.5	21.0	0.5	0.516	40..3		
	Score	2	3	2	3	2			12	Fair
2000	Value	10.7	73.8	31.5	29.0	2.0	0.618	46.1		
	Score	2	4	3	4	3			16	Good

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 150. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs for black bass in Elmer Davis Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																						
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	1	124	126	118	72	17	1	8	24	23	33	21	31	17	2	2	1	1	2		1	625	500.0 (90.3)

Dataset = cfdwrelm.d17

Table 151. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Elmer Davis Lake on 15 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	74	87 (1)	61	85 (1)	8	86 (4)	143	86 (1)

Dataset = cfdwrelm.d17

Table 152. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Elmer Davis Lake.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Area	Mean length	Std. error	CPUE	Std. Error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	269.6	(33.2)	14.4	(2.0)	52.8	(9.7)
2001	Total	4.5	(0.1)	210.7	(25.0)	47.3	(3.0)	80.6	(13.3)
2002	Total	4.3	(0.1)	67.3	(10.0)	13.3	(3.2)	57.5	(7.9)
2003	Total	4.2	(0.1)	179.0	(32.0)	27.0	(10.0)	94.4	(9.9)
2004	Total	4.3	(0.03)	180.0	(38.5)	24.7	(4.3)	78.1	(9.9)
2005	Total	4.4	(0.04)	190.0	(29.6)	33.3	(5.3)	68.1	(10.2)
2006	Total	3.7	(0.04)	166.0	(17.4)	8.0	(2.5)	26.9	(6.1)
2007	Total	4.3	(0.05)	114.0	(24.6)	17.3	(5.4)	127.5	(16.4)
2008	Total	3.9	(0.1)	73.3	(9.6)	0.7	(0.7)	18.5	(3.7)
2009	Total	4.2	(0.1)	108.0	(14.2)	20.0	(5.0)	29.0	(5.3)
2010	Total	4.7	(0.1)	108.0	(14.1)	34.7	(3.2)	32.4	(3.9)
2011	Total	4.0	(0.1)	74.0	(13.8)	14.7	(3.2)	78.0	(8.9)
2012	Total	3.4	(0.1)	56.0	(7.5)	6.0	(1.7)	NS	NS
2013	Total	3.5	(0.1)	20.0	(6.9)	0.0	(0.0)	8.0	(2.3)
2014	Total							28.0	(5.3)
2015	Total	4.0	(0.1)	77.3	(9.1)	11.3	(3.5)	46.5	(6.2)
2016	Total	4.4	(0.1)	80.0	(7.6)	24.7	(4.9)	60.5	(10.8)
2017	Total	3.9	(0.1)	366.4	(74.7)	71.2	(15.9)		

Dataset= cfdwrelm.d17

Table 153. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2017; numbers in parentheses are standard errors.

	Inch class										
Species	2	3	4	5	6	7	8	9	10	Total	CPUE
Bluegill	15	10	52	44	55	65	2			243	194.4 (26.5)
Redear sunfish				1		5	43	10	1	60	48.0 (13.2)

Dataset = cfdpselm.d17

Table 154. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2017. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	228	54 (± 6)	1(± 1)
Redear sunfish	60	98 (± 2)	18 (± 10)

[a]Bluegill = RSD_8; Redear = RSD_9

Dataset = cfdpselm.d17

Table 155. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Elmer Davis Lake from 1994-2017; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	Total
1994	1.0 (0.7)	12.0 (3.0)	29.0 (5.7)	1.5 (1.1)	43.5 (6.0)
1995			NS		
1996	42.0 (7.9)	75.0 (9.7)	55.0 (11.2)	20.0 (5.4)	192.0 (22.5)
1997	0.5 (0.5)	79.5 (12.5)	59.0 (16.3)	5.5 (2.1)	144.5 (28.6)
1998	2.7 (1.1)	17.1 (4.5)	7.7 (1.6)	2.9 (1.1)	30.4 (5.8)
1999	579.5 (74.5)	502.0 (65.4)	23.0 (7.6)	5.0 (3.4)	1,109.5 (130.9)
2000			No Sample		
2001	1.5 (0.8)	109.5 (28.0)	157.0 (23.5)	0.5 (0.5)	268.5 (49.6)
2002	33.6 (11.8)	78.4 (19.3)	272.8 (55.3)	0.8 (0.8)	385.6 (78.2)
2003	17.6 (4.7)	89.6 (12.9)	151.2 (30.1)	2.4 (1.7)	260.8 (37.1)
2004	40.0 (8.7)	100.8 (13.7)	119.2 (29.8)	8.8 (3.9)	268.8 (44.7)
2005	38.4 (11.4)	92.8 (16.1)	59.2 (9.8)	8.8 (3.0)	199.2 (23.9)
2006	162.4 (35.9)	115.2 (20.1)	42.4 (8.5)	16.0 (4.5)	336.0 (43.8)
2007	7.6 (1.8)	81.2 (7.4)	42.8 (9.7)	9.2 (2.4)	140.8 (14.9)
2008	34.4 (5.7)	133.2 (24.7)	58.8 (9.3)	6.8 (2.3)	233.2 (33.0)
2009	8.8 (1.8)	58.1 (6.5)	33.9 (3.7)	1.1 (0.5)	101.9 (7.3)
2010	51.6 (12.8)	126.8 (16.2)	26.8 (4.1)	0.0 (0.0)	205.2 (23.4)
2011	112.4 (19.6)	226.0 (18.9)	50.0 (7.3)	5.6 (2.5)	394.0 (36.2)
2012	42.4 (7.3)	254.4 (39.6)	68.8 (15.0)	0.8 (0.8)	366.4 (57.9)
2013	49.6 (18.2)	179.2 (28.4)	54.4 (14.8)	0.8 (0.8)	284.0 (56.5)
2014	17.6 (7.4)	117.6 (25.5)	33.6 (10.2)	0.0 (0.0)	168.8 (26.5)
2015	0.8 (0.8)	27.2 (5.0)	18.4 (7.4)	0.0 (0.0)	46.4 (9.6)
2016			No Sample		
2017	12.0 (3.4)	84.8 (11.4)	96.0 (19.6)	1.6 (1.6)	194.4 (26.5)

Dataset = cfdpselm.d17

Table 156. Population assessment for bluegill collected during spring electrofishing at Elmer Davis Lake from 2001-2017 (scoring based on statewide assessments).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	3.8*	4-4+*	97.6	1.6	-	-		
	Score	1	2	3	3			9	Fair
2015	Value	3.8	4-4+	18.4	0.0	-	-		
	Score	1	2	1	1			5	Poor
2014	Value	4.1*	3-3+*	33.6	0.0	-	-		
	Score	2	3	2	1			8	Fair
2013	Value	4.1	3-3+	55.2	0.8	-	-		
	Score	2	3	2	2			9	Fair
2012	Value	4.2	2-2+	69.6	0.8	1.305	72.9		
	Score	2	4	3	2			11	Good
2011	Value	4.4	2-2+	55.6	5.6	*	*		
	Score	3	4	2	4			13	Good
2010	Value	4.3	2-2+	26.8	0.0	1.471	77.0		
	Score	3	4	1	1			9	Fair
2009	Value	4.4	2-2+	34.9	1.1	*	*		
	Score	3	4	2	2			11	Good
2008	Value	4.1	2-2+	65.6	6.8	0.748	52.7		
	Score	2	4	3	4			13	Good
2007	Value	4.1	2-2+	52.0	9.2	0.718	51.2		
	Score	2	4	2	4			12	Good
2006	Value	5.1	2-2+	58.4	16.0	0.464	37.1		
	Score	4	4	3	4			15	Excellent
2005	Value	4.2	2-2+	68.0	8.8	0.729	51.7		
	Score	2	4	3	4			13	Good
2004	Value	4.3	2-2+	128.0	8.8	*	*		
	Score	3	4	4	4			15	Excellent
2003	Value	4.5	2-2+	153.6	2.4	*	*		
	Score	3	4	4	3			14	Excellent
2002	Value	4.5	2-2+	273.6	0.8	*	*		
	Score	3	4	4	2			13	Good
2001	Value	4.2	2-2+	157.5	0.5	*	*		
	Score	2	4	4	2			12	Good

* Age data not collected

Table 157. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Elmer Davis Lake from 1994-2017; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1994	0.0	0.5 (0.5)	0.5 (0.5)	2.5 (2.0)	1.5 (1.5)	3.5 (1.9)
1995				NS		
1996		7.5 (1.6)	23.5 (3.3)	4.0 (1.1)	1.0 (0.7)	35.0 (4.6)
1997	0.0	1.0 (1.0)	0.5 (0.5)	13.0 (3.8)	0.5 (0.5)	14.5 (4.6)
1998	0.0	0.3 (0.3)	0.0	0.0	0.0	0.3 (0.3)
1999	0.0	19.0 (4.4)	13.0 (2.2)	20.5 (5.3)	0.0	52.5 (7.5)
2000				NS		
2001	0.0	3.5 (2.1)	21.0 (5.1)	3.5 (1.6)	1.0 (0.7)	28.0 (4.8)
2002	0.8 (0.8)	4.0 (1.8)	8.8 (4.7)	15.2 (4.2)	0.8 (0.8)	28.8 (6.1)
2003	1.6 (1.1)	7.2 (5.5)	31.2 (7.4)	19.2 (6.2)	0.8 (0.8)	59.2 (13.5)
2004	4.0 (2.7)	8.0 (3.4)	66.4 (18.4)	24.8 (9.7)	3.2 (2.4)	103.2 (29.1)
2005	0.0	11.2 (2.4)	54.4 (16.7)	63.2 (18.6)	4.8 (1.8)	128.8 (26.9)
2006	0.0	12.8 (4.0)	4.8 (1.8)	30.4 (6.5)	4.0 (1.3)	51.2 (10.0)
2007	0.4 (0.4)	1.6 (0.7)	18.0 (3.5)	15.6 (3.4)	2.0 (1.1)	35.6 (5.6)
2008	1.2 (0.7)	13.2 (2.7)	40.8 (9.2)	17.6 (5.3)	2.8 (1.5)	72.8 (14.7)
2009	0.8 (0.6)	5.6 (1.3)	18.7 (3.2)	6.4 (1.8)	1.9 (0.7)	31.5 (4.3)
2010	1.2 (0.9)	3.2 (1.4)	23.6 (2.7)	13.2 (2.9)	0.8 (0.6)	41.2 (4.7)
2011	4.8 (1.7)	22.4 (4.5)	6.8 (2.0)	58.0 (8.5)	2.4 (1.3)	92.0 (10.3)
2012	5.6 (2.6)	31.2 (5.3)	44.0 (9.3)	31.2 (7.2)	4.8 (1.3)	112.0 (11.6)
2013	32.8 (16.3)	149.6 (40.1)	39.2 (13.6)	20.8 (5.6)	0.8 (0.8)	242.4 (67.2)
2014	0.8 (0.8)	146.4 (37.0)	56.8 (19.7)	27.2 (7.8)	0.8 (0.8)	231.2 (53.2)
2015	0.0	11.2 (3.0)	61.6 (8.9)	13.6 (4.0)	0.0	86.4 (13.1)
2016				NS		
2017	0.0	0.8 (0.8)	4.0 (1.8)	43.2 (13.0)	0.8 (0.8)	48.0 (13.2)

Dataset = cfdpselm.d17

Table 158. Population assessment for redear sunfish collected during spring electrofishing at Elmer Davis Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2017	Value	6.7*	4-4+*	43.2	0.8		
	Score	2	3	4	2	11	Good
2015	Value	6.7	4-4+	13.6	0.0		
	Score	2	3	3	1	9	Fair
2014	Value	7.7*	3-3+*	27.2	0.8		
	Score	3	4	4	2	13	Good
2013	Value	7.7	3-3+	20.8	0.8		
	Score	3	4	3	2	12	Good
2012	Value	7.7	3-3+	31.2	4.8		
	Score	3	4	4	4	15	Excellent
2011	Value	8.7	2-2+	58.0	2.4		
	Score	4	4	4	4	16	Excellent
2010	Value	8.4	2-2+	13.2	1.2		
	Score	4	4	3	3	14	Excellent
2009	Value	8.0	3-3+	6.4	1.9		
	Score	3	4	2	4	13	Good
2008	Value	8.8	2-2+	17.6	2.8		
	Score	4	4	3	4	15	Excellent
2007	Value	8.6	2-2+	15.6	2.0		
	Score	4	4	3	4	15	Excellent
2006	Value	8.8	2-2+	30.4	4.0		
	Score	4	4	4	4	16	Excellent
2005	Value	8.7	2-2+	63.2	4.8		
	Score	4	4	4	4	16	Excellent
2004	Value	9.0*	2-2+*	24.8	3.2		
	Score	4	4	4	4	16	Excellent
2003	Value	9.0	2-2+	19.2	0.8		
	Score	4	4	3	2	13	Good
2002	Value	6.5*	4-4+*	15.2	0.8		
	Score	1	3	3	2	9	Fair
2001	Value	6.5	4-4+	3.5	1.0		
	Score	1	3	2	3	9	Fair

* Age data not collected

Table 159. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Elmer Davis Lake on 15 September 2017; standard errors are in parentheses.

	Length group							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in		Total	
Bluegill	72	95 (2)	45	96 (1)	1	78	118	95 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	7	94 (4)	0		1	108	8	96 (4)

Dataset = cfdwrelm.d17

Table 160. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Kincaid Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	3	1	9	27	23	11	19	30	37	38	31	41	32	42	42	28	18	8	2	442	221.0 (10.4)

Dataset = cfdpskin.d17

Table 161. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Kincaid Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group					
Year	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
1992	4.0 (0.0)	34.0 (3.1)	13.3 (1.8)	53.3 (4.1)	11.3 (1.8)	104.7 (3.5)
1995	27.5 (3.4)	38.5 (4.5)	17.5 (2.9)	65.0 (6.5)	13.5 (3.0)	148.5 (11.9)
1997	13.5 (2.9)	59.0 (6.2)	53.0 (4.2)	92.0 (14.3)	16.0 (3.7)	217.5 (18.0)
1999	15.0 (4.3)	60.0 (8.6)	55.0 (3.7)	94.0 (6.8)	16.5 (3.4)	224.0 (8.6)
2000	15.3 (5.7)	64.5 (7.0)	36.5 (5.5)	70.0 (7.8)	6.5 (1.1)	186.0 (16.3)
2001	16.0 (2.9)	99.3 (13.7)	35.3 (5.8)	102.7 (10.6)	8.0 (1.0)	253.3 (23.5)
2002	10.0 (4.5)	35.3 (9.4)	36.7 (8.4)	110.0 (14.8)	6.7 (2.0)	192.0 (29.2)
2003	23.4 (5.8)	70.3 (12.1)	32.6 (4.0)	94.9 (15.8)	7.4 (2.0)	221.1 (22.8)
2004	7.0 (2.9)	76.0 (12.5)	38.5 (5.0)	71.0 (10.0)	9.5 (1.5)	192.5 (16.5)
2005	22.0 (3.7)	56.0 (8.2)	69.5 (9.3)	113.0 (18.5)	15.0 (2.8)	260.5 (30.7)
2006	14.5 (3.5)	82.0 (8.3)	43.0 (5.0)	112.5 (9.8)	16.5 (4.2)	252.0 (14.9)
2007	21.5 (5.3)	50.5 (6.1)	47.5 (5.3)	96.0 (6.7)	15.5 (2.4)	215.5 (13.6)
2008	16.0 (3.4)	92.5 (11.5)	48.0 (6.4)	112.0 (15.2)	12.0 (3.6)	268.5 (31.9)
2009	15.5 (2.4)	72.5 (13.7)	70.0 (9.6)	107.0 (11.0)	13.5 (1.5)	265.0 (24.4)
2010	14.8 (1.9)	72.0 (4.9)	61.5 (5.2)	69.3 (4.3)	7.8 (1.4)	217.5 (9.3)
2011	22.0 (3.2)	62.0 (7.9)	59.0 (8.4)	99.0 (4.9)	14.5 (2.1)	242.0 (16.9)
2012	12.0 (2.5)	52.0 (5.8)	41.0 (6.7)	63.0 (5.6)	8.5 (1.2)	168.0 (11.1)
2013	34.5 (4.3)	91.5 (11.0)	69.0 (6.3)	83.0 (6.3)	10.5 (2.5)	278.0 (19.6)
2014			No Sample			
2015	16.0 (5.8)	52.0 (5.9)	47.5 (7.4)	79.5 (6.3)	8.5 (11.9)	195.0 (22.3)
2016			No Sample			
2017	20.0 (2.8)	41.5 (3.1)	53.0 (5.6)	106.5 (4.1)	14.0 (1.5)	221.0 (10.4)

Dataset = cfdpskin.d17- .d92

Table 162. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2017; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	402	79 (± 4)	53 (± 5)

Dataset = cfdpskin.d17

Table 163. Population assessment for largemouth bass collected during spring electrofishing at Kincaid Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	11.6	2.0	53.0	106.5	14.0				
	Score	4	1	4	4	4			17	Excellent
2015	Value	11.7*	0.5	47.5	79.5	8.5				
	Score	4	1	3	4	4			16	Good
2013	Value	11.7	1.0	69.0	83.0	10.5				
	Score	4	1	4	4	4			17	Excellent
2012	Value	9.9*	4.5	41.0	63.0	8.5				
	Score	1	1	3	4	4			13	Good
2011	Value	9.9*	5.0	59.0	99.0	14.5				
	Score	1	1	4	4	4			14	Good
2010	Value	9.9*	1.3^	61.5	69.3	7.8				
	Score	1	1	4	4	4			14	Good
2009	Value	9.9	2.5	70.0	107.0	13.5	0.401	33.1		
	Score	1	1	4	4	4			14	Good
2008	Value	10.5*	1.0^	48.0	112.0	12.0				
	Score	2	1	3	4	4			14	Good
2007	Value	10.5*	0.0^	47.5	96.0	15.5				
	Score	2	0	3	4	4			13	Good
2006	Value	10.5*	1.5^	43.0	112.5	16.5				
	Score	2	1	3	4	4			14	Good
2005	Value	10.5	0.0	69.5	113.0	15.0	0.344	29.1		
	Score	2	0	4	4	4			14	Good
2004	Value	10.5*	1.0^	38.5	71.0	9.5				
	Score	2	1	3	4	4			14	Good
2003	Value	10.5	0.0	32.6	94.9	7.4	0.389	32.2		
	Score	2	0	2	4	4			12	Good
2002	Value	10.4	0.0	36.7	110.0	6.7	0.308	26.5		
	Score	2	0	3	4	4			13	Good
2001	Value	9.0	0.0	35.3	102.7	8.0	0.261	23.0		
	Score	1	0	3	4	4			12	Good
2000	Value	9.5	1.5	36.5	70.0	6.5	0.288	25.0		
	Score	1	1	3	4	4			13	Good

* Age data not collected

^Calculations based on age data gathered in previous years

-Instantaneous and annual mortality not calculated in years where age and growth data are not collected

Table 164. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs in Kincaid Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	10	25	9	3	9	26	14	20	20	15	11	21	15	22	15	10	6	8	3	2	264	176.0 (15.8)

Dataset = cfdwrkin.d17

Table 165. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected in the fall from Kincaid Lake in 2017.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2016	27	4.4									
2015	28	4.1	8.3								
2014	11	4.6	9.0	11.6							
2013	14	5.2	9.1	12.1	14.0						
2012	6	4.5	8.6	10.7	12.9	14.5					
2011	2	6.1	10.2	11.9	13.4	14.7	15.6				
2010	3	4.6	8.6	11.8	13.5	14.5	15.6	16.3			
2009	1	5.6	10.4	14.8	16.6	17.5	18.3	19.1	20.0		
2007	1	5.7	9.5	12.7	14.4	15.4	16.3	17.1	17.7	18.2	18.6
Mean	93	4.5	8.7	11.8	13.8	14.8	16.1	17.0	18.8	18.2	18.6
Smallest		3.0	6.7	9.4	11.3	12.5	13.6	14.5	17.7		
Largest		6.8	11.2	14.8	16.6	17.7	18.3	19.1	20.0		
Std Error		0.1	0.1	0.2	0.3	0.5	0.7	0.9	1.1		
95% ConLo		4.3	8.5	11.4	13.2	13.9	14.7	15.3	16.6		
95% ConHi		4.7	9.0	12.2	14.4	15.8	17.4	18.8	21.1		

Intercept value = 0.00
Dataset = cfdagkin.d17

Table 166. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Kincaid Lake on 11 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	67	87 (1)	46	93 (1)	66	99 (1)	179	93 (1)

Dataset = cfdwrkin.d17

Table 167. Indices of year class strength at age 0 and age 1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Kincaid Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	No. of fish	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	25	3.1	(0.2)	16.7	(5.7)	0.0		1.5	(1.10)
2000	11	3.1	(0.2)	4.7	(1.6)	0.0		0.0	
2001	36	2.9	(0.1)	20.6	(6.7)	0.0		0.0	
2002	76	2.6	(0.1)	43.4	(10.6)	0.0		0.0	
2003	33	2.8	(0.1)	22.0	(4.7)	0.0		1.0	(0.7)
2004	19	3.0	(0.1)	12.7	(4.3)	0.0		0.0	
2005	259	2.5	(0.03)	129.5	(19.3)	0.0		1.5	(0.7)
2006	64	2.7	(0.1)	42.7	(11.9)	0.0		0.0	
2007	29	3.2	(0.1)	19.3	(4.8)	0.7	(0.7)	1.0	(0.7)
2008	42	3.3	(0.1)	28.0	(2.1)	0.0		2.5	(1.1)
2009	47	2.7	(0.04)	31.3	(8.2)	0.0		1.3	(0.5)
2010	80	4.2	(0.1)	53.3	(12.0)	14.0	(3.4)	5.0	(1.7)
2011	112	3.8	(0.1)	74.7	(28.8)	7.3	(4.2)	4.5	(1.4)
2012	71	3.4	(0.1)	47.3	(9.1)	0.7	(0.7)	1.0	(0.7)
2013	56	3.6	(0.1)	37.3	(13.8)	0.0		NS	
2014	37	2.6	(0.1)	24.7	(7.4)	0.0			
2015				No Sample					
2016	51	3.8	(0.1)	34.0	(6.4)	3.3	(1.9)	2.0	(1.3)
2017	44	3.5	(0.1)	29.3	(8.2)	0.0			

Dataset = cfdwrkin.d17

Table 168. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Kincaid Lake on 9 October 2017. Channel catfish were collected using 3 set-nights of baited tandem hoop nets (72 hours soak time).

	Inch class																	Total	Average per set
Species	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Channel catfish	8	46	44	21	12	21	12	12	9	6	3	2	2	4	4	6	2	214	71.3 (16.8)

Dataset = cfdhnkin.d17

Table 169. CPUE (fish/set-night) for each length group of channel catfish collected by hoop net from Kincaid Lake from 2009-2017; numbers in parentheses are standard errors.

	Length group			
Year	>12.0 in	>15.0 in	>20.0 in	Total
2009	44.7 (19.3)	21.0 (9.0)	9.7 (4.8)	84.0 (31.29)
2010	21.0 (9.0)	9.0 (4.6)	1.0 (0.6)	131.0 (53.5)
2011	8.3 (4.3)	1.3 (0.3)	0.0	48.7 (23.3)
2012	20.7 (4.7)	9.0 (3.8)	3.3 (1.5)	40.0 (8.5)
2013	17.7 (5.8)	5.3 (2.3)	1.7 (1.2)	42.0 (14.6)
2015	10.0 (4.7)	6.7 (3.5)	1.7 (0.7)	16.7 (7.5)
2017	31.7 (5.7)	16.7 (3.7)	6.0 (2.3)	71.3 (16.8)

Dataset = cfdhnkin.d17 - .d09

Table 170. PSD and RSD_{24} values obtained for channel catfish from tandem hoop net samples in Kincaid Lake in 2017; confidence intervals are in parentheses.

Species	No. >stock size	PSD	RSD_{24}
Channel catfish	116	33 (± 9)	2 (± 2)

Dataset = cfdhnkin.d17

Table 171. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Kincaid Lake in October 2017; standard errors are in parentheses.

		Length group							
Species	Area	11.0–15.9 in		16.0–23.9 in		≥24.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Channel catfish	Total	78	90 (1)	36	90 (2)	2	106 (3)	116	90 (1)

Dataset = cfdhnkin.d17

Table 172. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs in McNeely Lake in September 2017; numbers in parentheses are standard errors.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Largemouth bass	61	120	39	2	18	84	36	43	49	27	9	6	6	1	2		3	506	404.8 (10.8)

Dataset = cfdwrmcl.d17

Table 173. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at McNeely Lake on 27 September 2017; standard errors are in parentheses.

		Length group							
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	100	85 (1)	40	92 (1)	12	93 (3)	152	88 (1)

Dataset = cfdwrmcl.d17

Table 174. Indices of year class strength at age-0 and age-1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at McNeely Lake.

Year class	Area	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	87.3	(16.1)	10.0	(2.3)	70.0	(9.4)
2001	Total	4.1	(0.9)	20.7	(1.6)	2.0	(1.4)	23.3	(2.4)
2002	Total	4.7	(0.1)	24.0	(5.8)	10.7	(3.8)	20.0	(2.5)
2003	Total	4.1	(0.1)	56.0	(14.0)	7.0	(1.9)	24.7	(3.5)
2004	Total	4.0	(0.1)	49.0	(2.4)	3.5	(0.9)	12.7	(2.4)
2005	Total	4.7	(0.1)	193.0	(17.2)	88.0	(12.1)	50.7	(7.2)
2006	Total	4.5	(0.1)	108.7	(23.3)	33.3	(5.7)	5.3	(1.7)
2007	Total	5.2	(0.04)	174.4	(49.0)	116.0	(28.3)	130.0	(6.7)
2008	Total	4.6	(0.1)	300.0	(34.5)	97.6	(16.6)	67.8	(11.7)
2009	Total	4.5	(0.04)	68.0	(5.7)	11.3	(1.2)	50.8	(2.2)
2010	Total	5.2	(0.04)	169.6	(15.1)	106.4	(12.2)	72.0	(14.2)
2011	Total	4.3	(0.05)	116.0	(12.8)	20.8	(6.6)	15.2	(6.4)
2012	Total	5.0	(0.04)	242.0	(10.0)	124.0	(11.0)	NS	NS
2013	Total	4.2	(0.04)	86.0	(11.5)	7.3	(2.8)	18.0	7.8
2014	Total	NS						109.0	27.8
2015	Total	4.2	(0.04)	126.4	(14.9)	12.0	(4.2)	38.0	13.1
2016	Total	5.0	(0.05)	96.0	(21.1)	56.8	(14.3)	---	---
2017	Total	4.4	(0.05)	177.6	(11.6)	32.8	(4.1)		

Dataset = cfdwrmcl.d17-.d00

Table 175 . Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in McNeely Lake, May 2017; numbers in parentheses are standard errors.

	Inch class									
Species	2	3	4	5	6	7	8	9	Total	CPUE
Bluegill	3	5	60	44	74	134	6		326	260.8 (29.5)
Redear sunfish		3	4	5	26	17	30	8	93	74.4 (13.2)

Dataset = cfdpsmcl.d17

Table 176. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2017. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD[a]
Bluegill	323	66 (± 5)	2 (± 2)
Redear sunfish	90	61 (±10)	9 (± 6)

[a]Bluegill = RSD_8; Redear = RSD_9

Dataset = cfdpsmcl.d17

Table 177. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from McNeely Lake from 1992-2017; numbers in parentheses are standard errors.

	Length group				
Year	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	Total
1994	17.6 (3.7)	303.2 (59.6)	13.6 (2.4)	0.0	334.4 (59.1)
1995			No Sample		
1996	2.7 (1.3)	187.3 (52.6)	95.3 (20.5)	0.0	285.3 (68.3)
1997			No Sample		
1998	0.0	72.0 (31.8)	68.7 (15.4)	0.0	140.7 (44.8)
1999	8.0 (4.3)	108.0 (20.6)	108.0 (27.7)	0.0	224.0 (44.8)
2000	2.0 (0.9)	204.7 (36.6)	110.0 (23.3)	0.0	316.7 (46.3)
2001	73.6 (23.8)	152.0 (17.0)	200.8 (29.1)	1.6 (1.1)	428.0 (35.2)
2002	53.6 (11.7)	270.4 (33.2)	335.2 (33.8)	0.8 (0.8)	660.0 (41.9)
2003	12.0 (2.2)	132.0 (31.9)	30.4 (10.6)	0.0	174.4 (40.9)
2004	4.0 (1.8)	181.6 (25.2)	74.4 (8.6)	0.0	260.0 (27.3)
2005	22.0 (3.3)	159.0 (16.7)	174.0 (27.6)	0.0	355.0 (33.5)
2006	47.0 (11.1)	145.0 (23.7)	101.0 (27.6)	0.0	293.0 (40.6)
2007	8.0 (2.8)	114.4 (18.6)	118.4 (22.5)	0.0	241.6 (30.8)
2008	98.40 (11.8)	184.0 (17.8)	206.4 (21.5)	0.0	488.8 (37.7)
2009	4.8 (3.2)	152.8 (28.4)	225.6 (20.3)	0.8 (0.8)	384.0 (37.7)
2010	7.2 (2.2)	104.0 (17.5)	96.0 (12.3)	0.0	207.2 (27.6)
2011	9.6 (3.1)	318.4 (39.4)	156.8 (27.0)	1.6 (1.6)	486.4 (43.5)
2012	4.0 (2.1)	325.0 (47.6)	203.0 (21.5)	1.0 (1.0)	533.0 (61.8)
2013	5.6 (2.9)	137.6 (16.7)	276.8 (30.1)	0.8 (0.8)	420.8 (33.4)
2014			No Sample		
2015	1.6 (1.1)	97.6 (22.1)	118.4 (19.9)	8.0 (2.7)	225.6 (32.6)
2016			No Sample		
2017	2.4 (1.2)	87.2 (12.0)	166.4 (25.4)	4.8 (1.3)	260.8 (29.5)

Dataset = cfdpsmcl.d17 - .d94

Table 178. Population assessment for bluegill collected during spring electrofishing at McNeely Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2017	Value	5.4*	2-2+*	171.2	4.8	-	-		
	Score	4	4	4	4			16	Excellent
2015	Value	5.4	2-2+	126.4	8.0	-	-		
	Score	4	4	4	4			16	Excellent
2014	Value		No Sample						
	Score								
2013	Value	5.8	2-2+	277.6	0.8	-	-		
	Score	4	4	4	2			14	Excellent
2012	Value	4.6	2-2+	204.0	1.0	0.922	60.2		
	Score	3	4	4	2			13	Good
2011	Value	4.5	2-2+	158.4	1.6	1.001	63.3		
	Score	3	4	4	3			14	Excellent
2010	Value	4.7	2-2+*	96.0	0.0	0.610	46.0		
	Score	3	4	3	1			11	Good
2009	Value	4.9*	2-2+*	226.4	0.8	0.763	53.4		
	Score	4	4	4	2			14	Excellent
2008	Value	4.9	2-2+	206.4	0.0				
	Score	4	4	4	1			13	Good
2007	Value	4.8	2-2+	118.4	0.0	0.963	61.8		
	Score	4	4	4	1			13	Good
2006	Value	5.1	3-3+	101.0	0.0	0.597	45.0		
	Score	4	3	4	1			12	Good
2005	Value	4.0	3-3+	174.0	0.0				
	Score	2	3	4	1			10	Good
2004	Value	3.9	3-3+	74.4	0.0	1.111	67.1		
	Score	2	3	3	1			9	Fair
2003	Value	3.9	3-3+	30.4	0.0	1.117	67.3		
	Score	2	3	2	1			8	Fair
2002	Value	4.2	2-2+	336.0	0.8				
	Score	2	4	4	2			12	Good
2001	Value	4.8	2-2+	202.4	1.6	0.926	60.4		
	Score	4	4	4	3			15	Excellent

* Age and growth data was not collected.

Table 179. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from McNeely Lake from 1998-2017; numbers in parentheses are standard errors.

	Length group					
Year	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	Total
1998	0.0	0.7 (0.7)	5.3 (2.2)	1.3 (1.3)	0.0	7.8 (3.4)
1999	0.0	10.0 (3.8)	3.0 (1.9)	1.0 (1.0)	0.0	14.0 (3.5)
2000	0.0	3.3 (2.6)	14.7 (2.5)	0.7 (0.7)	0.0	18.7 (3.4)
2001	2.4 (1.7)	8.8 (3.0)	15.2 (4.8)	8.0 (4.8)	0.0	34.4 (7.8)
2002	1.6 (1.1)	49.6 (10.6)	22.4 (5.8)	6.4 (2.0)	0.0	80.0 (13.4)
2003	0.8 (0.5)	5.2 (1.2)	20.4 (3.8)	2.4 (1.2)	0.0	28.8 (5.4)
2004	0.0	4.8 (1.8)	24.8 (6.5)	25.6 (7.0)	0.0	55.2 (9.9)
2005	1.0 (1.0)	25.0 (5.9)	16.0 (6.6)	33.0 (11.8)	0.0	75.0 (17.0)
2006	1.0 (1.0)	15.0 (3.8)	20.0 (4.0)	16.0 (2.6)	0.0	52.0 (6.2)
2007	0.0	2.4 (1.7)	29.6 (6.8)	6.4 (2.3)	0.0	38.4 (8.8)
2008	6.4 (2.9)	22.4 (4.4)	38.4 (3.8)	36.0 (4.8)	1.6 (1.1)	103.2 (9.4)
2009	0.0	4.8 (3.2)	55.2 (11.3)	38.4 (9.5)	2.4 (1.2)	98.4 (21.8)
2010	0.0	9.6 (4.1)	16.0 (4.1)	8.8 (3.3)	0.8 (0.8)	34.4 (6.4)
2011	0.8 (0.8)	20.8 (5.9)	16.8 (3.0)	21.6 (4.6)	0.0	60.0 (9.0)
2012	0.0	21.0 (5.4)	62.0 (7.1)	34.0 (6.0)	0.0	117.0 (13.2)
2013	0.0	13.6 (3.8)	27.2 (6.3)	52.8 (10.6)	2.4 (1.7)	93.6 (14.3)
2014			No Sample			
2015	0.0	3.2 (2.4)	16.8 (4.4)	13.6 (4.6)	2.4 (1.7)	33.6 (6.7)
2016			No Sample			
2017	0.0	9.6 (3.5)	34.4 (5.1)	30.4 (8.3)	0.0	74.4 (13.2)

Dataset = cfdpsmcl.d17 - .d98

Table 180. Population assessment for redear sunfish collected during spring electrofishing at McNeely Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2017	Value	8.2*	3-3+*	30.4	0.0		
	Score	4	4	4	1	13	Good
2015	Value	8.2	3-3+	13.6	2.4		
	Score	4	4	3	4	15	Excellent
2014	Value		No Sample				
	Score						
2013	Value	8.2	2-2+	52.8	2.4		
	Score	4	4	4	4	16	Excellent
2012	Value	8.1	3-3+	34.0	0.0		
	Score	4	4	4	1	13	Good
2011	Value	8.0	3-3+	21.6	0.0		
	Score	3	4	3	1	11	Good
2010	Value	8.1	2-2+	8.8	0.8		
	Score	4	4	3	2	13	Good
2009	Value	8.5*	2-2+*	38.4	2.4		
	Score	4	4	4	4	16	Excellent
2008	Value	8.5	2-2+	36.0	1.6		
	Score	4	4	4	3	15	Excellent
2007	Value	8.0	3-3+	6.4	0.0		
	Score	3	4	2	1	10	Good
2006	Value	7.9	3-3+	16.0	0.0		
	Score	3	4	3	1	11	Good
2005	Value	8.3	3-3+	33.0	0.0		
	Score	4	4	4	1	13	Good
2004	Value	7.7*	4-4+*	25.6	0.0		
	Score	3	3	4	1	11	Good
2003	Value	7.7	4-4+*	2.4	0.0		
	Score	3	3	1	1	8	Fair
2002	Value	6.7*	4-4+*	6.4	0.0		
	Score	2	3	2	1	8	Fair
2001	Value	6.7	4-4+	8.0	0.0		
	Score	2	3	2	1	8	Fair

Table 181. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected in the fall from McNeely Lake in 2017.

		Age			
Year	No.	1	2	3	4
2016	28	2.8			
2015	14	2.8	5.3		
2014	6	2.6	5.0	6.9	
2013	2	2.3	4.8	6.5	6.9
Mean	50	2.7	5.2	6.8	6.9
Smallest		1.6	4.4	6.4	6.8
Largest		4.2	6.2	7.3	7.0
Std Error		0.1	0.1	0.1	0.1
95% ConLo		2.5	5.0	6.6	6.7
95% ConHi		2.9	5.5	7.0	7.1

Intercept value = 0.00
Dataset = cfdagmcl.d17

Table 182. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected in the fall from McNeely Lake in 2017.

		Age						
Year	No.	1	2	3	4	5	6	7
2016	31	3.0						
2015	14	3.5	6.8					
2014	6	3.6	7.0	8.4				
2013	1	2.7	6.5	8.3	9.1			
2011	1	3.2	6.8	8.5	9.2	10.2	10.4	
2010	1	2.6	5.1	7.0	8.0	8.8	9.2	9.9
Mean	54	3.2	6.7	8.2	8.8	9.5	9.8	9.9
Smallest		2.1	5.1	7.0	8.0	8.8	9.2	9.9
Largest		4.8	7.8	8.6	9.2	10.2	10.4	9.9
Std Error		0.1	0.1	0.2	0.4	0.7	0.6	
95% ConLo		3.0	6.5	7.9	8.0	8.1	8.6	
95% ConHi		3.4	7.0	8.6	9.5	10.9	11.0	

Intercept value = 0.00
Dataset = cfdagmcl.d17

Table 183. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at McNeely Lake on 27 September 2017; standard errors are in parentheses.

	Length group							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0–5.9 in		6.0–7.9 in		≥8.0 in		Total	
Bluegill	77	100 (1)	51	91 (1)	1	94	129	96 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	76	97 (1)	21	101 (2)	7	95 (2)	104	98 (1)

Dataset = cfdwrmcl.d17

Table 184. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.5 hours of electrofishing in Lincoln Homestead Lake, April 2017; numbers in parentheses are standard errors.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass		1	21	34	29	13	30	25	11	7	8	5	2					2	1	189	378.0 (54.0)
Bluegill	11	6	15	38	39	7														116	232.0 (64.0)
Redear sunfish		3	7	1		1	1	1												14	28.0 (4.0)
White crappie							2	7	2	1										12	24.0 (8.0)
Black crappie						1	5													6	12.0 (12.0)

Dataset = cfdpslhl.d17

Table 185. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 1.0 hours of electrofishing in Reformatory Lake, May 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass			3	5	6	4	1	9	27	10	15	17	15	3	6	1	1	2	2	127	127.0 (28.9)
Bluegill	4	22	46	26	56	58														212	212.0 (33.4)
Redear sunfish			2	1	12	14	21	18	1											69	69.0 (16.1)

Dataset = cfdpsref.d17

NORTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwaters Fishery Surveys

FINDINGS

All sampling conditions can be found in Table 1. This includes dates, temperatures, secchi depths and any other pertinent sampling information during the sampling events.

Cave Run Lake (8,720a)

Muskellunge sampling

On March 27-29, the upper, middle and lower sections of Cave Run Lake were sampled for an assessment of the muskellunge fishery. In total, 170 fish were collected; of those, 69 (41%) came from the lower section, 62 (36%) came from the middle section, and 39 (23%) came from the upper section (Table 2). Relative weights continue to be in the upper 80% to lower 90% range and show very little statistical difference to relative weights obtained prior to the implementation of the 36.0-in minimum size limit (Table 3). Once again, average length and weight of known-age fish was determined from marked members of the population. In Cave Run Lake, the fish tend to reach the minimum size limit of 36.0 inches in their fourth year (Table 4). In 2017, the fishery overall was rated as "Excellent" with a score of 17; this brings us back to more normal levels after a slight drop in 2016 (Table 5). In October of 2016, Cave Run Lake was stocked with 2,700 young-of-year muskellunge. Stocked fish continue to be marked to indicate their spawning year as noted in the table below.

Year	Marking	Number stocked	Average length
2017	Caudal wire tag	2,700	12.0 in
2016	Right cheek wire tag	2,800	11.8 in
2015	Dorsal fin wire tag	1,307	13.0 in
2014	Left cheek wire tag	2,900	13.3 in
2013	Right pectoral fin clip	2,800	12.6 in
2012	Left pelvic fin clip	1,923	12.4 in
2011	Right pelvic fin clip	2,800	12.8 in
2010	Left pectoral fin clip	2,811	12.5 in

Black bass sampling (Spring/Fall)

On April 17-19, the upper, middle and lower sections of Cave Run Lake were nocturnally electrofished for assessment of the black bass population. In total, 1,710 fish were captured. The majority of these fish were largemouth bass (64%), followed by spotted bass (33%), and smallmouth bass (3%; Table 6). As is normally the case, the percentage of the population represented by spotted and smallmouth bass increases as you head from the upper sections of the lake to the lower sections of the lake. Catch rates were higher than the 1990-2016 average for all length groups of largemouth bass with the exception of the fish over 20.0 in, which was statistically identical to the 1990-2016 average (Table 7). PSD and RSD_{15} values for largemouth bass demonstrate that the majority of the fish in the lake are below 12.0 in (Table 8). PSD and RSD_{15} values were very similar to values obtained in 2016 (2016 values: PSD=47, RSD_{15}=13). Overall, the largemouth bass population was rated as "Excellent"; boosted by continued high scores for catch rates of fish in the 12.0- to 14.9-in range, the greater than 15.0-in range, the greater than 20.0-in range and the catch rates of age-1 fish (Table 9).

In October, spotted bass were collected for determination of age and growth characteristics, which allows for an assessment of this fishery in the lake. Spotted bass in Cave Run Lake show slow growth rates with an average length of age-3 fish of 9.7 in (Table 10). Furthermore, some individuals can reach 12.0 in by their sixth year at the earliest, but most are later than that. The overall assessment of this fishery is "Fair" (Table 11). The spotted bass fishery on Cave Run Lake tends to exhibit similar characteristics as the largemouth bass population (i.e.: slow growth and high recruitment).

White Bass sampling

Over the last week of October, white bass were sampled in the middle and upper reaches of Cave Run Lake with 3-panel, 150-foot experimental gill nets. In 15 net-nights, 288 white bass were collected ranging in size from 6.0 to 15.0 in (Table 12). Relative weights range in the upper 80 to lower 90 percent range, and were slightly lower (but with minimal statistical difference) than the average of the last 4 sampling attempts (2007, 2008, 2011, and 2014; Table 13). White bass were collected for determination of age and growth characteristics and exhibit reasonable growth rates with a mean length at age-2 of 12.2 in and the potential of reaching 15.0 in by their third year (Table 14). The majority of the fish collected were in the 12.0- to 14.0-in range and were primarily in their second year (Table 15). The overall assessment of the white bass fishery at Cave Run Lake was “Good” with excellent numbers of fish over 12.0 in (Table 16).

Grayson Lake (1,512a)

Black bass sampling (Spring/Fall)

The black bass population of Grayson Lake was nocturnally electrofished from April 24-26. In total, 1,202 fish were collected ranging in size from 3.0 to 20.0 in (Table 17). The majority of these fish (85%) were largemouth bass and the remainder were spotted bass (15%). Catch rates by length group were either higher than or not statistically different than the average from 1999-2016 (Table 18). The majority of the population of largemouth bass over 8.0 in is under 12.0 in as demonstrated by PSD values (Table 19). However, PSD and RSD_{15} values were very similar to what was obtained in 2016. The overall assessment of the largemouth bass fishery at Grayson Lake was “Good” (Table 20).

In September, Grayson Lake was nocturnally electrofished for collection of fish to determine age and growth characteristics and spawning strength of largemouth bass. Growth rates show slight improvement but remain fair. Generally speaking, it takes a fish 6 years of growth to reach a harvestable size of 15.0 in (Table 21). Growth rates were very similar between different sections of the lake (Table 22). During the sampling period in September, 1,375 total fish were collected ranging in size from 3.0 to 21.0 in (Table 23). Overall, relative weights were in the middle 80 percent range for largemouth bass and the middle section of the lake exhibited some of the better scores (Table 24). Indices of year class strength for largemouth bass continue to be on the high end (Table 25) and the lake was once again not stocked with young of year largemouth bass in 2017

Lake Carnico (114 a)

Black bass sampling (Spring/Fall)

On April 12, Lake Carnico was diurnally electrofished to assess the largemouth bass population. A total of 182 fish were collected ranging from 2.0 to 22.0 in (Table 26). The fish in the 12.0- to 14.9-in and greater than 15.0 inch classes posted high values and should lead to good numbers of big fish for years to come (Table 27). The PSD and RSD_{15} values are at an all-time high reflecting the low recruitment the lake has experienced over the last several years (Table 28). The overall largemouth bass assessment was rated as “Good” but has poor catch rates of age-1 fish and fish over 20.0 in (Table 29).

On October 4, Lake Carnico was diurnally electrofished to assess age and growth and relative weights of the largemouth bass population. This sample showed that most bass reached harvestable size (15.0 in) by age 5 with some reaching it at 4 years of age (Table 30). The overall catch rate on this date was 57.3 fish/hr and largemouth bass caught ranged in size from 2.0 to 20.0 in (Table 31). Relative weights have held steady for the last ten years in the upper 80s to low 90s and this year was not an exception (Table 32).

Sunfish sampling (Summer)

On May 16, Lake Carnico was diurnally electrofished to assess the sunfish population. A total of 153 bluegill were collected ranging in size from 1.0 to 6.0 in and redear sunfish ranged in size from 3.0 to 7.0 in (Table 33). Bluegill overall numbers are low (nearly a quarter of the 2003-2012 average) and nearly all of the fish caught were in the 3.0- to 5.9-in class (Table 34). PSD values also reflected the fact that the majority of the fish in the population were smaller size (Table 35). A subsample of bluegill and redear sunfish were collected from this sampling event to obtain information about the age and growth structure of the populations. Data showed that bluegill growth is slow, with fish barely exceeding 6.0 in by their 5th year (Table 36). Age frequency shows us that the majority of the fish collected were 2 years old and ranged in size from 3.0 to 5.0 in (Table 37). The bluegill assessment was rated at "Poor" (Table 38). Overall, catch rates of redear sunfish were low (as they historically have been) and data should be interpreted with caution (Table 39). Similar to the bluegill, the majority of the redear collected were smaller (Table 40) and growth rates were slow (Table 41). The majority of the fish collected were 2 and 3 years old (33% and 47%, respectively; Table 42). The overall redear assessment was rated as "Poor" this year (Table 43). Both bluegill and redear are scheduled to be stocked in 2018 in an attempt to rebuild this population.

Greenbo Lake (181a)

Black bass sampling (Spring)

On April 20, Greenbo Lake was nocturnally electrofished to assess the largemouth bass population. A total of 301 fish were collected ranging in size from 2.0 to 22.0 in (Table 44). The catch rates of fish in the 12.0- to 14.9-in, over 15.0-in, and over 20.0-in classes were all still well above the ten year average (Table 45). PSD and RSD_{15} values are still well within the range needed for a balanced population (Table 46). The overall largemouth bass assessment was rated as "Good" with high numbers in the 12.0- to 14.9-in and over 20.0-in fish groups (Table 47).

Sunfish sampling (Spring)

On May 16, Greenbo Lake was diurnally electrofished to assess the sunfish population. A total of 544 bluegill were collected ranging in size from 1.0 to 9.0 in and 61 redear sunfish were captured ranging in size from 2.0 to 11.0 in (Table 48). Overall catch rates of bluegill were on track with the 2007-2016 average (Table 49). PSD and RSD_8 values for bluegill continue to show a balanced population; similar to the largemouth bass population (Table 50). A subsample of bluegill and redear sunfish were collected from this sampling event to obtain information about the age and growth structure of the populations. Data shows bluegill are reaching 8.0 in as early as 3 years, and overall growth rates are good (Table 51). The majority of the fish collected were 1 and 2 years old (51% and 27%, respectively) and ranged in size up to 6.0 in (Table 52). The bluegill assessment was "Fair" (Table 53). Redear sunfish showed a record high for both fish over 6.0 in and over 8.0 in (Table 54) and a good proportion of the fish collected were over 7.0 and 9.0 in (PSD=45 and RSD=25; Table 55). Growth rates of the redear sunfish collected were excellent (Table 56) and the majority of the fish collected were 2 and 3 years old (56% and 29%, respectively; Table 57). The overall redear assessment was "Good" (Table 58).

Miscellaneous

Hydrilla continues to be a problem at Greenbo Lake. The fall largemouth bass sample was not attempted due to excessive weed coverage. In an effort to reduce the amount of vegetation, grass carp were stocked for a third straight year. Fifty-seven grass carp averaging fifteen inches were stocked this year.

Mill Creek Lake (41 a)

Black bass sampling (Spring/Fall)

On April 24, Mill Creek Lake was diurnally electrofished for an assessment of the largemouth bass population. In total, 229 fish were sampled ranging in size from 2.0 to 20.0 in (Table 59). Catch rates were right at or above average for all size classes (Table 60). PSD values were among the highest obtained on the lake, but RSD_{15} values were amongst the lowest (Table 61). In October, fish were collected for determination of age and growth characteristics. Largemouth bass generally exhibit slower growth rates, struggling to reach a harvestable size (15.0 in) before their eighth year (Table 62). Overall, the assessment of largemouth bass in Mill Creek Lake was "Good", boosted by higher catch rates of fish in the 12.0- to 14.9-in range and catch rates of fish over 20.0 in (Table 63).

Also in October, Mill Creek Lake was sampled for determination of relative weights of largemouth bass. In total, 108 fish were collected ranging in size from 2.0 to 15.0 in (Table 64). Relative weights were all at 90 percent (Table 65). These values were above the average for the 8.0- to 11.9-in and 12.0- to 14.9-in categories, but were slightly below average for the greater than 15.0-in category.

Sunfish sampling (Summer)
On May 18, Mill Creek Lake was diurnally electrofished for assessment of the bluegill fishery. In total, 189 bluegill were collected ranging in size from 3.0 to 9.0 in (Table 66). Catch rates by size class were all well above the 2005 to 2016 average (Table 67). PSD values showed a decrease over the last couple of samples (2015 and 2012) but remained close to the average since 2005. RSD_8 values are spot on the average since 2005 (Table 68). The overall assessment of the bluegill fishery remains as “Good” (Table 69).

Lake Reba (76a)

Black bass sampling (Spring/Fall)
On April 17, Lake Reba was diurnally electrofished for assessment of the largemouth bass fishery. In total, 831 fish were collected ranging in size from 3.0 to 21.0 in (Table 70). This exceptionally high catch rate was nearly three times the 1995 to 2016 average and was driven almost exclusively by catch rates of fish less than 8.0 in; although all categories were at or above the average (Table 71). Echoing abundance of smaller size classes of fish, PSD and RSD_{15} values were at (PSD) and below (RSD_{15}) the 1995 to 2016 average (Table 72). The overall assessment of the largemouth bass fishery at Lake Reba was “Excellent” (Table 73).

Lake Reba was once again diurnally electrofished in the fall to collect indices related to spawning class strength, and based on these values, the lake was not stocked in 2017 (Table 74).

Sunfish sampling (Summer)
On May 3, Lake Reba was diurnally electrofished for assessment of the bluegill and redear sunfish populations. In total, 366 bluegill and 83 redear sunfish were sampled (Table 75). For bluegill, there was a pretty significant drop in overall catch rates over previous years, but more fish over 8.0 in were collected than in any other year (Table 76). Furthermore, PSD and RDS_8 values were among the highest collected on the lake (Table 77). Otoliths were also kept from a subsample of 10 fish per inch class and those have demonstrated an improvement in growth rates (Table 78). Otoliths have also shown a more normal distribution of age classes of fish (Table 79). Overall, the bluegill fishery was rated as “Good” which is a dramatic improvement from previous years (Table 80). As was the case with the bluegill, redear sunfish catch rates by size class were also down overall, but more larger fish were collected than in previous years (Table 81). PSD and RDS_9 values were among the highest collected on the lake (Table 82), growth rates have improved (Table 83), and there is a normal distribution of age classes (Table 84). Overall, the assessment of the redear sunfish fishery was “Good” and as with bluegill, was a dramatic improvement from previous years (Table 85).

Creel Survey
From 01 April to 31 October, a roving creel survey was conducted on Lake Reba. In 2017 there were significantly more trips and man hours spent on the lake than the previous creel survey (2005), which is most likely a reflection of the population growth in Richmond and the surrounding areas (Table 86). The majority of the users on Lake Reba are male residents who spend time still fishing from the bank. The most fished for species on the lake was panfish (6,299.8 trips), followed by black bass (2,341.2 trips), crappie (451.7 trips), and catfish (422.3 trips; Table 87). The most harvested species were panfish and crappie (58,713 and 5,428, respectively), but the most caught species were panfish and black bass (64,565 and 8,8682, respectively). Anglers had the most success fishing for crappie (71.2% success) and the least for black bass species (2.9% success). Table 88 shows the number of fish harvested and released by inch class. This table shows the very low (3% overall) harvest rate for largemouth bass, but high harvest rates for bluegill, and both species of crappie. Several illegal-sized largemouth bass and channel catfish were also harvested. May and June are the peak months for largemouth bass fishing on the lake, and they are also the months with the highest catch rates (catch per angler hour = 2.04 and 1.43, respectively; Table 89). April and October are the peak months for crappie fishing but May and August posted the highest catch rates (catch per angler hour = 3.14 and 5.47, respectively; Table 90). Finally, May and June were the peak months for panfish fishing on the lake, but anglers posted healthy catch rates pretty much the whole summer (mean catch per angler hour = 2.94 fish; Table 91).

Angler Attitude Survey
In conjunction with the creel survey anglers were asked a series of questions pertaining to their attitudes towards fishing on Lake Reba (Table 92). Anglers were only surveyed once in the year. Of the surveyed anglers, 36% of

them came from Madison County, another 42% came from either Estill, Fayette or Clark counties and the remaining 22% came from a mixture of 24 different Kentucky counties and several surrounding states. Overall, the most fished for species were bluegill, bass, and redear sunfish. Seventy-six percent of anglers fishing for bass were satisfied and those who were not satisfied (17.8%) were disappointed in the size of the fish caught (45.8% or 22 individuals) or the number of fish caught (43.8% or 21 individuals). Similarly, the majority of the anglers who fished for bluegill, redear sunfish, or catfish were also satisfied (71.7%, 74.5% and 80.9%, respectively). The majority of anglers fished 1-4 or 5-8 times a month (55.7% and 28.1%, respectively). Support for the 15.0-in minimum size limit on largemouth bass was 85.0%. Of those that did not support the regulation (only 13.8% or 56 anglers), the majority of them wanted to see a 12.0-in minimum size limit (50 individuals). Comically, 3.6% of the anglers that opposed the 15.0-in minimum size limit preferred it to be changed to a 15.0-in minimum size limit.

Lake Wilgreen (131a)

Creel Survey

From 01 April to 31 October, a roving creel survey was conducted on Lake Wilgreen and it represents potentially the first creel survey ever conducted on the lake. In total, there were 4,198 trips on the lake (30 trips per acre), and anglers spent a total of 16,226 hours on the lake (114 hours per acre; Table 93). While these overall numbers are much lower than many of our larger lakes, the trips per acre and hours per acre comparisons demonstrate that these smaller lakes receive proportionally much more pressure than our larger lakes. The majority of the users on Lake Wilgreen are male residents who spend time casting from a boat. The most fished for species on the lake was panfish (1,632.7 trips), followed by black bass (1,206.8 trips), catfish (713.6 trips), and crappie (573.4 trips; Table 94). The most harvested species were panfish and crappie (10,780 and 9,754, respectively) and they were also the most caught species (16,187 and 11,977, respectively). Anglers had the most success fishing for crappie (70.0% success) and the least success fishing for black bass species (21.9% success). Table 95 shows the number of fish harvested and released by inch class. This table shows the very low (19% overall) harvest rate for largemouth bass, but high harvest rates for bluegill, both species of crappie, and blue and channel catfish. There likely is some overlap between the channel and blue catfish with creel clerk and angler difficulties differentiation between these two species; for this reason data should be used with caution. There were consistent numbers of trips made for largemouth bass from April through July but the month with the highest catch rate was May (catch per angler hour = 1.57; Table 96). April was the peak month for crappie fishing but May and June posted the highest catch rates (catch per angler hour = 5.02 and 5.84, respectively; Table 97). Finally, June and July were the peak months for panfish fishing on the lake, but anglers posted healthy catch rates from May through August (Table 98).

Angler Attitude Survey

In conjunction with the creel survey, anglers were asked a series of questions pertaining to their attitudes towards fishing on Lake Wilgreen (Table 99). Anglers were only surveyed once in the year. Of the surveyed anglers, 34% came from Madison County, another 36% came from either Fayette, Clark or Estill counties and the remaining 30% came from a mixture of 26 different Kentucky counties and several surrounding states. Overall, the most fished for species were bass, bluegill and channel catfish. Seventy-one percent of those that fished for bass were satisfied, while those who were not satisfied (22.7%) were disappointed in the size and the number of fish caught (43.9% or 25 individuals for both). Similarly, the majority of the anglers who fished for bluegill, redear sunfish, or catfish were also satisfied (64.6%, 47.6% and 82.8% respectively). The majority of anglers fish 1-4 or 5-8 times a month (55.1% and 26.3%, respectively). Most anglers support the 12.0-in minimum size limit on largemouth bass (93.1%). Of those that did not support it (only 5.5% or 20 anglers), the majority wanted to see a 15.0-in minimum size limit (15 individuals). Similar to Lake Reba, 5.0% of the anglers that opposed the 12.0-in minimum size limit preferred it to be changed to a 12.0-in minimum size limit.

Table 1: Yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Species	Date (2017)	Time 24hr	Gear	Weather	Water Temp (ºF)	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Cave Run Lake	Muskie	3/27	900	electro	overcast	53	724.51	18	fair	upper section (Poppin Rock/Bangor)
Cave Run Lake	Muskie	3/28	900	electro	overcast	53	724.93	18	good	middle section (Beaver Creek)
Cave Run Lake	Muskie	3/29	900	electro	overcast	52	725.27	36	good	lower section (Dam/Scott's Creek)
Cave Run Lake	LMB	4/17	2000	electro	clear / calm	68	726.95	26	good	upper section (Bangor)
Cave Run Lake	LMB	4/18	2000	electro	clear / calm	63	727.06	52	good	middle section (Clay Lick/Warix)
Cave Run Lake	LMB	4/19	2000	electro	clear / calm	65	727.16	64	good	lower section (Scott's Creek)
Cave Run Lake	SPB	10/16	800	electro	-	-	727.09	-	-	sample for otoliths only
Cave Run Lake	WB	10/24	800	gill net	overcast	65	727.96	-	good	middle and upper section; windy conditions
Cave Run Lake	WB	10/25	800	gill net	overcast	63	725.97	-	good	middle and upper section
Cave Run Lake	WB	10/26	800	gill net	overcast	59	725.82	-	good	middle and upper section
Grayson Lake	LMB	4/24	2000	electro	clear / calm	61	645.60	44	good	upper section (Caney)
Grayson Lake	LMB	4/25	2000	electro	clear / calm	66	645.55	-	good	middle section (Bruin)
Grayson Lake	LMB	4/26	2025	electro	clear / calm	67	645.50	82	good	lower section (Dam/Deer Creek)
Grayson Lake	LMB	9/25	2000	electro	clear / calm	75	645.61	-	good	middle section (Bruin)
Grayson Lake	LMB	9/26	2000	electro	clear / calm	77	645.58	-	good	upper section (Caney)
Grayson Lake	LMB	9/27	2000	electro	clear / calm	77	645.55	-	good	lower section (Dam/Deer Creek)
Lake Carnico	LMB	4/12	900	electro	sunny/warm	58	normal	72	good	
Lake Carnico	BG/RE	5/4	930	electro	sunny/warm	64	normal	69	good	
Greenbo Lake	LMB	4/20	2000	electro	clear	68	normal	88	good	
Greenbo Lake	BG/RE	5/11	945	electro	sun/warm	65	normal	162	good	
Mill Creek Lake	LMB	4/24	1000	electro	sunny	62	normal	84	good	
Mill Creek Lake	BG/RE	5/18	930	electro	sunny	71	normal	60	good	
Mill Creek Lake	LMB	10/2	930	electro	clear	-	normal	-	good	
Lake Reba	LMB	4/17	1000	electro	sunny	67	normal	38	good	
Lake Reba	BG/RE	5/3	930	electro	sunny	66	normal	48	good	
Lake Reba	LMB	9/25	1000	electro	clear	78	normal	-	good	
S. Fk. Licking R.	"game"	5/31	800	j. electro	sunny	70	5.45'	12	good	water level at Cynthania Gauge; Lair
S. Fk. Licking R.	"game"	5/31	1030	j. electro	sunny	78	5.45	20	good	water level at Cynthania Gauge; Airport
S. Fk. Licking R.	"game"	5/31	1300	j. electro	sunny	76	5.45	22	good	water level at Cynthania Gauge; Cynthania
S. Fk. Licking R.	"game"	9/7	900	j. electro	sunny	74	-	14	good	above Robinson
Stoner Creek	"game"	9/7	1100	j. electro	sunny	73	normal	22.5	good	Fryman's

Table 2. Relative abundance and CPUE (fish/hour) of muskellunge collected in the upper, middle and lower sections during 17.5 hours of 30-minute runs spread across each area of Cave Run Lake (27-29 March).

		Inch class																																			
Species	Area	11	12	13	14	15	16	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	45	46	47	48	49	50	Total	CPUE	se
Muskellunge	Upper			6	7					4	2	2	1		1	2	1	2	1	2	2	2		1	1	1						1					39	6.5	1.0
	Middle	2	9	9	6	2			1	2	1		1		1	2	2		5	1	3	3		5	1	1		1	2						1	1	62	11.3	1.9
	Lower	1	8	10	5	2				2			1	1			4	1	1	3	2	2	3	7	6	2	2	4				1				1	69	11.5	2.5
	Total	3	17	25	18	4			1	8	3	2	3	1	2	4	7	3	7	6	7	7	3	13	8	4	2	5	2			2			1	2	170	9.7	1.1

nedmuscr.d17

Table 3. Number of fish and mean relative weight (W_r) values for length groups of muskellunge collected across all lake units in Cave Run Lake from 2003-2016.

	Length group														
	≤20.0 in			20.1-30.0 in			30.1-38.0 in			≥38.1 in			Total		
Year	N	W_r	s.e.	N	W_r	s.e.	N	W_r	s.e.	N	W_r	s.e.	N	W_r	s.e.
2017	4	88	3	31	92	1	54	88	1	18	87	3	107	89	1
2016	5	81	1	25	89	2	31	89	1	9	100	4	70	90	1
2015*															
2014	30	80	1	24	89	1	57	90	1	29	91	2	140	88	1
2013	11	79	2	4	95	2	41	94	1	17	92	3	73	91	1
2012	14	75	1	28	87	2	58	102	12	20	86	1	120	93	6
2011	23	83	2	29	93	1	40	91	1	27	88	2	119	89	1
2010	19	79	1	64	92	1	52	94	2	18	90	1	153	91	1
2009	12	88	4	11	97	1	36	93	1	23	93	1	82	93	1
2008	27	76	1	40	114	17	48	94	1	11	89	1	126	96	6
2007	35	84	1	9	102	4	18	95	3	14	92	2	76	90	1
2006	17	75	1	13	88	2	26	89	1	13	87	1	69	85	1
2005	26	81	4	23	91	1	38	89	1	22	85	2	109	87	1
2004	10	79	2	10	90	3	32	87	1	15	80	1	67	85	1
2003	22	82	3	16	96	3	33	92	2	9	87	2	80	90	1

nedmuscr.d16-d03

* = Lake was not sampled due to high water

Table 4. Average length and weight of known-age muskellunge (standard error in parentheses) in comparison to historical averages (collected from known-age muskie from 1989-2003).

	Age class						
	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7
2011	N= 33 L= 14.9 (0.2) W= 0.6 (0.0)						
2012	N= 61 L= 14.4 (0.1) W= 0.5 (0.0)	N= 15 L= 23.4 (0.5) W= 2.8 (0.2)					
2013	N= 74 L= 13.9 (0.1) W= 0.5 (0.0)	N= 2 L= 22.3 (2.8) W= 2.6 (1.4)	N= 7 L= 31.0 (0.4) W= 7.5 (0.5)				
2014	N= 73 L= 14.7 (0.1) W= 0.6 (0.0)	N= 23 L= 23.4 (0.4) W= 2.9 (0.2)	N= 9 L= 31.7 (0.4) W= 8.1 (0.4)	N= 15 L= 34.0 (0.8) W= 10.2 (0.9)			
2015							
2016	N= 40 L= 14.0 (0.1) W= 0.6 (0.1)	N= 18 L= 23.2 (0.2) W= 2.8 (0.1)	N= 15 L= 31.0 (0.4) W= 7.3 (0.3)	N= 13 L= 34.2 (0.5) W= 10.2 (0.6)	N= 1 L= 39.1 (--) W= 16.0 (--)	N= 5 L= 38.5 (1.0) W= 15.0 (2.2)	
2017	N= 59 L= 13.5 (0.1) W= 0.4 (0.0)	N= 17 L= 24.1 (0.7) W= 3.4 (0.5)	N= 23 L= 29.0 (0.9) W= 6.1 (0.4)	N= 17 L= 34.3 (0.4) W= 10.2 (0.4)	N= 9 L= 37.3 (0.5) W= 13.5 (0.9)	N= 5 L= 37.5 (0.5) W= 12.8 (0.7)	N= 4 L= 37.6 (0.4) W= 13.2 (0.8)
Average (Present)	L= 14.3 (0.2) W= 0.5 (0.0)	L= 23.3 (0.3) W= 2.9 (0.2)	L= 30.7 (0.5) W= 7.2 (0.5)	L= 24.2 (0.1) W= 10.2 (0.0)	L= 38.2 (0.9) W= 14.8 (1.8)	L= 38.0 (0.5) W= 13.9 (1.6)	L= 37.6 (--) W= 13.2 (--)
Historical Average	L= 15.1 W= 0.7	L= 23.8 W= 3.8	L= 30.5 W= 7.8	L= 35.0 W= 11.3	L= 37.3 W= 15.7	L= 38.3 W= 15.3	L= 42.6 W= 20.7

nedmuscr.d11-d17

Table 5. Muskellunge assessment for Cave Run Lake spring electrofishing from 1995-2017.

Year		CPUE age-1	Spring CPUE ≥20.0 in	Spring CPUE ≥30.0 in	Spring CPUE ≥36.0 in	Spring CPUE ≥40.0 in	Total score	Assessment rating
2017	Value	3.8	5.9	4.1	2.2	0.7	17	Excellent
	Score	3	3	3	4	4		
2016	Value	2.4	3.8	2.4	0.9	0.2	9	Fair
	Score	1	2	2	2	2		
2015*								
2014	Value	4.1	6.1	4.8	2.8	1.1	18	Excellent
	Score	3	3	4	4	4		
2013	Value	4.2	3.4	3.2	1.6	0.6	13	Good
	Score	3	1	3	3	3		
2012	Value	3.5	5.9	4.3	1.9	0.6	16	Good
	Score	2	3	4	4	3		
2011	Value	1.9	5.3	3.7	2.2	0.9	14	Good
	Score	1	2	3	4	4		
2010	Value	6.8	7.4	3.9	1.9	0.6	18	Excellent
	Score	4	4	3	4	3		
2009	Value	2.6	3.9	3.3	1.7	0.7	14	Good
	Score	2	2	3	3	4		
2008	Value	2.7	5.5	3.3	1.3	0.3	13	Good
	Score	2	3	3	3	2		
2007	Value	3.6	2.5	1.8	1.2	0.4	9	Fair
	Score	2	1	1	2	3		
2006	Value	2.4	2.9	2.2	1.2	0.4	9	Fair
	Score	1	1	2	2	3		
2005	Value	2.9	5.5	4.0	2.0	0.8	16	Good
	Score	2	3	3	4	4		
2004	Value	1.3	3.2	2.6	1.3	0.4	10	Fair
	Score	1	1	2	3	3		
2003	Value	1.9	3.2	2.3	1.0	0.3	8	Poor
	Score	1	1	2	2	2		
2002*								
2001	Value	2.3	4.4	3.1	1.5	0.6	11	Fair
	Score	1	2	2	3	3		
2000	Value	1.7	2.8	1.8	0.9	0.3	7	Poor
	Score	1	1	1	2	2		
1999	Value	1.6	3.2	2.3	0.7	0.2	7	Poor
	Score	1	1	2	1	2		
1998	Value	3.8	2.8	2.8	1.0	0.3	10	Fair
	Score	3	1	2	2	2		
1997	Value	2.3	1.7	0.8	0.2	0.5	8	Poor
	Score	1	1	1	2	3		
1996	Value	5.2	4.2	2.4	0.8	0.4	11	Fair
	Score	3	2	2	1	3		
1995	Value	2.9	4.5	2.8	1.6	0.6	12	Fair
	Score	2	2	2	3	3		

nedmuscr.d16-09; nedMS2cr.d08; nedMK1cr.d07; nedmuscr.d06-95

* = Lake was not sampled due to high water

Table 6. Length frequency and CPUE (fish/hr) of black bass collected in 2.0 hours (6.0 hours total) of 30-minute nocturnal electrofishing runs in each area of Cave Run Lake from 17-19 April.

		Inch class																					Std.
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	error
Upper	Smallmouth bass																				0		
	Spotted bass	2	1	3	1	5	3	3		4											22	11.0	7.8
	Largemouth bass	8	31	54	37	6	14	28	25	14	35	12	20	26	14	8	5	2	2	1	342	171.0	20.1
Middle	Smallmouth bass		2	4	1												1				8	4.0	2.2
	Spotted bass	3	43	49	22	11	45	53	39	13	4		1		1						284	142.0	13.7
	Largemouth bass	2	13	64	71	20	22	37	33	13	27	27	24	9	6	7	3	2			380	190.0	22.9
Lower	Smallmouth bass	6	16	4	1		1	6	4	2	2		1	4	3						50	25.0	12.0
	Spotted bass	15	39	30	34	37	41	30	14	6	2	1		1							250	125.0	41.1
	Largemouth bass	1	27	46	39	22	31	58	39	18	16	21	12	15	21	4	3	1			374	187.0	40.2
Total	Smallmouth bass	6	18	8	2		1	6	4	2	2		1	4	3		1				58	9.7	5.0
	Spotted bass	20	83	82	57	53	89	86	53	23	6	1	1	1	1						556	92.7	22.0
	Largemouth bass	11	71	164	147	48	67	123	97	45	78	60	56	50	41	19	11	5	2	1	1,096	182.7	15.4

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Table 7. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cave Run Lake from 1990-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017	73.5	8.0	55.3	7.4	32.3	3.0	21.5	2.8	0.5	0.3	182.7	15.4
2016	83.8	12.7	99.7	9.2	64.3	8.4	25.5	2.9	1.3	0.6	273.3	22.8
2015*												
2014	59.0	7.5	69.3	10.6	23.8	3.4	20.0	3.1	2.0	0.7	172.0	12.9
2013	93.0	6.1	56.7	5.0	20.7	2.3	17.7	2.3	1.5	0.4	188.0	10.1
2012	46.0	6.7	88.0	4.9	25.5	3.6	18.3	2.4	1.3	0.4	177.8	10.7
2011*												
2010*												
2009*												
2008	25.8	6.2	23.3	2.6	8.3	1.8	3.5	1.0	0.5	0.5	61.0	8.5
2007	67.5	7.2	43.3	3.5	19.9	2.8	7.9	1.3	0.3	0.2	138.7	10.7
2006	50.7	10.1	48.5	7.7	14.7	2.0	10.2	1.4	0.2	0.2	124.0	19.1
2005	75.0	13.1	41.7	6.4	14.7	2.7	7.2	1.6	0.7	0.4	138.5	22.2
2004	29.0	3.0	60.7	5.9	26.0	3.0	14.1	13.5	0.3	0.2	129.8	10.1
2003	41.0	6.0	64.6	5.2	24.8	2.3	20.3	2.9	0.8	0.3	150.6	13.0
2002*												
2001	22.8	3.7	54.7	5.4	27.6	2.3	12.6	1.6	0.3	0.2	117.7	8.6
2000	45.1	4.9	78.3	6.5	26.8	2.9	9.0	1.5	0.4	0.3	159.3	10.7
1999	67.6	7.2	51.3	3.5	21.6	1.8	8.6	1.5			149.0	8.7
1998	18.7	3.5	17.9	2.9	20.6	2.1	6.9	1.5			64.0	7.6
1997	37.1	3.6	50.4	5.2	24.6	2.6	4.4	0.8	0.1	0.1	116.5	10.4
1996	58.9	6.5	42.4	4.0	15.3	1.5	4.0	0.7			116.1	9.5
1995	27.8	5.3	80.5	11.5	36.6	3.9	6.4	0.7	0.1	0.1	151.3	17.9
1994	62.5	7.0	54.7	7.9	38.8	3.1	3.7	0.6	0.3	0.2	159.6	15.5
1993	47.1	5.4	110.7	10.3	36.2	4.8	4.9	0.8	0.3	0.1	198.8	15.3
1992	52.0	4.3	77.9	5.1	21.9	1.8	2.8	0.6	0.2	0.1	152.8	6.8
1991	32.5	4.7	64.5	4.9	31.0	2.1	6.3	1.0	0.4	0.2	134.3	7.2
1990	23.3	2.7	43.0	2.7	18.5	2.2	3.4	0.9	0.2	0.1	88.2	5.8

* = No sample due to high water

nedpsdcr.d90 - d17

Table 8. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Cave Run Lake; 95% confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD (± 95%)		RSD_a (± 95%)	
Upper	Smalllmouth bass	0				
	Spotted bass	15	27	(± 23)		
	Largemouth bass	206	61	(± 7)	28	(± 6)
Middle	Smalllmouth bass	1	100	(± 100)		
	Spotted bass	167	11	(± 5)		
	Largemouth bass	210	50	(± 7)	1	(± 2)
Lower	Smalllmouth bass	23	52	(± 21)	35	(± 20)
	Spotted bass	132	8	(± 5)	1	(± 1)
	Largemouth bass	239	39	(± 6)	18	(± 5)
Total	Smallmouth bass	24	54	(± 20)	38	(± 20)
	Spotted bass	314	11	(± 3)	1	(± 1)
	Largemouth bass	655	49	(± 4)	20	(± 3)

[a]: Largemouth bass = RSD_{15}, spotted and smallmouth bass = RSD_{14}

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Table 9. Population assessment of largemouth bass based on samples collected at Cave Run Lake 2000-2017.

Year		Mean length age-3	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Spring CPUE age-1	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value		32.3	21.5	0.5	72.0	17	Excellent		
	Score	2	4	4	3	4				
2016	Value	12.4	64.3	25.5	1.3	81.3	18	Excellent	-0.743	52.40%
	Score	2	4	4	4	4				
2015*	Value									
	Score									
2014	Value		23.8	20.0	2.0	59.0	17	Excellent		
	Score	2	3	4	4	4				
2013	Value		20.7	17.7	1.5	91.3	15	Good		
	Score	2	2	3	4	4				
2012	Value	11.8	25.5	18.3	1.3	45.3	16	Good	0.852	57.30%
	Score	2	3	3	4	4				
2011*	Value									
	Score									
2010*	Value									
	Score									
2009*	Value									
	Score									
2008	Value		8.3	3.5	0.5	24.9	10	Fair	0.786	54.40%
	Score	2	1	1	3	3				
2007	Value	12.4	19.9	7.9	0.3	66.5	12	Fair	0.703	51.00%
	Score	2	2	2	2	4				
2006	Value		14.7	10.2	0.2	49.2	11	Fair	0.799	55.00%
	Score	2	1	2	2	4				
2005	Value		14.7	7.2	0.7	43.0	12	Fair	0.897	59.00%
	Score	2	1	2	3	4				
2004	Value		26.0	14.1	0.3	28.1	13	Good	0.846	57.00%
	Score	2	3	3	2	3				
2003	Value	12.4	24.8	20.3	0.8	39.8	15	Good		
	Score	2	3	4	3	3				
2002*	Value									
	Score									
2001	Value	10.7	27.6	12.6	0.3	15.1	10	Fair		
	Score	1	3	2	2	2				
2000	Value	10.3	26.8	9.0	0.4	35.5	11	Fair		
	Score	1	3	2	2	3				

* = Lake was not sampled due to high water

nedpsdcr.d00 - d17

Table 10. Mean back calculated lengths (in) at each annulus for spotted bass collected from Cave Run Lake in November 2017, includes 95% confidence interval (CI) for mean length for each age class.

		Age						
Year	No.	1	2	3	4	5	6	7
2017	0							
2016	28	4.3						
2015	16	4.8	7.5					
2014	7	3.9	7.1	8.7				
2013	6	4.2	6.4	8.2	9.3			
2012	2	4.3	6.9	8.6	9.9	10.9		
2011	1	4.3	7.5	9.4	10.6	11.6	12.0	
2010	1	4.8	7.8	9.4	9.8	10.3	10.6	10.9
Mean		4.4	7.2	8.6	9.6	10.9	11.3	-
Number		61	33	17	10	4	2	1
Smallest		2.9	5.8	6.9	8.1	10.1	10.6	
Largest		6.2	8.7	9.6	11.0	11.8	12.0	
Std. error		0.1	0.1	0.2	0.3	0.4	0.7	
95% CI (±)		0.4	0.5	0.7	1.1	1.7	2.6	

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Table 11. Population assessment of spotted bass based on samples collected at Cave Run Lake 2000-2017. (Scoring for "Mean Length at age-3" is based on the 2017 age and growth samples and is reflective of previous studies done by the now-defunct Black Bass Research Section.)

Year		Mean Length age-3	Spring CPUE 11.0-13.9	Spring CPUE ≥14.0 in	Spring CPUE age-1	Total score	Assessment rating
2017	Value	9.7	5.0	0.5	27.2	8	Fair
	Score	1	1	2	4		
2016	Value		5.3	0.8	24.8	8	Fair
	Score	(1)	1	2	4		
2015*	Value						
	Score						
2014	Value		1.8	0.3	10.8	7	Fair
	Score	(1)	1	1	4		
2013	Value		4.2	0.3	11.8	7	Fair
	Score	(1)	1	1	4		
2012	Value		7.0	0.2	20.0	8	Fair
	Score	(1)	2	1	4		
2011*	Value						
	Score						
2010*	Value						
	Score						
2009*	Value						
	Score						
2008	Value		0.7	0.0	7.8	7	Fair
	Score	(1)	1	1	4		
2007	Value		2.3	0.2	13.6	7	Fair
	Score	(1)	1	1	4		
2006	Value		2.8	0.3	15.3	7	Fair
	Score	(1)	1	1	4		
2005	Value		1.7	0.3	9.2	7	Fair
	Score	(1)	1	1	4		
2004	Value		2.9	0.4	5.9	8	Fair
	Score	(1)	1	2	4		
2003	Value		3.0	0.4	13.3	8	Fair
	Score	(1)	1	2	4		
2002*	Value						
	Score						
2001	Value		2.5	0.3	9.0	7	Fair
	Score	(1)	1	1	4		
2000	Value		2.7	0.0	13.6	7	Fair
	Score	(1)	1	1	4		

* = Lake was not sampled due to high water

nedpsdcr.d00 - d17

Table 12. Length frequency and CPUE (fish/nn) for white bass collected in 15 net-nights of sampling at Cave Run Lake from 24-26 October.

	Inch class												Std.
Species	6	7	8	9	10	11	12	13	14	15	Total	CPUE	error
White bass	2	29	4		1	24	47	102	74	5	288	19.2	3.5

nedwtbcr.d17

Table 13. Number of fish and mean relative weight (Wr) values for length groups of white bass collected in Cave Run Lake by gill netting. Standard errors are in parentheses.

	Length group											
	6.0 - 8.9 in			9.0 - 11.9 in			≥ 12.0 in			Overall		
Year	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
2017	35	89	1	25	86	1	228	91	0	288	90	0
2014				7	81	2	25	85	1	34	85	1
2011	19	88	2	40	89	1	173	96	1	232	94	1
2008	22	93	2	19	90	2	94	92	1	135	92	1
2007	8	95	3	32	88	1	98	93	1	138	92	1

nedwtbcr.d17, d14, d11, d08, d07

Table 14. Mean back calculated lengths (in) at each annulus for white bass collected from Cave Run Lake in October 2017, includes 95% confidence interval (CI) for mean length for each age class.

		Age			
Year	No.	1	2	3	4
2017	0				
2016	12	8.3			
2015	103	8.8	12.2		
2014	3	8.4	12.2	13.8	
2013	1	8.8	12.9	14.3	15.2
Mean		8.8	12.2	13.9	15.2
Number		119	107	4	1
Smallest		6.3	10.4	13.1	
Largest		10.6	13.4	14.4	
Std. error		0.1	0.1	0.3	
95% CI (±)		0.3	0.3	1.1	

nedaagcr.d17

Table 15. Age frequency and CPUE (fish/nn) of white bass sampled using gill nets for 15 net-nights at Cave Run Lake in October 2017.

	Inch class													Std.
Age	6	7	8	9	10	11	12	13	14	15	Total	%	CPUE	error
0	2	29	4								35	12	2.3	0.8
1					1	24	4	2			31	11	2.1	0.6
2							43	100	72	2	217	75	14.4	2.6
3									2	2	4	2	0.3	0.1
4										1	1	0	0.1	0.0
Total	2	29	4		1	24	47	102	74	5	288	100		
%	1	10	1		0	8	16	35	26	2	100			

nedwtbgl.d17; nedaagcr.d17

Table 16. Population assessment using statewide criteria for white bass based on fall sampling from 1993 through 2017 at Cave Run Lake.

Year		CPUE age-1 and older	Mean length age-2 at capture	CPUE ≥ 12.0 in	CPUE age-1	Total score	Assessment rating
2017	Value	16.8	13.6	15.2	2.1	12	Good
	Score	3	3	4	2		
2014	Value	2.1		1.6	2.1	5	Poor
	Score	1	2	1	1		
2011	Value	21.4	11.6	17.3	3.4	12	Good
	Score	4	2	4	2		
2008	Value	9.0	12.9	7.8	2.3	9	Fair
	Score	2	3	3	1		
2007	Value	4.3	12.9	3.1	1.1	7	Fair
	Score	1	3	2	1		
2005	Value	13.3	12.9	7.5	5.1	12	Good
	Score	3	3	3	3		
2003	Value	17.9	13.6	4.9	15.1	13	Good
	Score	3	4	2	4		
1998	Value	13.6	13.4	9.3	4.4	12	Good
	Score	3	4	3	2		
1993	Value	10.0	13.0	6.8	3.1	12	Good
	Score	3	4	3	2		

nedwtbcr.d17, d14, d11, d07, d05, d03, d98, d93

Table 17. Length frequency and CPUE (fish/hr) of black bass collected in 4.5 hours (1.5 hours in each area; 3- 30-minute runs) of nocturnal electrofishing for black bass in Grayson Lake from 24 to 26 April.

	Inch class																			Std.
Area/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	error
Upper																					
Spotted bass		1					3	1	2										7	4.7	2.4
Largemouth bass	4	21	34	21	3	20	22	23	16	20	8	4	3	2	3		2	1	207	138.0	22.7
Middle																					
Spotted bass	1	8	7	2	2	5	8	3	2										38	25.3	6.4
Largemouth bass	1	55	93	40	16	75	35	16	26	24	2	4	3	2	2	3	3	1	401	267.3	33.1
Lower																					
Spotted bass	8	43	15	6	15	18	17	7	6	2									137	91.3	7.5
Largemouth bass	2	42	48	16	13	113	53	49	34	15	9	3	4	2	1	2	4	2	412	274.7	17.3
Total																					
Spotted bass	9	52	22	8	17	23	28	11	10	2									182	40.4	13.4
Largemouth bass	7	118	175	77	32	208	110	88	76	59	19	11	10	6	6	5	9	4	1020	226.7	25.5

nedpsdgl.d17

Table 18. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Grayson Lake from 1999-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	90.9	13.7	107.1	17.9	19.8	2.3	8.9	1.3	0.9	0.5	226.7	25.5
2016	178.3	15.4	93.7	7.4	15.7	2.4	11.0	1.5	1.7	1.0	298.7	16.1
2015	55.1	14.2	90.9	12.5	18.9	4.0	14.9	2.6	3.3	0.9	179.8	27.8
2014	53.5	10.7	97.3	11.3	12.7	1.6	13.5	2.0	2.2	0.7	176.9	18.3
2013	75.2	11.3	78.2	5.7	13.2	1.5	16.3	2.1	1.5	0.4	182.8	14.4
2012	67.0	11.4	91.0	6.5	16.8	2.2	13.3	2.8	0.3	0.3	188.0	16.1
2011*												
2010*												
2009	22.8	4.0	41.0	4.2	17.0	2.7	12.7	2.0	0.8	0.3	93.5	10.3
2008	25.7	7.2	22.5	4.4	11.5	2.5	3.7	0.9	0.3	0.2	63.3	11.5
2007	48.0	8.0	46.8	3.8	16.0	2.1	5.0	0.8	0.2	0.2	115.8	11.6
2006	18.8	2.9	55.5	7.4	23.7	3.9	5.3	1.1	0.3	0.2	103.3	10.1
2005	50.1	8.0	70.2	7.9	25.1	3.7	2.9	0.5	0.2	0.2	148.3	15.9
2004	162.3	22.0	77.8	10.1	12.9	1.4	2.9	0.6	0.3	0.2	255.9	31.9
2003	128.3	10.7	79.5	6.5	6.3	0.8	2.2	0.6	0.7	0.4	216.3	15.1
2002	132.5	17.9	54.5	5.5	4.8	1.4	3.0	0.8	0.8	0.4	194.8	22.7
2001	220.8	30.6	54.2	3.2	6.7	0.9	2.2	0.5	0.2	0.2	283.9	30.2
2000	143.3	20.6	65.7	5.9	13.4	1.5	6.7	1.0	0.3	0.2	229.1	25.9
1999	172.7	21.6	102.4	10.1	24.1	2.1	4.6	0.7	0.2	0.2	303.8	31.3

* = No sample due to high water

nedpsdgl.d17-d12; d09 - d99

Table 19. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Grayson Lake; 95% confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	(± 95%)	RSD_a	(± 95%)
Upper	Spotted bass	6	33	(± 41)		
	Largemouth bass	124	35	(± 8)	9	(± 5)
Middle	Spotted bass	20	10	(± 13)		
	Largemouth bass	196	22	(± 6)	7	(± 4)
Lower	Spotted bass	65	12	(± 8)		
	Largemouth bass	291	14	(± 4)	5	(± 3)
Total	Spotted bass	91	13	(± 7)		
	Largemouth bass	611	21	(± 3)	7	(± 2)

$_a$:Largemouth bass = RSD_{15}, spotted bass = RSD_{14}

nedpsdgl.d17

Table 20. Population assessment of largemouth bass based on samples collected at Grayson Lake from 2000-present (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Spring CPUE age-1	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	12.2	19.8	8.9	0.9	85.1	13	Good	-0.659	48.30%
	Score	2	2	2	3	4				
2016	Value		15.7	11.0	1.7	169.3	12	Fair		
	Score	2	1	2	3	4				
2015	Value		18.9	14.9	3.3	53.8	15	Good		
	Score	2	2	3	4	4				
2014	Value		12.7	13.5	2.2	46.9	14	Good		
	Score	2	1	3	4	4				
2013	Value		13.2	16.3	1.5	73.2	14	Good		
	Score	2	1	3	4	4				
2012	Value		16.8	13.3	0.3	48.5	13	Good		
	Score	2	2	3	2	4				
2011	Value									
	Score									
2010	Value									
	Score									
2009	Value		17.0	12.7	0.8	19.9	11	Fair	-0.361	30.30%
	Score	2	2	2	3	2				
2008	Value	11.6	11.5	3.7	0.3	21.3	8	Poor	-0.445	35.90%
	Score	2	1	1	2	2				
2007	Value		16.0	5.0	0.2	45.9	9	Fair	-0.538	41.60%
	Score	1	1	1	2	4				
2006	Value		23.7	5.3	0.3	17.3	9	Fair	-5.350	41.50%
	Score	1	3	1	2	2				
2005	Value		25.1	2.9	0.2	46.8	11	Fair	-0.731	51.90%
	Score	1	3	1	2	4				
2004	Value		12.9	2.9	0.3	40.4	8	Poor		
	Score	1	1	1	2	3				
2003	Value		6.3	2.2	0.7	125.2	10	Fair		
	Score	1	1	1	3	4				
2002	Value		4.8	3.0	0.8	127.2	10	Fair		
	Score	1	1	1	3	4				
2001	Value	10.7	6.7	2.2	0.2	218.1	9	Fair		
	Score	1	1	1	2	4				
2000	Value	10.5	13.4	6.7	0.3	130.8	10	Fair		
	Score	1	1	2	2	4				

nedpsdgl.d00-d17; nedaaggl.d03,d08,d17

Table 21. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Grayson Lake from 25 to 27 September 2017, including the range of length of bass at each age and the 95% confidence intervals for each age class.

		Age										
Year	No.	0	1	2	3	4	5	6	7	8	9	10
2017	32	4.9										
2016	36		5.7									
2015	25		5.5	8.8								
2014	19		5.7	9.1	11.0							
2013	17		5.9	9.2	11.0	12.4						
2012	9		5.6	8.6	10.6	12.0	13.4					
2011	6		6.2	9.9	11.8	12.9	14.1	15.4				
2010	4		5.9	9.1	11.3	13.0	14.0	14.9	15.6			
2009	2		5.4	9.3	11.0	12.3	13.5	14.4	14.8	15.4		
2008	1		5.7	9.0	11.0	12.7	13.9	15.8	17.0	17.8	18.2	
2007	1		6.5	10.1	12.2	13.8	15.3	16.3	17.1	17.4	17.7	18.3
Mean		4.9	8.9	10.6	12.2	13.2	14.9	15.4	17.7	18.3	17.7	18.3
Number		32	120	84	59	40	23	14	8	4	2	1
Smallest		3.6	3.9	7.2	9.0	10.5	11.1	13.2	13.8	15.1	17.7	
Largest		6.3	7.5	11.0	13.2	15.1	16.9	18.3	18.0	17.8	18.2	
Std error		0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.7	0.3	
95% CI (+)			0.2	0.3	0.5	0.7	1.2	1.6	2.1	2.6	1.0	

Otoliths were used for age-determinations; Intercept=0

nedaaggl.d17

Table 22. Comparison of mean back-calculated lengths (in) for largemouth bass collected from different locations of Grayson Lake in 2017.

		Age					
Location	Year	1	2	3	4	5	6
Upper Lake	Number	44	28	21	13	9	4
	Mean	5.5	8.9	10.8	12.1	13.7	16.0
	Smallest	3.9	7.2	9.0	10.5	11.5	13.7
	Largest	7.3	11.0	13.2	14.7	16.9	18.3
	Std error	0.1	0.2	0.2	0.4	0.6	1.0
Middle Lake	Number	37	26	18	10	4	1
	Mean	5.7	8.9	11.0	12.4	13.5	14.7
	Smallest	4.5	7.8	9.4	10.5	11.1	
	Largest	7.0	10.6	12.7	14.5	16.2	
	Std error	0.1	0.2	0.2	0.4	0.1	
Lower Lake	Number	31	22	12	9	2	1
	Mean	6.0	9.3	11.4	12.7	14.0	13.7
	Smallest	4.8	8.2	10.2	11.6	12.9	
	Largest	7.0	10.9	12.7	14.1	15.1	
	Std error	0.1	0.1	0.2	0.3	1.1	
Total Lake	Number	112	76	51	32	15	6
	Mean	5.7	9.0	11.0	12.4	13.7	15.4
	Smallest	3.9	7.2	9.0	10.5	11.1	13.7
	Largest	7.3	11.0	13.2	14.7	16.9	18.3
	Std error	0.1	0.1	0.1	0.2	0.4	0.7

Table 23. Length frequency and CPUE (fish/hr) of black bass collected in 4.5 hours (1.5 hours in the upper, middle and lower areas) of nocturnal electrofishing (3- 30-minute runs) for black bass in Grayson Lake from 25 through 27 September.

	Inch class																					Std.
Area/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	error
Upper																						
Smallmouth bass																				0		
Spotted bass					1			1												2	1.3	1.3
Largemouth bass	4	12	1	11	54	15	18	15	14	9	4	9	3	2	2	1	2	1	1	178	118.7	24.8
Middle																						
Smallmouth bass		2																		2	1.33	0.67
Spotted bass		25	20	4	8	1	5	6	4		1									74	49.3	13.7
Largemouth bass		26	127	25	33	125	45	49	23	7	5	6		2		2				475	316.7	10.1
Lower																						
Smallmouth bass		6											1							7	4.7	4.7
Spotted bass	9	84	13	31	41	10	18	6	1	2										215	143.3	45.4
Largemouth bass		84	116	18	14	50	44	50	25	12	2	3	3	1						422	281.3	14.9
Total																						
Smallmouth bass		8											1							9	2.0	1.5
Spotted bass	9	109	33	35	50	11	23	13	5	2	1									291	64.7	24.9
Largemouth bass	4	122	244	54	101	190	107	114	62	28	11	18	6	5	2	3	2	1	1	1075	238.9	31.7

nedwrsgl.d17

Table 24. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Grayson Lake sampled by nocturnal electrofishing.

		Length group											
Species	Area	8.0 - 11.9 in			12.0 - 14.9 in			≥ 15.0 in			Overall		
		No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
Largemouth bass	Lower	166	81	0.8	17	78	1.7	4	83	2.7	187	81	0.7
	Middle	238	86	3.2	18	82	1.8	4	97	2.6	260	86	2.9
	Upper	60	81	1.1	22	90	2.1	12	90	2.0	94	84	0.9
	Total	464	84	1.7	57	84	1.3	83	90	1.7	541	84	1.5

		7.0-10.9 in			11.0-13.9 in			≥14.0 in			Overall		
		No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
Spotted bass	Lower	33	96	4.7	3	87	2.7				36	95	4.3
	Middle	12	96	4.1	5	92	2.6				17	95	3.0
	Upper	1	90	-							1	90	-
	Total	46	96	3.5	8	90	2.0				54	95	3.0

		7.0-10.9 in			11.0-13.9 in			≥14.0 in			Overall		
		No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
Smallmouth bass	Lower	1	72	-							1	72	-
	Middle												
	Upper												
	Total	1	72	-							1	72	-

nedwrsgl.d17

Table 25. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in September while nocturnal electrofishing at Grayson Lake.

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017	Total	5.2	0.0	91.1	20.1	63.1	15.3		
2016	Total	4.7	0.0	116.4	24.1	38.9	9.7	85.1	12.7
2015	Total	4.8	0.0	126.0	16.7	48.7	8.6	169.3	15.1
2014	Total	4.6	0.0	101.8	15.7	31.8	8.3	53.8	14.3
2013	Total	4.3	0.0	81.3	11.2	15.3	3.3	46.9	9.5
2012	Total	4.5	0.0	139.1	23.0	41.8	6.1	65.7	9.1
2011	Total	4.0	0.0	83.6	15.0	11.1	2.6	48.5	12.0
2010	Total	4.8	0.0	98.2	17.3	42.0	6.9	*	*
2009	Total	4.1	0.1	33.1	5.7	4.2	1.4	*	*
2008	Total	4.1	0.0	66.0	16.4	8.7	2.8	19.9	3.8
2007	Total	4.3	0.1	44.9	9.2	12.9	2.8	29.8	10.0
2006	Total	4.1	0.0	87.1	17.9	12.0	2.6	45.9	8.0
2005	Total	4.0	0.0	72.3	17.0	11.7	2.2	17.3	2.8
2004	Total	4.3	0.1	40.4	5.7	11.3	2.1	46.8	7.8
2003	Total	4.3	0.0	59.1	6.8	10.4	1.7	158.9	21.7

* No sample collected due to high water

nedwrsgl.d17; nedbsigl.d16-d13; nedwrsgl.d12 - d03; nedpsdgl.d17-d12, d09 - d04

nedaaggl.d03, d08

Table 26. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours (6- 15-minute runs) of diurnal electrofishing for largemouth bass in Lake Carnico on 12 April.

	Inch class																							Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Largemouth bass	1	1	2	2	6	3	5	7	6	9	11	19	28	36	20	14	5	6			1	182	121.3	13.8

nedpsdlc.d17

Table 27. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Carnico from 2000 to 2017.

	Length group											
	< 8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.
2017	10.0	0.9	18.0	3.7	38.7	6.1	54.7	5.5	0.7	0.7	121.3	13.8
2016[a]												
2015	7.3	1.6	21.3	2.2	22.0	3.5	22.0	4.2	2.7	1.3	72.7	8.2
2014[a]												
2013	40.0	6.2	77.3	8.6	34.7	4.7	22.0	4.7	2.0	1.4	174.0	13.4
2012	52.0	7.9	44.7	10.8	23.3	3.3	14.7	2.5	0.0		134.7	15.9
2011	22.0	3.7	24.0	5.8	24.0	2.3	9.3	2.0	0.0		79.3	8.9
2010	20.0	5.9	26.7	4.0	28.0	4.7	12.0	3.4	1.3	0.8	86.7	9.2
2009	38.7	7.0	29.3	5.2	18.7	2.9	8.7	1.6	1.3	0.8	95.3	10.8
2008	2.7	0.8	16.0	4.5	9.3	2.5	8.0	2.1	1.3	0.8	36.0	7.3
2007	40.0	8.1	108.7	9.0	31.3	3.9	14.7	2.5	1.3	1.3	194.7	10.3
2006	28.7	5.1	41.3	8.6	18.0	3.7	9.3	2.9	0.7	0.7	97.3	18.1
2005	24.0	5.6	64.7	8.5	24.7	3.3	14.0	1.7	0.7	0.7	127.3	12.6
2004	56.7	13.4	121.3	15.6	36.0	5.2	19.3	3.0	0.7	0.7	233.3	34.7
2003	42.7	9.5	47.7	6.3	34.0	4.7	13.3	4.1	1.3	0.8	164.7	15.8
2002	49.0	9.4	51.0	17.1	30.0	7.8	9.0	1.9	0.0		139.0	29.6
2001	35.0	5.0	51.0	8.5	28.0	5.9	6.0	2.6	0.0		123.0	11.3
2000	28.0	6.3	41.0	3.0	16.0	5.7	9.0	3.0	1.0	1.0	94.0	15.9

nedpsdlc.d17 - d00

[a] = sample not collected

Table 28. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Lake Carnico.

Year	No. ≥8.0 in	PSD (± 95% CI)		RSD_{15} (± 95% CI)	
2017	167	84	± 06	49	± 08
2016[a]					
2015	24	67	± 09	34	± 09
2014[a]					
2013	201	42	± 07	16	± 05
2012	124	46	± 09	18	± 07
2011	86	58	± 10	16	± 08
2010	100	60	± 19	18	± 15
2009	85	48	± 11	15	± 08
2008	50	52	± 14	24	± 12
2007	232	30	± 06	10	± 04
2006	103	40	± 10	14	± 07
2005	155	37	± 08	14	± 06
2004	265	31	± 06	11	± 04
2003	183	39	± 07	11	± 05
2002	90	43	± 10	10	± 06
2001	85	40	± 11	7	± 06
2000	66	38	± 12	14	± 08

nedpsdlc.d17-d00

[a] = sample not collected

Table 29. Population assessment of largemouth bass based on samples collected at Lake Carnico from 2004-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	11.5	4.0	38.7	54.7	0.7	13	Good	-1.014	63.70%
	Score	4	1	3	4	1				
2016[a]	Value									
	Score									
2015	Value		4.0	22.0	22.0	2.7	12	Fair		
	Score	3	1	2	3	3				
2014[a]	Value									
	Score									
2013	Value		20.0	34.7	22.0	2.0	13	Good		
	Score	3	2	2	3	3				
2012	Value		16.0	23.3	14.7	0.0	9	Fair	-0.504	39.60%
	Score	3	2	2	2	0				
2011	Value		9.3	24.0	9.3	0.0	8	Fair	-0.419	34.20%
	Score	3	1	2	2	0				
2010	Value		18.7	28.0	12.0	1.3	11	Fair	-0.552	42.50%
	Score	3	2	2	2	2				
2009	Value		18.0	18.7	8.7	1.3	10	Fair	-0.599	45.10%
	Score	3	2	1	2	2				
2008	Value	11.0	2.7	9.3	8.0	1.3	9	Fair	-0.673	49.00%
	Score	3	1	1	2	2				
2007	Value		39.5	31.3	14.7	1.3	12	Fair	-0.679	49.30%
	Score	4	2	2	2	2				
2006	Value		27.5	18.0	9.3	0.7	10	Fair	-0.505	39.60%
	Score	4	2	1	2	1				
2005	Value		23.2	24.7	14.0	0.7	11	Fair	-0.511	40.00%
	Score	4	2	2	2	1				
2004	Value	12.2	54.1	36.0	19.3	0.7	14	Good	-0.631	46.90%
	Score	4	3	3	3	1				

nedpsdlc.d17 - d04; nedaaglc.d03,d08, d17

[a] = sample not collected

Table 30. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Lake Carnico, including size range at each age and 95% confidence intervals.

		Age						
Year	No.	1	2	3	4	5	6	7
2017	0							
2016	29	4.2						
2015	10	4.6	8.6					
2014	3	4.9	9.3	11.5				
2013	1	4.2	8.3	10.6	12.2			
2010	1	5.5	9.7	13.8	16.3	18.0	18.7	19.4
Mean		4.4	8.8	11.8	14.3	18.0	18.7	19.4
Number		44	15	5	2	1	1	1
Smallest		3.0	7.0	10.0	12.2			
Largest		6.1	10.3	13.8	16.3			
Std Error		0.1	0.2	0.7	2.1			
95% CI (±)		0.4	1.0	2.7	8.1			

Otoliths were used for age determination; Intercept = 0

nedaaglc.d17

Table 31. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hour (6- 15-minute runs) of diurnal electrofishing for largemouth bass in Lake Carnico on 4 October.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. error
Largemouth bass	11	5	16	9	8	7	3	4	3	4	2	4	1	2	2	2	1		2	86	57.3	9.3

nedwrslc.d17

Table 32. Number of fish and mean relative weight (W_r) values for length groups of largemouth bass collected in Lake Carnico.

Year	Length group											
	8.0 - 11.9 in			12.0 - 14.9 in			≥ 15.0 in			Overall		
	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
2017	14	96	16	7	89	4	9	90	5	30	93	8
2011	45	90	1	21	90	1	6	99	2	72	90	1
2010	33	89	1	31	90	1	13	98	1	77	91	1
2009	41	86	2	22	88	2	7	92	3	70	87	1
2008	48	85	1	19	86	2	10	80	8	77	85	1
2007	101	96	7	31	88	1	8	90	2	140	94	8
2006	87	83	1	41	85	1	13	91	2	141	84	1

nedwrslc.d06-d17

Table 33. Length frequency and CPUE (fish/hr) for sunfish collected in 1 hour of electrofishing (4- 15-minute runs) at Lake Carnico (Nicholas Co.) on 4 May.

	Inch class									Std.
	1	2	3	4	5	6	7	Total	CPUE	error
Bluegill	4	36	52	33	23	5		153	153.0	20.9
Redear sunfish			11	3	14	4	1	33	33.0	5.3

nedsungb.d17

Table 34. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Carnico in 2003, 2006-2017.

	Inch class												Total (excluding < 3.0 in)
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	
2017	40.0	14.0	108.0	10.7	5.0	1.0	5.0	1.0			153.0	20.9	113.0
2012			74.0	11.9	8.0	2.1	8.0	2.1			82.0	12.6	82.0
2011	338.0	49.5	177.0	37.9	4.0	4.0	4.0	4.0			519.0	35.6	181.0
2010	446.0	71.4	520.0	65.4	60.0	26.1	57.7	25.1			1026.0	121.9	580.0
2009	214.0	42.6	109.0	23.2	59.0	20.9	59.0	20.9			382.0	79.9	168.0
2008	292.0	42.1	58.0	14.9	7.0	2.8	7.0	2.8			357.0	38.0	65.0
2007	140.8	27.4	54.4	14.0	0.8	0.8	55.2	13.8	0.8	0.8	196.0	38.3	56.0
2006	540.0	73.1	382.4	31.0	47.2	11.2	47.2	11.2			969.6	93.6	429.6
2003	160.8	23.8	134.4	22.4	24.0	6.9	24.0	6.9			319.2	39.5	158.4

nedsunlc.d17, d12 - d06, d03

* In 2012 <3.0-in fish were not collected.

Table 35. Bluegill PSD and RSD_8 values from spring electrofishing at Lake Carnico; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (± 95% CI)		RSD_8 (± 95% CI)	
2017	113	4	(± 4)		
2012	82	10	(± 6)		
2011	181	2	(± 2)		
2010	580	10	(± 5)		
2009	168	35	(± 7)		
2008	65	11	(± 8)		
2007	245	15	(± 5)		
2006	537	11	(± 3)		
2003	198	28	(± 6)	0.4	(± 1)

nedsunlc.d17, d12-d06, d03

Table 36. Mean back-calculated lengths (in) at each annulus for bluegill collected from Lake Carnico, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2017	0					
2016	10	2.7				
2015	14	2.4	3.5			
2014	5	2.4	3.2	4.0		
2013	14	2.5	3.8	4.7	5.4	
2012	5	2.4	4.0	4.9	5.6	6.2
Mean		2.5	3.6	4.6	5.5	6.2
Number		48	38	24	19	5
Smallest		1.7	2.6	3.4	4.4	5.6
Largest		3.2	4.4	5.3	6.2	6.6
Std error		0.1	0.1	0.1	0.1	0.2
95% CI (±)		0.2	0.3	0.4	0.4	0.7

Otoliths were used for age determination; Intercept = 0

nedaaglc.d17

Table 37. Age frequency and CPUE of bluegill sampled in 2017.

	Inch class								
Age	3	4	5	6	7	Total	%	CPUE	Std. error
1	30					30	20	30.0	10.3
2	6	47	10			63	42	62.7	11.8
3		5	13			18	12	18.4	3.3
4			10	21	1	32	21	31.8	3.5
5				2	4	6	4	6.1	1.1
Total	36	52	33	23	5	149	100		
%	24	35	22	15	3	100			

nedsunlc.d17; nedaaglc.d17

Table 38. Population assessment for bluegill based on samples collected at Lake Carnico from 2006-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	3.5	5+	5.0	0.0	4	Poor	-0.648	47.70%
	Score	2	1	1	0				
2012	Value			8.0	0.0				
	Score			1	0				
2011	Value	4.1	3+	4.0	0.0	6	Poor	-1.221	70.50%
	Score	2	3	1	0				
2010	Value	4.1	3+	60.0	0.0	8	Fair	-1.088	66.30%
	Score	2	3	3	0				
2009	Value	5.3	3+	59.0	0.0	10	Fair	-0.506	39.70%
	Score	4	3	3	0				
2008	Value	5.3	3+	7.0	0.0	8	Fair	-0.759	53.20%
	Score	4	3	1	0				
2007	Value	5.3	4+	0.8	0.0	7	Fair	-0.561	42.90%
	Score	4	2	1	0				
2006	Value	5.3	4+	47.2	0.0	8	Fair	-0.037	31.10%
	Score	4	2	2	0				

nedsunlc.d06-17; nedaaglc.d06, d10, d17

Table 39. Spring electrofishing CPUE (fish/hr) for various length groups of redear collected at Lake Carnico in 2003, 2006-2017.

	Inch class														Total (excluding < 3.0 in)
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		≥ 10.0 in		Total		
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	
2017	28.0	4.0	5.0	1.9			5.0	1.9					33.0	5.3	5.0
2012	*	*	5.0	2.1	7.0	5.1	7.0	5.1					12.0	6.4	12.0
2011	3.0	2.1	12.0	7.4	2.0	2.0	2.0	2.0					17.0	10.4	14.0
2010	3.0	1.5	8.0	4.0	4.0	2.1	3.9	2.1					15.0	3.8	12.0
2009			2.0	1.3	5.0	2.1	7.0	3.8	2.0	2.0			9.0	4.9	9.0
2008			1.0	1.0	3.0	2.1	5.0	3.0	2.0	1.3			6.0	2.9	6.0
2007			4.0	1.8	1.6	1.1	1.6	1.1					5.6	2.4	5.6
2006	2.4	1.2	4.8	2.7	8.8	3.9	8.8	3.9					22.9	5.9	13.6
2003	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8					4.0	1.8	1.6

nedsunlc.d17, d12 - d06, d03

* In 2012 <3.0-in fish were not collected.

Table 40. Redear PSD and RSD$_9$ values from spring electrofishing at Lake Carnico; 95% confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (± 95% CI)		RSD$_9$ (± 95% CI)
2017	22	4	(± 9)	
2012	12			
2011	9	11	(± 20)	
2010	11	18	(± 24)	
2009	8	75	(± 32)	
2008	6	50	(± 44)	
2007	5			
2006	13	62	(± 28)	

nedsunlc.d17,d12-d06

Table 41. Mean back-calculated lengths (in) at each annulus for redear collected from Lake Carnico, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2017	0					
2016	0					
2015	10	2.3	3.5			
2014	12	2.6	3.9	5.0		
2013	5	2.8	4.3	5.3	6.3	
2012	1	2.9	5.3	6.0	6.4	6.2
Mean		2.5	3.9	5.1	6.3	6.2
Number		28	28	18	6	1
Smallest		1.9	3.0	4.3	5.1	
Largest		3.6	5.3	6.0	7.4	
Std error		0.1	0.1	0.1	0.3	
95% CI (±)		0.3	0.4	0.5	1.2	

Otoliths were used for age determination; Intercept = 0
nedaaglc.d17

Table 42. Age frequency and CPUE of redear sampled in 2017.

	Inch class								
Age	3	4	5	6	7	Total	%	CPUE	Std. error
1						0			
2	11					11	33	11.0	1.0
3		3	12			15	47	15.4	3.4
4			2	3	1	6	17	5.6	1.6
5				1		1	3	1.0	0.6
Total	11	3	14	4	1	33	100		
%	33	9	42	12	3	100			

nedsunlc.d17; nedaaglc.d17

Table 43. Population assessment for redear based on samples collected at Lake Carnico from 2006-2012 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	5	6-6+	0.0	0.0	2	Poor	-0.811	55.60%
	Score	1	1	0	0				
2012	Value			0.0	0.0				
	Score			0	0				
2011	Value	6.1	6-6+	38.0	0.0	8	Fair		
	Score	3	1	4	0				
2010	Value	6.1	6-6+	6.0	0.0	6	Poor		
	Score	3	1	2	0				
2009	Value	6.1	5-5+	1.6	0.0	6	Poor	-1.495	77.60%
	Score	3	2	1	0				

nedsunlc.d06-12, d17; nedaaglc.d06, d10,d17

Table 44. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hour (6- 15-minute runs) of nocturnal electrofishing for largemouth bass in Greenbo Lake on 20 April.

	Inch class																							
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std. error
Largemouth bass	4	2	1		6	23	12	18	41	46	69	36	19	7	5	4	2		2	2	2	301	200.7	17.2

nedpsdgb.d17

Table 45. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Greenbo Lake.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		>20.0 in		Total	
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.
2017	24.0	5.6	78.0	13.1	82.7	10.7	16.0	2.3	4.0	1.5	200.7	17.2
2016	40.7	7.8	103.3	5.5	76.7	7.6	18.0	5.5	6.0	2.9	238.7	15.0
2015	38.7	4.8	68.0	7.7	58.0	8.1	12.7	3.0	2.0	1.4	177.3	16.8
2014	28.0	7.2	52.7	3.0	116.0	16.1	7.3	1.6	3.3	1.2	204.0	16.0
2013	14.0	1.7	78.7	7.4	75.3	17.3	8.7	2.2	1.3	0.8	176.7	22.4
2012	25.3	4.8	111.3	11.8	64.7	8.0	8.7	2.8	2.0	0.9	210.0	21.1
2011	46.0	13.1	91.3	9.3	58.0	8.9	6.7	3.2	1.3	0.8	202.0	14.8
2010	78.0	12.9	87.3	3.5	45.3	9.3	13.3	5.8	2.0	1.4	224.0	11.3
2009	44.7	9.4	60.0	8.7	50.0	8.0	18.0	3.4	2.7	1.3	172.7	16.7
2008[a]	24.0	7.2	27.3	5.8	19.3	2.8	9.3	3.0	2.7	1.3	80.0	15.2
2007	0.0	0.0	39.3	11.8	48.7	13.3	8.7	2.4	1.3	1.3	164.7	21.5

nedpsdgb.d07 - d17

[a]: Malfunctioning electrofishing boat this year.

Table 46. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (± 95% CI)		RSD_{15} (± 95% CI)	
2017	265	56	(± 6)	9	(± 3)
2016	297	48	(± 6)	8	(± 3)
2015	208	51	(± 7)	9	(± 4)
2014	264	70	(± 6)	4	(± 2)
2013	244	52	(± 6)	5	(± 3)
2012	277	40	(± 6)	5	(± 3)
2011	234	51	(± 6)	4	(± 3)
2010	219	40	(± 7)	9	(± 4)
2009	192	53	(± 7)	14	(± 5)
2008[a]	84	51	(± 11)	17	(± 8)
2007	188	46	(± 7)	7	(± 4)

nedpsdgb.d07 - d17

[a]: Malfunctioning electrofishing boat this year.

Table 47. Population assessment of largemouth bass based on samples collected at Greenbo Lake from 2007-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value		6.0	82.7	16.0	4.0	14	Good		
	Score	3	1	4	2	4				
2016	Value		14.7	76.7	18.0	6.0	16	Good	-1.17	68.80%
	Score	3	2	4	3	4				
2015	Value	11.2	38.7	58.0	12.6	2.0	15	Good		
	Score	3	3	4	2	3				
2014	Value	11.2	21.3	116.0	7.3	3.3	14	Good		
	Score	3	2	4	2	3				
2013	Value	11.2	3.8	75.3	8.7	1.3	12	Good		
	Score	3	1	4	2	2				
2012	Value	11.2	2.0	64.7	8.7	2.0	13	Good	-0.812	56.60%
	Score	3	1	4	2	3				
2011	Value	10.7	9.5	58.0	6.7	1.3	12	Fair		
	Score	2	2	4	2	2				
2010	Value	10.7	5.3	45.3	13.3	2.0	13	Good	-0.597	45.00%
	Score	2	1	4	3	3				
2009	Value	10.7	3.2	50.0	18.0	2.7	13	Good	-0.415	34.00%
	Score	2	1	4	3	3				
2008[a]	Value	10.7	1.0	19.3	9.3	2.7	10	Fair	-0.642	47.40%
	Score	2	1	2	2	3				
2007	Value	10.7	16.0	48.7	8.7	1.3	12	Fair	-0.687	49.70%
	Score	2	2	4	2	2				

nedpsdgb.d07-d17

[a]: Malfunctioning electrofishing boat this year.

Table 48. Length frequency and CPUE (fish/hr) for sunfish collected in 1.25 hours of diurnal electrofishing (5- 15-minute runs) at Greenbo (Greenup Co.) on 11 May.

	Inch class													Std.
	1	2	3	4	5	6	7	8	9	10	11	Total	CPUE	error
Bluegill	96	121	121	87	64	23	20	11	1			544	435.2	62.5
Redear sunfish		8		9	18	2	1	10	11	1	1	61	48.8	7.3
Green sunfish				2	1		2	1				6	4.8	1.5
Longear sunfish	2	8	8	11	4	1						34	27.2	10.9

nedsungb.d17

Table 49. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Greenbo Lake.

	Inch class													Total (excluding < 3.0 in)
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	
2017	173.6	58.04	217.6	27.85	34.4	11.77	44.0	14.6	9.6	3.71	435.2	62.5	261.6
2016[a]													
2015			92.0	6.3	28.0	12.7	41.6	17.8	13.6	5.3	133.6	12.4	133.6
2014[a]													
2013			96.8	21.9	97.6	19.2	121.6	23.3	24.0	5.2	218.4	31.6	218.4
2012			276.0	65.6	70.4	5.9	77.6	4.8	7.2	2.5	353.6	66.7	353.6
2011	693.6	115.6	340.8	60.2	37.6	7.2	51.2	11.3	13.6	4.8	1085.6	164.2	392.0
2010	721.6	226.2	176.8	40.4	68.0	10.0	92.0	15.9	24.0	6.3	990.4	255.8	268.8
2009	103.2	35.9	194.4	35.6	35.2	9.6	40.8	10.4	5.6	2.7	338.4	76.8	235.2
2008	80.0	15.2	196.8	51.3	40.8	7.6	47.2	8.1	6.4	2.0	324.0	56.6	244.0
2007	286.4	50.8	191.2	47.4	45.6	15.1	52.8	17.5	7.2	2.8	530.4	80.4	244.0

nedsungb.d17, d15, d13 - d05

* Beginning in 2012-2016, <3.0 in were not collected.

[a] = sample not collected

Table 50. Bluegill PSD and RSD_8 values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (± 95% CI)		RSD_8 (± 95% CI)	
2017	327	17	±04	4	±02
2016[a]					
2015	167	31	±07	10	±04
2014[a]					
2013	273	56	±06	11	±04
2012	442	22	±04	2	±01
2011	490	13	±03	3	±02
2010	336	34	±10	9	±06
2009	294	17	±04	2	±02
2008	305	19	±04	2	±02
2007	305	22	±05	3	±02

nedpsdgb.d07 - d17

[a] = sample not collected

Table 51. Mean back-calculated lengths (in) at each annulus for bluegill collected from Greenbo Lake, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2017	0					
2016	14	3.0				
2015	18	3.0	4.7			
2014	16	2.7	4.6	6.2		
2013	13	3.0	4.9	6.7	7.8	
2012	5	2.5	4.7	6.5	7.5	8.1
Mean		2.9	4.7	6.4	7.8	8.1
Number		66	52	34	18	5
Smallest		2.1	3.4	4.6	6.6	7.4
Largest		4.1	6.8	8.6	8.6	8.6
Std error		0.1	0.1	0.1	0.1	0.2
95% CI (±)		0.2	0.4	0.6	0.5	1.0

Otoliths were used for age determination; Intercept = 0

nedaaggb.d17

Table 52. Age frequency and CPUE of bluegill sampled in 2017.

	Inch class										
Age	2	3	4	5	6	7	8	Total	%	CPUE	Std. error
1	121	106						227	51	181.5	47.4
2		15	74	29	5			123	27	98.0	14.7
3			13	35	14	6	1	69	16	55.6	11.8
4					5	11	6	22	5	17.2	6.6
5						3	4	7	2	5.4	2.2
Total	121	121	87	64	24	20	11	448	100		
%	27	27	19	14	5	4	2	100			

nedsungb.d17; nedaaggb.d17

Table 53. Population assessment of bluegill based on samples collected at Greenbo Lake from 2005-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	4.7	3-3+	44.0	9.6	10	Fair	-0.872	58.20%
	Score	3	3	2	2				
2016[a]	Value								
	Score								
2015	Value			41.6	17.8				
	Score			2	3				
2014[a]	Value								
	Score								
2013	Value			121.6	24.0				
	Score			4	4				
2012	Value			77.6	7.2				
	Score			4	2				
2011	Value	4.9	3.0	51.2	13.6	12	Good	-1.150	68.30%
	Score	3	3	3	3				
2010	Value			92.0	24.0				
	Score			4	4				
2009	Value			40.8	5.6				
	Score			2	2				
2008	Value	4.9	3.0	47.2	6.4	10	Fair	-0.865	57.90%
	Score	3	3	2	2				
2007	Value			52.8	7.2				
	Score			3	2				
2006	Value			28.0	4.8				
	Score			2	2				
2005	Value	5.2	3.0	49.6	3.2	11	Good	-1.270	71.90%
	Score	4	3	2	2				

nedsungb.d05-17; nedaaggb.d11, d08,d17

[a] = sample not collected

Table 54. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Greenbo Lake.

	Inch class														
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥6.0 in		≥8.0 in		≥10.0 in		Total		Total (excluding < 3.0 in)
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	
2017	6.4	4.7	21.6	7.2	2.4	1.0	20.8	5.9	18.4	6.3	1.6	1.0	48.8	7.3	50.4
2014[a]															
2015			11.2	2.3	6.4	2.0	14.4	6.0	8.0	5.1	1.6	1.6	25.6	7.1	25.6
2014[a]															
2013			1.6	1.1	3.2	1.8	6.4	3.1	3.2	2.4	2.4	2.4	8.0	2.9	8.0
2012			4.8	4.8	0.8	0.8	1.6	1.1	0.8	0.8	0.8	0.8	6.4	4.7	6.4
2011	0.8	0.8	3.2	1.8	6.4	2.0	10.4	3.6	4.0	2.5			14.4	4.1	13.6
2010	4.8	2.1	11.2	4.2	8.0	2.4	12.0	3.2	4.0	2.2	0.8	0.8	28.0	7.3	23.2
2009	0.8	0.8	0.8	0.8	2.4	1.2	2.4	1.2					4.0	1.8	3.2
2008			7.2	3.7	5.6	3.4	6.4	3.3	0.8	0.8			13.6	5.7	13.6
2007	2.4	1.2	12.0	6.1	1.6	1.1	1.6	1.1					16.0	6.9	13.6

nedsungb.d17 - d07

* In 2012, <3.0-in fish were not collected.

[a] = sample not collected

Table 55. Redear sunfish PSD and RSD_9 values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥4.0 in	PSD (± 95% CI)		RSD_9 (± 95% CI)	
2017	53	45	±14	25	±12
2016[a]					
2015	26	54	±20	23	±17
2014[a]					
2013	8	63	±36	50	±37
2012	5	20	±39	20	±39
2011	17	41	±24	12	±16
2010	22	32	±20	23	±18
2009	4	25	±49	0	±00
2008	13	23	±24	0	±00
2007	11	9	±18	0	±00

nedsungb.d17, d15, d13 - d05

[a] = sample not collected

Table 56. Mean back-calculated lengths (in) at each annulus for redear collected from Greenbo Lake, including size range at each age and 95% confidence intervals.

		Age				
Year	No.	1	2	3	4	5
2017	0					
2016	0					
2015	19	2.8	5.0			
2014	14	3.6	6.3	8.5		
2013	5	3.7	6.1	8.2	9.4	
2012	2	3.0	6.2	8.8	9.8	10.5
Mean		3.2	5.7	8.4	9.5	10.5
Number		40	40	21	7	2
Smallest		2.1	3.9	7.7	9.2	10.0
Largest		4.3	0.1	9.5	10.3	10.9
Std error		0.1	0.1	0.1	0.1	0.5
95% CI (±)		0.3	0.5	0.5	0.6	1.7

Otoliths were used for age determination; Intercept = 0

nedaaggb.d17

Table 57. Age frequency and CPUE of redear sunfish sampled in 2017.

	Inch class										
Age	4	5	6	7	8	9	10	Total	%	CPUE	Std. error
1								0			
2	9	18	2					29	56	23.2	6.6
3				1	10	4		15	29	12.1	3.7
4						7		7	13	5.5	2.4
5							1	1	2	0.8	0.8
Total	9	18	2	1	10	11	1	52	100		
%	17	35	4	2	19	21	2	100			

nedsungb.d17; nedaaggb.d17

Table 58. Population assessment of redear sunfish based on samples collected at Greenbo Lake from 2007-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥ 8.0 in	CPUE ≥ 10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	8.2	3	18.4	1.6	13	Good	-0.975	62.30%
	Score	4	4	4	1				
2016[a]	Value								
	Score								
2015	Value			8.0	1.6				
	Score			2	1				
2014[a]	Value								
	Score								
2013	Value			3.2	2.4				
	Score			1	2				
2012	Value			0.8	0.8				
	Score			1	1				
2011	Value	9.7	3	4.0	0.0	11	Good	-0.271	23.70%
	Score	4	4	3	0				
2010	Value			4.0	0.8				
	Score			3	1				
2009	Value			0.0	0.0				
	Score			0	0				
2008	Value	7.6	4	0.8	0.0	8	Fair	-0.626	46.50%
	Score	4	3	1	0				
2007	Value			0.0	0.0				
	Score			0	0				

nedsungb.d17,d15, d13 - d05; nedaaggb.d17, d11, d08

[a] = sample not collected

Table 59. Length frequency and CPUE (fish/hr) of black bass collected in 0.88 hours (3- 0.25 hour runs and 1- 0.13 hour run) of diurnal electrofishing in Mill Creek Lake on 24 April.

	Inch class																				Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	error
Largemouth bass	3	9	10	5	3	14	20	14	24	47	46	23	6	2			1		2	229	257.6	13.9

nedpsdmc.d17

Table 60. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Mill Creek Lake.

	Inch class											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		>20.0 in		Total	
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.
2017	46.8	10.3	118.9	13.4	85.2	11.1	6.9	4.0	2.9	1.9	257.6	13.9
2016[a]												
2015[a]												
2014	27.0	3.8	155.0	14.3	32.0	7.8	18.0	2.6	5.0	1.9	232.0	11.9
2013[a]												
2012	27.0	11.5	97.0	12.4	20.0	5.4	14.0	2.6	7.0	3.0	158.0	27.8
2011[a]												
2010	43.0	8.1	65.0	6.6	41.0	10.3	12.0	3.7	1.0	1.0	161.0	10.0
2009	9.0	3.8	52.0	5.4	44.0	3.3	12.0	4.6	4.0	1.6	117.0	3.4
2008	10.0	3.5	89.0	10.8	38.0	3.5	12.0	3.7	3.0	1.9	149.0	11.0
2007	31.0	5.3	84.0	15.9	31.0	9.0	7.0	2.5			153.0	22.3
2006	45.0	18.5	108.0	11.0	22.0	2.0	7.0	4.4			182.0	28.7
2005[a]												
2004	50.4	16.1	68.0	4.6	17.6	2.0	5.6	1.6	1.6	1.6	283.0	35.9
2003[a]												
2002[a]												
2001	36.0	8.5	59.0	10.6	13.0	3.0	7.0	2.5	1.0	1.0	115.0	17.5
2000	39.0	11.4	70.0	11.5	12.0	3.3	4.0	0.0			125.0	21.6
1999	29.0	6.8	4.0	11.4	70.0	3.4	2.0	1.2			78.0	20.9
1998[a]												
1997	27.0	6.6	44.0	6.7	22.0	3.5	6.0	2.6	3.0	1.9	99.0	13.9
1996[a]												
1995[a]												
1994	91.0	21.0	178.0	4.0	8.0	4.0	5.0	1.0	2.0	0.0	282.0	12.0
1993[a]												
1992	90.0	0.0	44.0	6.0	12.0	2.0	4.0	0.0			150.0	4.0
1991	86.1	6.1	31.5	2.5	19.2	0.8	2.3	0.3			176.0	40.0
1990[a]												

nedpsdmc.d17 - d04; nedlmbmc.d03 - d90

[a] = Lake not sampled

Table 61. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (± 95% CI)		RSD_{15} (± 95% CI)	
2017	185	43	±07	3	±04
2016[a]					
2015[a]					
2014	205	24	±06	9	±04
2013[a]					
2012	131	26	±08	11	±05
2011[a]					
2010	118	45	±09	10	±05
2009	108	52	±09	11	±06
2008	139	36	±08	9	±05
2007	122	31	±08	6	±04
2006	137	21	±07	5	±04
2005[a]					
2004	114	25	±08	6	±04
2003[a]					
2002[a]					
2001	79	25	±10	9	±06
2000	86	19	±08	5	±04
1999	49	18	±11	4	±06
1998[a]					
1997	72	39	±11	8	±06
1996[a]					
1995[a]					
1994	191	7	±04	3	±02
1993[a]					
1992	60	27	±11	7	±06
1991	47	40	±14	4	±06
1990[a]					

nedpsdmc.d17 - d04; nedlmbmc.d03 - d90

[a] = Lake not sampled

Table 62. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Mill Creek Lake in October 2017, includes 95% confidence interval (CI) for mean length for each age class.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2017	0								
2016	18	4.5							
2015	13	4.5	8.1						
2014	5	4.6	8.2	9.9					
2013	11	4.5	7.7	9.9	11				
2012	4	4.7	7.7	9.8	11.1	12			
2011	7	5.0	8.3	9.9	10.9	11.8	12.4		
2010	1	5.1	8.3	10.8	12.1	13.1	13.7	14.1	
2009	1	5.3	8.8	10.6	12.0	12.5	13.0	13.4	13.8
Mean		4.6	8.0	9.9	11.1	12.0	12.6	13.8	-
Number		60	42	29	24	13	9	2	1
Smallest		3.3	6.4	9.1	9.7	11.2	11.7	13.4	
Largest		6.7	9.2	10.8	12.1	13.1	13.7	14.1	
Std. error		0.1	0.1	0.1	0.1	0.1	0.2	0.4	
95% CI (±)		0.4	0.4	0.4	0.5	0.6	0.7	1.4	

nedaagmc.d17

Table 63. Population assessment of largemouth bass based on samples collected at Mill Creek Lake from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	10.7	31.9	85.2	6.9	2.9	13	Good	-0.423	34.30%
	Score	1	3	3	2	3				
2016[a]	Value									
	Score									
2015[a]	Value									
	Score									
2014	Value		22.0	32.0	18.0	5.0	13	Good		
	Score	2	2	2	3	4				
2013[a]	Value									
	Score									
2012	Value		25.0	20.0	14.0	7.0	12	Good		
	Score	2	2	2	2	4				
2011[a]	Value									
	Score									
2010	Value		1.0	41.0	12.0	1.0	10	Fair	-0.302	26.00%
	Score	2	1	3	2	2				
2009	Value		1.0	44.0	12.0	4.0	12	Good	-0.085	8.10%
	Score	2	1	3	2	4				
2008	Value	10.5	2.0	38.0	12.0	3.0	11	Fair	-0.312	26.80%
	Score	2	1	3	2	3				
2007	Value		14.1	31.0	7.0	0.0	7	Poor	-0.825	56.20%
	Score	2	1	2	2	0				
2006	Value		19.6	22.0	7.0	0.0	8	Fair	-0.425	34.90%
	Score	2	2	2	2	0				
2005[a]	Value									
	Score									
2004	Value		17.0	17.0	5.6	1.6	9	Fair	-0.315	27.10%
	Score	2	2	1	2	2				
2003[a]	Value									
	Score									
2002[a]	Value									
	Score									
2001	Value	10.7	30.1	13.0	7.0	1.0	9	Fair		
	Score	2	2	1	2	2				

nedpsdmc.d12 - d04; nedlmbmc.d03 - d00

Table 64. Length frequency and CPUE (fish/hr) of black bass collected in 0.96 hours (3- 0.25 hour runs and 1- 0.21 hour run) of diurnal electrofishing in Mill Creek Lake on 02 October.

	Inch class																Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	error
Largemouth bass	7	18	6	1	6	15	6	7	6	14	12	6	2	2	108	111.8	28.5

nedwrsmc.d17

Table 65. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Mill Creek Lake.

	Length group											
	8.0 - 11.9 in			12.0 - 14.9 in			≥ 15.0 in			Overall		
Year	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.	No.	W_r	s.e.
2017	33	90	1	20	90	1	2	90	2	55	90	1
2010	60	85	1	16	84	1	3	93	4	79	85	1
2009	36	84	1	18	86	2	6	96	3	60	86	1
2008	34	84	1	18	88	1	2	98	12	54	86	1
2007	58	87	1	12	85	2	3	90	1	73	87	1

nedwrsmc.d17; d10 - d07

Table 66. Length frequency and CPUE (fish/hr) of bluegill collected in 0.75 hours (3- 0.25 hour runs) of diurnal electrofishing in Mill Creek Lake on 18 May.

	Inch class									Std.
Species	3	4	5	6	7	8	9	Total	CPUE	error
Bluegill	47	59	24	18	20	18	3	189	252.0	18.0

nedsunmc.d17

Table 67. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Mill Creek Lake from 2005-2017.

	Length group										Total		CPUE (excluding <3.0 in)
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥6.0 in		≥8.0 in				
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	
2017			173.3	15.5	50.7	6.7	78.7	13.1	28.0	6.9	252.0	18.0	252.0
2016[a]													
2015			54.0	4.8	39.0	17.1	55.0	23.3	16.0	10.7	109.0	22.1	109.0
2014[a]													
2013[a]													
2012			161.0	37.4	74.0	8.7	98.0	12.4	24.0	7.1	259.0	42.4	259.0
2011[a]													
2010	254.0	11.9	153.0	23.2	35.0	8.7	46.0	6.2	11.0	3.0	453.0	37.3	199.0
2009	519.0	219.0	193.0	15.3	19.0	7.0	23.0	6.0	4.0	1.6	735.0	234.1	216.0
2008			164.0	49.9	20.0	10.1	28.0	13.7	8.0	4.6	192.0	55.6	192.0
2007			76.0	14.7	18.0	6.2	25.0	7.9	7.0	3.2	101.0	14.0	101.0
2006	124.6	48.9	74.3	16.2	33.1	8.1	42.3	13.0	9.1	7.9	241.1	73.9	116.6
2005	42.3	8.1	98.3	16.2	77.2	12.3	100.6	16.6	22.9	7.5	241.1	17.6	198.9

nedsunmc.d17, d15, d12 - d05

[a] = Lake not sampled

Table 68. Bluegill PSD and RSD_8 values from spring electrofishing at Mill Creek Lake.

Year	No. ≥ 3.0 in	PSD (± 95% CI)		RSD_8 (± 95% CI)	
2015	189	31	±07	11	±04
2014[a]					
2015	109	50	±09	15	±07
2014[a]					
2013[a]					
2012	259	38	±06	9	±04
2011[a]					
2010	199	23	±06	6	±03
2009	216	11	±04	2	±02
2008	96	15	±07	4	±04
2007	101	25	±08	7	±05
2006	102	36	±09	8	±05
2005	174	51	±07	11	±05

nedsunmc.d17, d15, d12 - d05

[a] = Lake not sampled

Table 69. Population assessment of bluegill based on samples collected at Mill Creek Lake from 2005-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥ 6.0 in	Spring CPUE ≥ 8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value			78.7	28.0				
	Score			3	4				
2016[a]	Value								
	Score								
2015	Value	4.67	3	55.0	16.0	13	Good	-0.458	36.80%
	Score	3	3	3	4				
2014[a]	Value								
	Score								
2013[a]	Value								
	Score								
2012	Value			98.0	24.0				
	Score			4	4				
2011[a]	Value								
	Score								
2010	Value	3.9	3-3+	46.0	11.0	10	Fair	-1.503	77.80%
	Score	2	3	2	3				
2009	Value			23.0	4.0				
	Score			1	1				
2008	Value			28.0	8.0				
	Score			2	2				
2007	Value	4.4	4-4+	25.0	7.0	8	Fair	-1.391	75.10%
	Score	2	2	2	2				
2006	Value			42.3	9.1				
	Score			2	2				
2005	Value			100.6	22.9				
	Score			4	4				

nedsunmc.d17, d15, d12 - d05

[a] = Lake not sampled

Table 70. Length frequency and CPUE (fish/hr) of black bass collected in 1.25 hour (5- 15-minute runs) of diurnal electrofishing for largemouth bass in Lake Reba on 17 April.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Largemouth bass	2	32	175	193	65	12	32	81	94	70	37	11	11	6	2	2		2	4	831	664.8	53.0

nedpsdlr.d17

Table 71. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Reba from 1995-2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2017	373.6	51.5	175.2	19.9	94.4	21.2	21.6	2.4	4.8	0.8	664.8	53.0
2016	108.0	15.8	102.0	23.7	41.0	10.0	13.0	1.9	2.0	1.2	264.0	19.5
2015	103.2	26.5	84.0	9.2	96.8	12.9	33.6	5.7	4.0	1.8	317.6	23.0
2014	56.0	11.0	144.0	12.4	95.0	10.8	75.0	18.1	7.0	5.7	370.0	22.7
2013	60.1	7.8	102.4	7.7	63.3	11.0	27.1	8.7	0.0		252.9	26.9
2012	103.3	16.5	90.7	9.0	68.0	8.2	16.7	4.2	1.3	0.8	278.7	13.5
2011	66.0	11.4	108.7	16.8	106.0	18.6	25.3	6.1	2.0	1.4	306.0	35.8
2010	67.7	8.1	118.3	19.4	57.7	8.0	6.8	1.7	0.7	0.7	246.0	26.8
2009	47.3	7.6	238.7	12.9	92.7	7.3	26.0	3.2	0.7	0.7	404.7	23.4
2008	77.3	18.4	208.0	28.4	34.0	6.3	12.7	2.6	0.0		332.0	47.1
2007	134.7	20.9	216.7	45.9	60.7	5.2	18.7	4.1	0.7	0.7	430.7	52.2
2006	189.3	18.9	70.7	13.5	26.0	4.9	6.0	2.3	0.0		292.0	27.1
2005	53.3	9.3	57.3	8.1	45.3	4.3	13.3	2.2	0.7	0.7	169.3	16.4
2004	30.0	8.9	125.3	21.5	51.3	9.2	6.7	2.2	0.0		213.3	26.0
2003	110.0	17.9	126.0	10.9	52.0	6.1	8.0	2.5	0.7	0.7	296.0	27.3
2002	138.0	33.6	140.0	31.3	31.0	6.6	5.0	1.0	0.0		314.0	67.0
2001	196.0	25.0	32.0	15.1	9.3	5.3	4.0	2.3	0.0		241.3	32.4
2000	104.1	17.3	35.1	6.6	4.6	0.6	8.0	3.3	0.0		151.7	11.3
1999	122.7	29.4	10.0	3.5	8.0	2.1	18.0	4.7	0.7	0.7	158.7	27.3
1998	76.0	23.7	10.0	2.6	23.0	5.5	21.0	3.4	2.0	1.2	130.0	28.5
1997												
1996	104.0	32.2	7.0	3.4	15.0	5.7	14.0	2.6	0.0		140.0	28.8
1995	160.0	52.9	21.0	7.7	74.0	7.4	3.0	1.9	0.0		258.0	61.5

nedpsdlr.d95 - Present

Table 72. Largemouth bass PSD and RSD_{15} values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (± 95% CI)		RSD_{15} (± 95% CI)	
2017	364	40	(± 5)	7	(± 3)
2016	156	35	(± 7)	8	(± 4)
2015	268	61	(± 6)	16	(± 4)
2014	314	54	(± 6)	24	(± 5)
2013	243	47	(± 6)	14	(± 4)
2012	263	48	(± 6)	10	(± 4)
2011	360	55	(± 5)	11	(± 3)
2010	270	35	(± 6)	4	(± 2)
2009	536	33	(± 4)	7	(± 2)
2008	382	18	(± 4)	5	(± 2)
2007	444	27	(± 4)	6	(± 2)
2006	154	31	(± 7)	6	(± 4)
2005	174	51	(± 7)	11	(± 5)
2004	275	32	(± 6)	4	(± 2)
2003	279	32	(± 5)	4	(± 2)
2002	176	20	(± 6)	3	(± 2)
2001	33	30	(± 16)	9	(± 10)
2000	43	28	(± 14)	19	(± 12)
1999	98	72	(± 12)	50	(± 13)
1998	26	81	(± 10)	39	(± 13)
1997					
1996	54	96	(± 8)	62	(± 19)
1995	54	79	(± 8)	3	(± 3)

nedpsdlr.d17 - d98, d96 - d95

Table 73. Population assessment of largemouth bass based on samples collected at Lake Reba from 2001-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Spring CPUE age-1	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value		94.4	21.6	4.8	321.6	18	Excellent		
	Score	3	4	3	4	4				
2016	Value		41.0	13.0	2.0	101.0	15	Good		
	Score	3	3	2	3	4				
2015	Value	11.0	96.8	33.6	4.0	72.8	19	Excellent	-0.464	37.10%
	Score	3	4	4	4	4				
2014	Value		95.0	75.0	7.0	50.0	18	Excellent		
	Score	3	4	4	4	3				
2013	Value		63.3	27.1	0.0	28.4	15	Good		
	Score	3	4	4	1	3				
2012	Value		68.0	16.7	1.3	76.0	16	Good		
	Score	3	4	3	2	4				
2011	Value		106.0	25.3	2.0	52.7	16	Good		
	Score	3	4	3	3	3				
2010	Value	11.4	57.7	6.8	0.7	47.1	14	Good	-1.019	63.90%
	Score	3	4	2	2	3				
2009	Value		92.7	26.0	0.7	65.3	16	Good	-0.162	15.00%
	Score	3	4	3	2	4				
2008	Value		34.0	12.7	0.0	113.0	13	Good	-1.030	64.30%
	Score	3	3	2	1	4				
2007	Value		60.7	18.7	0.7	183.7	16	Good	-1.040	65.00%
	Score	3	4	3	2	4				
2006	Value	11.2	26.0	6.0	0.0	192.0	13	Good	-0.790	55.00%
	Score	3	3	2	1	4				
2005	Value		45.3	13.3	0.7	41.2	13	Good	-0.250	22.00%
	Score	1	4	3	2	3				
2004	Value		51.3	6.7	0.0	23.2	11	Fair	-0.290	25.00%
	Score	1	4	2	1	3				
2003	Value		52.0	8.0	0.7	52.1	12	Fair	-0.500	39.00%
	Score	1	4	2	2	3				
2002	Value		31.0	5.0	0.0	105.8	10	Fair		
	Score	1	3	1	1	4				
2001	Value	10.1	9.3	4.0	0.0	186.9	8	Poor		
	Score	1	1	1	1	4				

nedpsdlr.d17

Table 74. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass while diurnal electrofishing at Lake Reba

		Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017	Total	4.8	0.1	501.3	123.3	196.0	34.2		
2016	Total	5.1	0.1	490.0	43.9	279.0	8.1	321.6	48.5
2015	Total	4.5	0.6	116.0	34.5	35.2	10.2	101.0	15.2
2014	Total	4.1	0.1	375.0	29.6	74.0	16.5	100.0	27.3
2013	Total	3.9	0.1	80.0	16.4	12.0	4.4	50.0	8.9
2012	Total	4.5	0.1	129.1	16.8	37.2	6.0	54.6	9.4
2011	Total	4.4	0.0	334.9	44.8	84.4	19.5	76.0	14.9
2010	Total	3.9	0.1	58.7	18.9	10.7	4.8	57.3	10.5
2009	Total	4.0	0.1	58.7	15.6	11.3	8.1	47.1	7.0
2008	Total	4.2	0.1	58.7	15.6	11.3	8.1	65.3	7.1
2007	Total	4.3	0.1	44.0	11.2	5.3	2.2	113.0	27.2
2006	Total	4.3	0.0	175.3	35.9	30.0	8.7	183.7	22.1
2005	Total	5.2	0.1	225.0	48.6	133.0	30.2	192.0	19.5
2004	Total	4.2	0.1	76.7	9.6	15.3	1.9	61.0	10.4
2003	Total	3.7	0.2	23.3	4.8	0.7	0.7	47.3	14.0

nedbsilr.d17-d16, nedwrslr.d15, nedbsilr.d14 - d12, nedwrslr.d11 - d03, nedpsdlr.d17-d02

Table 75. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hour (10- 7.5-minute runs) of diurnal electrofishing for sunfish at Lake Reba on 03 May.

	Inch class												
Species	1	2	3	4	5	6	7	8	9	10	Total	CPUE	Std. error
Bluegill	3	85	74	79	57	34	30	4			366	281.5	46.7
Redear sunfish		2	4	6	5	4	12	31	18	1	83	63.9	9.9

nedpsdlr.d17

Table 76. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Reba from 1995-2017.

	Length group												
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		Total		Total CPUE
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	(excluding <3.0 in)
2017			161.5	24.1	49.2	7.7	52.3	7.8	3.1	1.7	281.5	46.7	213.9
2016[a]													
2015			418.0	83.2	83.0	25.1	84.0	25.1	1.0	1.0	502.0	78.8	502.0
2014[a]													
2013			371.0	84.6	44.0	15.3	44.0	15.3			415.0	415.0	415.0
2012			151.0	26.4	38.0	14.7	38.0	14.7			189.0	36.6	189.0
2011	2169.0	361.1	919.0	141.7	98.0	26.5	99.0	26.7	1.0	1.0	3187.0	448.7	1018.0
2010	514.4	138.5	375.2	35.5	21.6	4.8	21.6	4.8			911.2	144.8	396.8
2009	527.0	93.0	200.0	19.7	22.0	6.4	22.0	6.4			749.0	100.5	222.0
2008	188.0	41.9	194.0	41.1	71.0	11.6	71.0	11.6			453.0	59.1	265.0
2007			73.0	10.8	29.0	7.7	29.0	7.7			102.0	10.9	102.0
2006	843.2	140.7	228.8	22.9	79.2	20.3	79.2	20.3			1151.2	158.5	308.0
2005	279.2	37.0	308.0	42.7	97.6	19.4	97.6	19.4			684.8	74.4	405.6
2004	199.2	39.4	187.2	27.0	23.2	7.0	23.2	7.0			409.6	58.2	210.4
2003	178.4	27.9	356.0	49.7	49.5	20.1	49.5	20.1			584.0	75.3	405.6
2002	266.0	39.7	703.0	102.0	29.0	10.4	29.0	10.4			998.0	138.3	732.0
2001			1210.7	207.6	89.3	16.7	89.3	16.7			1300.0	220.3	1300.0
2000	7.0	4.7	1181.3	152.3	303.5	13.0	303.5	13.0			1327.0	124.5	1320.0
1999	74.0	74.0	700.0	120.0	48.0	16.0	48.0	16.0			822.0	30.0	748.0
1998			1032.0		4.0		4.0				1036.0	0.0	1036.0
1997[a]													
1996	16.0	12.0	722.0	110.0	22.0	18.0	22.0	18.0			760.0	140.0	744.0
1995			338.0	54.0	32.0	0.0	32.0	0.0			1370.0	54.0	1370.0

nedsunlr.d17, d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 77. Bluegill PSD and RSD_8 values from spring electrofishing at Lake Reba.

Year	No.≥ 3.0 in	PSD (± 95% CI)		RSD_8 (± 95% CI)	
2017	278	24	(± 5)	1	(± 1)
2016[a]					
2015	502	17	(± 3)	0	(± 0)
2014[a]					
2013	415	11	(± 3)		
2012	189	20	(± 6)		
2011	1018	10	(± 2)	0	(± 0)
2010	496	5	(± 2)		
2009	222	10	(± 4)		
2008	265	27	(± 5)		
2007	102	28	(± 9)		
2006	385	26	(± 4)		
2005	507	24	(± 4)		
2004	263	11	(± 4)		
2003	507	12	(± 3)		
2002	732	4	(± 1)		
2001	975	7	(± 2)		
2000	1320	21	(± 2)		
1999	374	6	(± 2)		
1998	259	0	(± 1)		
1997[a]					
1996	372	3	(± 2)		
1995	685	2	(± 1)		

nedsunlr.d17, d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 78. Mean back calculated lengths (in) at each annulus for bluegill collected from Lake Reba in May 2017, includes 95% confidence interval (CI) for mean length for each age class.

		Age					
Year	No.	1	2	3	4	5	6
2017	0						
2016	34	3.7					
2015	12	3.6	6.1				
2014	9	3.2	5.7	7.3			
2013	2	2.9	4.8	6.2	7.3		
2012	2	3.3	5.4	6.6	7.3	6.1	
2011	1	2.8	4.5	5.6	6.4	6.9	7.4
Mean		3.5	5.7	6.9	7.1	6.4	-
Number		60	26	14	5	3	1
Smallest		2.1	4.5	5.6	6.4	4.2	
Largest		5.5	7.0	8.2	7.6	8.1	
Std. error		0.1	0.1	0.2	0.2	1.2	
95% CI (±)		0.5	0.5	0.8	0.9	4.6	

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Table 79. Age frequency and CPUE (fish/nn) of bluegill electrofished from Lake Reba in May 2017.

	Inch class										Std.
Age	2	3	4	5	6	7	8	Total	%	CPUE	error
0											
1	85	74	79	25				263	73	202.6	37.4
2				32	21	5		58	16	44.9	7.6
3					9	16	2	27	7	20.7	2.8
4					4	3		7	2	5.4	1.0
5						3	2	5	1	3.6	1.0
6						3		3	1	2.1	0.4
Total	85	74	79	57	34	30	4	363	100		
%	23	20	22	16	9	8	1	100			

nedsunlr.d17; nedaaglr.d17

Table 80. Population assessment of bluegill based on samples collected at Lake Reba from 1995-2017 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	6.1	3+	52.3	3.1	12	Good	-0.956	61.50%
	Score	4	3	2	3				
2016[a]	Value								
	Score								
2015	Value			84.0	1.0				
	Score			4	1				
2014[a]	Value								
	Score								
2013	Value			44.0	0.0				
	Score			2	0				
2012	Value	4.0	3+	38.0	0.0	7	Fair	-0.112	10.60%
	Score	2	3	2	0				
2011	Value			99.0	1.0				
	Score			4	1				
2010	Value			21.6	0.0				
	Score			1	0				
2009	Value			22.0	0.0				
	Score			1	0				
2008	Value	4.0	3+	71.0	0.0	8	Fair	-0.719	51.30%
	Score	2	3	3	0				
2007	Value			29.0	0.0				
	Score			2	0				
2006	Value			79.2	0.0				
	Score			4	0				
2005	Value			97.6	0.0				
	Score			4	0				
2004	Value			23.2	0.0				
	Score			1	0				
2003	Value	4.1	3+	49.6	0.0	7	Fair	-0.422	34.40%
	Score	2	3	2	0				
2002	Value			29.0	0.0				
	Score			2	0				
2001	Value			89.3	0.0				
	Score			4	0				
2000	Value	5.0	4+	303.5	0.0	10	Fair		
	Score	4	2	4	0				
1999	Value			48.0	0.0				
	Score			2	0				
1998	Value			4.0	0.0				
	Score			1	0				
1997[a]	Value								
	Score								
1996	Value			22.0	0.0				
	Score			1	0				
1995	Value			32.0	0.0				
	Score			2	0				

nedsunlr.d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 81. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Reba from 1995-2017.

	Length group														
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 6.0 in		≥ 8.0 in		≥ 10.0 in		Total		Total CPUE
Year	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	CPUE	s.e.	(excluding <3.0 in)
2017			11.5	4.3	12.3	4.0	50.8	7.6	38.5	5.6	0.8	0.8	63.9	9.9	62.3
2016[a]															
2015			54.0	7.7	198.0	56.5	231.0	56.9	33.0	6.3			285.0	58.6	285.0
2014[a]															
2013			98.0	26.2	143.0	23.6	145.0	23.5	2.0	1.3			243.0	21.2	243.0
2012			79.0	15.2	94.0	24.5	95.0	25.2	1.0	1.0			174.0	33.5	174.0
2011	31.0	12.6	146.0	19.6	204.0	57.8	210.0	59.4	6.0	3.3			387.0	48.7	356.0
2010	14.4	5.8	101.6	19.2	28.0	7.4	28.8	7.9	0.8	0.8			144.8	28.2	130.4
2009	184.0	52.9	150.0	22.9	60.0	4.5	60.0	4.5					394.0	65.7	210.0
2008	10.0	5.0	134.0	18.3	225.0	18.0	226.0	18.5	1.0	1.0			370.0	33.0	360.0
2007			122.0	16.3	33.0	5.9	35.0	5.0	2.0	1.3			157.0	20.3	157.0
2006	111.2	30.7	121.6	17.2	205.6	44.7	206.4	44.8	0.8	0.8			439.2	51.5	328.0
2005	16.8	5.9	39.2	5.5	196.0	33.4	196.0	33.4					252.0	30.7	235.2
2004	17.6	4.6	59.2	18.3	67.2	13.7	67.2	13.7					144.0	30.4	126.4
2003	13.6	5.7	119.2	19.8	178.4	68.8	178.4	68.8					311.2	82.9	297.6
2002	11.0	1.9	424.0	124.1	151.0	47.9	152.0	48.7	1.0	1.0			587.0	160.3	576.0
2001			220.0	46.1	84.0	32.7	85.3	32.4	1.3	1.3			305.3	39.4	305.3
2000			125.8	39.3	134.9	39.6	134.9	39.6					245.0	74.9	245.0
1999	2.0	2.0	92.0	36.0	122.0	22.0	122.0	22.0					216.0	60.0	214.0
1998			80.0		44.0		44.0						124.0	0.0	124.0
1997[a]															
1996			44.0	20.0	14.0	10.0	14.0	10.0					58.0	30.0	58.0
1995															

nedsunlr.d17, d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 82. Redear sunfish PSD and RSD_9 values from spring electrofishing at Lake Reba.

Year	No.≥ 3.0 in	PSD (± 95% CI)		RSD_9 (± 95% CI)	
2017	77	81	(± 10)	25	(± 10)
2016[a]					
2015	265	62	(± 6)		
2014[a]					
2013	237	26	(± 6)		
2012	139	21	(± 7)		
2011	310	22	(± 5)	0	(± 0)
2010	118	8	(± 5)		
2009	175	4	(± 3)		
2008	342	11	(± 3)		
2007	141	10	(± 5)		
2006	297	49	(± 6)		
2005	264	19	(± 5)		
2004	146	4	(± 3)		
2003	359	4	(± 2)		
2002	452	6	(± 2)		
2001	158	9	(± 4)		
2000	216	29	(± 6)		
1999	91	4	(± 4)		
1998	27	4	(± 7)		
1997[a]					
1996	28	4	(± 7)		
1995					

nedsunlr.d17, d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 83. Mean back calculated lengths (in) at each annulus for redear sunfish collected from Lake Reba in May 2017, includes 95% confidence interval (CI) for mean length for each age class.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2017	0								
2016	16	4.2							
2015	16	4.3	7.3						
2014	7	3.7	6.4	8.3					
2013	9	3.8	6.2	7.9	9.1				
2012	3	3.3	5.4	7.0	8.1	8.9			
2011	2	3.3	5.0	6.6	7.6	8.4	9.2		
2010	0								
2009	2	2.6	4.5	5.6	9.7	7.4	7.8	8.4	8.9
Mean		3.9	6.5	7.6	8.4	8.3	8.5	8.4	8.9
Number		55	39	23	16	7	4	2	2
Smallest		2.3	4.4	5.2	6.3	7.0	7.6	8.1	8.6
Largest		5.9	8.8	9.5	10.1	9.2	9.6	8.6	9.1
Std. error		0.1	0.2	0.2	0.2	0.3	0.4	0.2	0.3
95% CI (±)		0.5	0.7	0.8	1.0	1.1	1.7	0.9	0.9

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Table 84. Age frequency and CPUE (fish/nn) of redear sunfish electrofished from Lake Reba in May 2017.

	Inch class												Std.
Age	2	3	4	5	6	7	8	9	10	Total	%	CPUE	error
0										0			
1	2	4	6	5						17	20	13.1	4.7
2					4	11	8			23	27	17.4	4.1
3						1	16			17	20	12.9	2.0
4							3	11	1	15	17	10.8	2.0
5							3	3		6	7	4.3	0.7
6								3		3	4	2.3	0.5
7										0	0	0.0	
8							3	2		5	5	3.1	0.5
Total	2	4	6	5	4	12	33	19	1	86	100		
%	2	5	7	6	5	14	37	22	1	100			

nedsunlr.d17; nedaaglr.d17

Table 85. Population assessment of redear sunfish based on samples collected at Lake Reba from 1995-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	Spring CPUE ≥8.0 in	Spring CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2017	Value	8.3	4+	38.5	0.8	13	Good	-0.512	40.00%
	Score	4	3	4	2				
2016[a]	Value								
	Score								
2015	Value			33.0	0.0				
	Score			4	0				
2014[a]	Value								
	Score								
2013	Value			2.0	0.0				
	Score			1	0				
2012	Value	5.8	>6	1.0	0.0	4	Poor	-0.963	61.80%
	Score	2	1	1	0				
2011	Value			6.0	0.0				
	Score			2	0				
2010	Value			0.8	0.0				
	Score			1	0				
2009	Value			0.0	0.0				
	Score			0	0				
2008	Value	6.3	>7	1.0	0.0	5	Poor	-0.810	55.70%
	Score	3	1	1	0				
2007	Value			2.0	0.0				
	Score			1	0				
2006	Value			0.8	0.0				
	Score			1	0				
2005	Value			0.0	0.0				
	Score			0	0				
2004	Value			0.0	0.0				
	Score			0	0				
2003	Value	6.5	>6	0.0	0.0	5	Poor	-0.322	27.90%
	Score	4	1	0	0				
2002	Value			1.0	0.0				
	Score			1	0				
2001	Value			1.3	0.0				
	Score			1	0				
2000	Value			0.0	0.0				
	Score			0	0				
1999	Value			0.0	0.0				
	Score			0	0				
1998	Value			0.0	0.0				
	Score			0	0				
1997[a]	Value								
	Score								
1996	Value								
	Score								
1995	Value								
	Score								

nedsunlr.d15, d13 - d98, d96 - d95

[a] = Sample not collected

Table 86. Fishery statistics derived from a daytime creel survey (752 individual angler interviews) at Lake Reba during April through October 2017 compared to findings from 2005.

	2017	2005
Fishing trips		
No. of fishing trips (per acre)	9,753 (125.04)	7,772 (99.64)
Fishing pressure		
Total man-hours (S.E.)	30,448 (891)	19,302 (746)
Man hours/acre	390.00	248
Catch/harvest		
No. of fish caught (S.E.)	81,363 (8,129)	36,240 (3,735)
No. of fish harvested (S.E.)	66,293 (7,385)	9,249 (1,410)
Lbs. of fish harvested	17,304	1,984
Harvest rate		
Fish/hour	2.1	0.4
Fish/acre	849.9	N/A
Lbs/acre	221.8	N/A
Catch rates		
Fish/hour	2.58	1.85
Fish/acre	1043.1	464.6
Misc. characteristics (%)		
Male	80.7	76.5
Female	19.3	23.5
Resident	96.8	98.0
Non-resident	3.2	2.0
Method (%)		
Still fishing	56.7	77.0
Casting	42.3	17.9
Trot Line/ Jugging	0.9	0.0
Trolling	0.1	2.6
Fly Fishing	0.0	2.5
Mode (%)		
Boat	23.4	14.9
Bank	76.2	85.1
Dock	0.4	0.0

(S.E.) = Standard error

Table 87. Fish harvest statistics derived from the 2017 creel survey at Lake Reba.

	Bluegill	Redear Sunfish	Warmouth	Rock Bass	Green Sunfish	Longear Sunfish	Panfish Group	Largemouth Bass	Illegal Bass	Black Bass Group	Black Crappie	White Crappie	Crappie Group	Channel Catfish	Flathead Catfish	Illegal Catfish	Catfish Group	Anything
Number caught	57,777	6,398	267	84	31	8	64,565	8,682	481	8,682	5,001	981	5,982	1,546	51	56	1,653	
(per acre)	740.7	82.0	3.4	1.1	0.4	0.1	827.8	111.3	6.2	111.3	64.1	12.6	76.7	19.8	0.7	0.7	21.2	
Number harvested	52,383	6,016	199	84	31	0	58,713	275	481	275	4,514	914	5,428	1,318	23	56	1,396	
(per acre)	671.6	77.1	2.6	1.1	0.4		753	3.5	6.2	3.5	58.9	11.7	69.6	16.9	0.3	0.7	17.9	
% of total number harvested	79.0	9.1	0.3	0.1	0.0		88.6	0.4	0.7	0.4	6.8	1.4	8.2	2.0	0.0	0.1	2.1	
Pounds harvested	8152.4	3457.3	62.3	31.5	6.5		11710.0	626.4	313.5	626.4	1948.1	446.5	2,394.6	2079.0	178.4	-	2257.4	
(per acre)	104.5	44.3	0.8	0.4	0.1		150.1	8.0	4.0	8.0	25.0	5.7	60.7	26.7	2.3	-	28.9	
% of total pounds harvested	47.1	20.0	0.4	0.2	0.0		67.7	3.6	1.8	3.6	11.3	2.6	13.8	12.0	1.0	-	13.0	
Mean length (in)	6.3	9.23	7.5	7.3	7.0			16.4	12.1		9.4	10.2		16.7	27.0	7.0		
Mean weight (lbs)	0.16	0.5	0.34	0.35	0.21			2.31	0.93		0.44	0.5		1.53	7.79	-		
Number fishing trips for that species							6299.8			2,341.2			451.7				422.3	238.0
% of all trips							64.6			24.1			4.6				4.3	2.4
Hours fished for that species							19,667.3			7,309.1			1,410.0				1,318.5	742.9
(per acre)							(252.14)			(93.71)			(18.08)				(16.90)	(9.52)
Number harvested fishing for that species							55			196			4				778	
Pounds harvested fishing for that species							11169.0			424.8			1587.3				12.9	
Number harvested per hour fishing for that species							2693.0			0.0			2.1				0.2	
% success fishing for that species							58.1			2.9			71.2				37.0	17.4

Table 88. Length distribution (length of released fish are estimates) for each species of fish harvested (H) and/or released (R) at Lake Reba from April through October 2017.

Species		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total (By Status)	Total (Overall)	Harvest (%)
Bluegill	H	638	3762	8831	18205	12721	5261	2822	112	31															52,383	57,777	91
	R	479	1468	1190	1237	603	263	154																	5,394		
Largemouth Bass	H													79	118	39		39							275	8,682	3
	R						239	1177	1586	2660	665	1091	375	119	188	119	85	51	17	17	18				8,407		
Redear Sunfish	H			19	37	334	854	1894	1931	947															6,016	6,398	94
	R		90	67	45			90		90															382		
Black Crappie	H			57	220	506	582	830	1222	792	220	38		38				9							4,514	5,001	90
	R			159		50	20	60	99	89							10								487		
Channel Catfish	H											36	271	199	182	126	181	90		108	72		18	36	1,319	1,548	85
	R							15	30	30		61	30				30			15	18				229		
White Crappie	H						126	206	343	217	22														914	976	94
	R				29			24	9																62		
Illegal Bass	H								192	211	38		40												481	481	100
	R																								0		
Warmouth	H		40	53	40	40	13		13																199	267	75
	R			20	29		10	9																	68		
Rock Bass	H		28	28			14				14														84	84	100
	R																								0		
Illegal Catfish	H				11	33	12																		56	56	100
	R																								0		
Green Sunfish	H					31																			31	31	100
	R																								0		
Flathead Catfish	H													9				9			10				28	28	100
	R																								0		
Longear Sunfish	H																								0	8	0
	R									8															8		

Table 89. Monthly black bass angling success at Lake Reba during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	1472.3		309.9	967.5	1236	1.08		
May	2679.5	183.2	442.2	1380.5	2084	2.04	137	0.13
Jun	2450.4	51.0	494.9	1545.1	2068	1.43	26	0.02
Jul	646.6	22.3	375.5	1172.3	334	0.29	22	0.02
Aug	413.2	10.6	277.2	865.3	308	0.47	11	0.02
Sep	584.0		169.0	572.5	392	0.78		
Oct	436.1	7.7	272.6	851.0	329	0.41		
Total	8682.0	274.8	2341.2	7309.1	6751		196	
Mean						0.82		0.02

Table 90. Monthly crappie angling success at Lake Reba during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	1840.4	1434.5	144.6	451.5	1038	1.79	840	1.45
May	458.0	435.1	31.6	98.6	252	3.14	252	3.14
Jun	25.5							
Jul	167.2	156.1	20.9	65.1	11	0.22	11	0.22
Aug	1281.9	1281.9	35.8	111.6	868	5.47	868	5.47
Sep	839.4	766.4	76.0	237.4	539	1.93	593	1.93
Oct	1369.6	1354.3	142.8	445.8	1140	2.22	1125	2.19
Total	5982.1	5428.4	451.7	1410.0	3848		3635	
Mean						2.26		2.14

Table 91. Monthly panfish angling success at Lake Reba during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	6238.3	5247.4	919.4	2870.3	5615	1.95	4776	1.66
May	21894.4	21413.4	1737.2	54233.3	21895	3.79	21414	3.70
Jun	9291.0	7249.0	1328.4	4147.3	9061	2.23	7121	1.75
Jul	7992.8	6867.2	740.6	2312.0	5964	2.59	5384	2.34
Aug	10594.0	9852.4	599.0	1870.1	9578	4.65	8974	4.35
Sep	6587.7	6131.5	735.0	2294.7	6423	2.83	5976	2.64
Oct	1966.4	1851.7	240.1	749.7	1822	2.53	1729	2.40
Total	64564.6	58712.6	6299.8	19667.3	60358		55374	
Mean						2.94		2.69

Table 92. Angler attitude survey carried out in conjunction with 2017 creel survey on Lake Reba.

3. Which species do you fish for at Lake Reba (check all that apply)? (N=414)

Bluegill = 77.1%; **Bass** = 67.1%**; Redear Sunfish** = 62.1%; **Channel Catfish** = 50.0%; **Crappie** = 22.2%

4. Which species do you fish for most at Lake Reba (check only one)?

Bluegill = 52.5%; **Bass** = 30.4%**; Channel Catfish** = 11.1%; **Crappie** = 4.0%; **Redear Sunfish** = 2.0%

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Lake Reba? (N=275)

Very Satisfied	71.6%	**Somewhat Satisfied**	4.4%	**Total**	76.0%
Very Dissatisfied	2.2%	**Somewhat Dissatisfied**	15.6%	**Total**	17.8%
Neutral	5.8%	**No Opinion**	0.4%		

*5a. If angler responds with somewhat or very dissatisfied in question 5: what is the single most important reason for your dissatisfaction? *Note: These numbers are percentages ONLY of those who were dissatisfied (17.8%)*

Size of fish	45.8%	**Number of fish**	43.8%	**Regulations**	4.2%
Too many	4.2%	**Unfamiliar with lake**	2.1%		

Bluegill Anglers

6. What level of satisfaction do you have with bluegill fishing at Lake Reba? (N=318)

Very Satisfied	63.5%	**Somewhat Satisfied**	8.2%	**Total**	71.7%
Very Dissatisfied	2.2%	**Somewhat Dissatisfied**	17.9%	**Total**	20.1%
Neutral	7.2%	**No Opinion**	90.0%		

*6a. If angler responds with somewhat or very dissatisfied in question 6: what is the single most important reason for your dissatisfaction? *Note: These numbers are percentages ONLY of those who were dissatisfied (20.1%)*

Number of fish	53.2%	**Size of fish**	43.5%	**Too many anglers**	3.2%

Redear Sunfish Anglers

7. What level of satisfaction do you have with redear sunfish fishing at Lake Reba? (N=255)

Very Satisfied	71.0%	**Somewhat Satisfied**	3.5%	**Total**	74.5%
Very Dissatisfied	40.0%	**Somewhat Dissatisfied**	8.6%	**Total**	48.6%
Neutral	14.5%	**No Opinion**	2.0%		

*7a. If angler responds with somewhat or very dissatisfied in question 7: what is the single most important reason for your dissatisfaction? *Note: These numbers are percentages ONLY of those who were dissatisfied (48.6%)*

Number of fish	72.7%	**Size of fish**	22.7%	**Too many anglers**	4.5%

Catfish Anglers

8. What level of satisfaction do you have with catfish fishing at Lake Reba? (N=204)

Very Satisfied	77.0%	**Somewhat Satisfied**	3.9%	**Total**	80.9%
Very Dissatisfied	0.0%	**Somewhat Dissatisfied**	8.3%	**Total**	8.3%
Neutral	7.8%	**No Opinion**	2.9%		

*8a. If angler responds with somewhat or very dissatisfied in question 8: what is the single most important reason for your dissatisfaction? *Note: These numbers are percentages ONLY of those who were dissatisfied (8.3%)*

Number of fish	82.4%	**Size of fish**	17.6%

All Anglers

9. On average, how many times do you fish Lake Reba each month? (N=409)

≤ 1=	13.4%	**1 - 4=**	55.7%	**5 - 10=**	28.1%	**≥ 10=**	2.7%

10. Do you support or oppose the current regulation on largemouth bass at Lake Reba? (N=412)

Support	85.0%	**Oppose**	13.8%	**No Opinion**	1.2%

10a. If you oppose, what largemouth bass size limit do you prefer at Lake Reba? (N=56)

12" MSL (89.3%); **15" MSL** (3.6%); **C&R Only** (3.6%); **10" MSL** (1.8%); **19" MSL** (1.8%)

Table 93. Fishery statistics derived from a daytime creel survey (588 individual angler interviews) at Lake Wilgreen during April through October 2017 .

	2017
Fishing trips	
No. of fishing trips (per acre)	4,198 (29.56)
Fishing pressure	
Total man-hours (S.E.)	16,226 (374.15)
Man hours/acre	114.27
Catch/harvest	
No. of fish caught (S.E.)	36,079 (3,622.10)
No. of fish harvested (S.E.)	24,183 (2,930.92)
Lbs. of fish harvested	12,082
Harvest rate	
Fish/hour	1.4
Fish/acre	170.3
Lbs/acre	85.1
Catch rates	
Fish/hour	2.05
Fish/acre	254.1
Misc. characteristics (%)	
Male	85.5
Female	14.5
Resident	97.8
Non-resident	2.2
Method (%)	
Still fishing	31.5
Casting	59.4
Trot Line/ Jugging	8.5
Trolling	0.7
Mode (%)	
Boat	79.4
Bank	17.2
Dock	3.4

(S.E.) = Standard error

Table 94. Fish harvest statistics derived from the 2017 creel survey at Lake Wilgreen.

	Bluegill	Green Sunfish	Rock Bass	Warmouth	Panfish Group	Black Crappie	White Crappie	Crappie Group	Largemouth Bass	Black Bass Group	Channel Catfish	Blue Catfish	Flathead Catfish	Catfish Group	Anything
Number caught	16,030	69	47	41	16,187	7,054	4,923	11,977	4,708	4,708	3,103	58	46	3,207	16,187
(per acre)	112.9	0.5	0.3	0.3	114.0	49.7	34.7	84.3	33.2	33.2	21.9	0.4	0.3	22.6	114.0
Number harvested	10,674	59	47	0	10,780	5,893	3,862	9,754	890	891	2,659	52	46	2,758	10,780
(per acre)	75.2	0.4	0.3		76	41.5	27.2	68.7	6.3	6.3	18.7	0.4	0.3	19.4	76
% of total number harvested	44.3	0.2	0.2		44.6	24.4	16.0	40.3	3.7	3.7	11.0	0.2	0.2	11.4	44.6
Pounds harvested	921.1	4.0	12.9		938.0	2833.3	924.7	3758.0	1470.4	1,470.4	5142.6	596.5	176.2	5915.3	938.0
(per acre)	6.5	0.0	0.1		6.6	20.0	6.5	26.5	10.4	10.4	36.2	4.2	1.2	41.7	6.6
% of total pounds harvested	7.6	0.0	0.1		7.8	23.5	7.7	31.1	12.2	12.2	42.6	4.9	1.5	49.0	7.8
Mean length (in)	5.3	4.6	7.8			9.3	8.2		14.6		17.8	33.1	20.0		
Mean weight (lbs)	0.10	0.10	0.30			0.40	0.30		1.6		1.80	22.50	3.30		
Number fishing trips for that species					1632.7			573.4		1206.8				713.6	71.6
% of all trips					38.9			13.7		28.7				17.0	1.7
Hours fished for that species					6,310.4			2,216.3		4664.4				2,758.1	276.6
(per acre)					(44.44)			(15.61)		(32.85)				(28.75)	(1.95)
Number harvested fishing for that species					9,605			7,077		871				1972	
Pounds harvested fishing for that species					804.4			3370.0		1440.5				1440.5	
Number harvested per hour fishing for that species					1.5			2.6		0.2				0.6	
% success fishing for that species					41.5			70.0		21.9				61.7	15.4

Table 95. Length distribution (length of released fish are estimates) for each species of fish harvested (H) and/or released (R) at Lake Wilgreen from April through October 2017.

Species		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	Total (By Status)	Total (Overall)	Harvest (%)
Bluegill	H	1328	33339	3280	1998	458	153	12	35	12		59																																40,674	46,029	88
	R	1075	2823	1106	175	41		10	21	62	10	21	11																															5,355		
Black Crappie	H			76	138	183	703	1101	1788	1353	390	161																																5,893	7,054	84
	R			181	26	310	258	299	77	10																																		1,161		
White Crappie	H		11	446	424	569	536	960	703	67		146																																3,862	4,923	78
	R		93	119	13	199	624	13																																				1,061		
Largemouth Bass	H										106	203	221	115	62	26	71	35	35	17																								891	4,708	19
	R						173	700	809	863	327	364	282	109	45	36	64	27		18																								3,817		
Channel Catfish	H						60	20	10	10	50	191	413	282	191	91	353	201	60	131	343	40	20	71	10		20	30	30		20			20	20		30			12				2,729	3,173	86
	R						10	60	40	30	121			20	10	50	10	20	10							30												10	10		13			444		
Green Sunfish	H		25	34																																								59	69	86
	R			10																																								10		
Blue Catfish	H												6							12		17		6			6																5	52	57	91
	R																																							5				5		
Rock Bass	H							19	19		9																																	47	47	100
	R																																											0		
Flathead Catfish	H														15						31																							46	46	100
	R																																											0		
Warmouth	H																																											0	41	0
	R				31		10																																					41		

Table 96. Monthly black bass angling success at Lake Wilgreen during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	559.8	113.9	210.2	812.5	535	0.57	109	0.12
May	1288.5	257.7	213.6	825.4	1235	1.57	258	0.33
Jun	701.3	113.5	209.5	809.7	701	0.86	113	0.14
Jul	696.8	215.7	200.2	773.6	547	0.68	207	0.26
Aug	788.0	135.9	97.0	375.0	435	0.95	129	0.28
Sep	379.0	22.6	173.2	669.4	357	0.51	23	0.03
Oct	294.9	31.6	103.2	398.8	269	0.71	32	0.08
Total	4708.2	890.8	1206.8	4664.4	4079		871	
Mean						0.74		0.15

Table 97. Monthly crappie angling success at Lake Wilgreen during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	3868.8	2764.1	295.4	1141.9	3117	2.54	2487	2.03
May	3295.8	2848.2	106.8	412.7	2211	5.02	1967	4.46
Jun	1588.3	1433.6	31.4	121.5	753	5.84	753	5.84
Jul	199.1	199.1	7.1	27.6	66	2.00	66	2.00
Aug	1936.0	1766.2	53.9	208.3	1161	4.75	1161	4.75
Sep	282.8	237.6	14.8	57.4	158	3.11	158	3.11
Oct	805.7	505.6	63.9	246.9	785	3.17	485	1.96
Total	11976.5	9754.4	573.4	2216.3	8215		7077	
Mean						3.14		2.62

Table 98. Monthly panfish angling success at Lake Wilgreen during the 2017 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Catch fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Apr	460.7	257.6	73.9	285.5	223	1.22	94	0.51
May	2970.3	2048.0	280.3	1083.4	2672	2.40	1750	1.57
Jun	6631.7	4610.2	471.4	1821.8	6075	3.60	4167	2.47
Jul	2944.6	1982.4	378.9	1464.3	2720	1.95	1924	1.38
Aug	2065.1	1297.5	221.0	854.1	1915	2.66	1175	1.63
Sep	741.0	226.3	138.6	535.5	724	1.42	221	0.43
Oct	373.9	358.1	68.8	265.9	274	1.55	274	1.55
Total	16187.3	10780.1	1632.7	6310.4	14603		9605	
Mean						2.38		1.54

Table 99. Angler attitude survey carried out in conjunction with 2017 creel survey on Lake Wilgreen.

3. Which species do you fish for at Lake Wilgreen (check all that apply)? (N=362)

Bass = 67.1%**; Bluegill** = 66.0%; **Channel Catfish** = 61.9%; **Redear Sunfish** = 34.8%; **Crappie** = 33.1%

4. Which species do you fish for most at Lake Wilgreen (check only one)?

Bluegill = 37.0%; **Bass** = 35.3%; **Channel Catfish** = 23.2%; **Crappie** = 4.5%

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Lake Wilgreen? (N=255)

Very Satisfied	64.3%	**Somewhat Satisfied**	6.7%	**Total**	71.0%
Very Dissatisfied	3.9%	**Somewhat Dissatisfied**	18.8%	**Total**	22.7%
Neutral	5.5%	**No Opinion**	0.8%		

5a. If angler responds with somewhat or very dissatisfied in question 5: what is the single most important reason for your dissatisfaction? **Note: These numbers are percentages ONLY of those who were dissatisfied (22.7%)*

Size of fish	43.9%	**Number of fish**	43.9%	**Too many anglers**	5.3%
Unfamiliar with lake	5.3%	**Regulations**	1.8%		

Bluegill Anglers

6. What level of satisfaction do you have with bluegill fishing at Lake Wilgreen? (N=237)

Very Satisfied	55.3%	**Somewhat Satisfied**	9.3%	**Total**	64.6%
Very Dissatisfied	4.6%	**Somewhat Dissatisfied**	19.4%	**Total**	24.0%
Neutral	11.0%	**No Opinion**	0.4%		

6a. If angler responds with somewhat or very dissatisfied in question 6: what is the single most important reason for your dissatisfaction? **Note: These numbers are percentages ONLY of those who were dissatisfied (24.0%)*

Size of fish	72.7%	**Number of fish**	20.0%	**Too many anglers**	3.6%
Unfamiliar with lake	3.6%				

Redear Sunfish Anglers

7. What level of satisfaction do you have with redear sunfish fishing at Lake Wilgreen? (N=124)

Very Satisfied	46.0%	**Somewhat Satisfied**	1.6%	**Total**	47.6%
Very Dissatisfied	8.1%	**Somewhat Dissatisfied**	10.5%	**Total**	18.6%
Neutral	30.6%	**No Opinion**	3.2%		

7a. If angler responds with somewhat or very dissatisfied in question 7: what is the single most important reason for your dissatisfaction? **Note: These numbers are percentages ONLY of those who were dissatisfied (18.6%)*

Number of fish	66.7%	**Size of fish**	23.8%	**Too many anglers**	4.8%
Unfamiliar with lake	4.8%				

Catfish Anglers

8. What level of satisfaction do you have with catfish fishing at Lake Wilgreen? (N=221)

Very Satisfied	80.1%	**Somewhat Satisfied**	2.7%	**Total**	82.8%
Very Dissatisfied	0.9%	**Somewhat Dissatisfied**	8.6%	**Total**	9.5%
Neutral	5.4%	**No Opinion**	2.3%		

8a. If angler responds with somewhat or very dissatisfied in question 8: what is the single most important reason for your dissatisfaction? **Note: These numbers are percentages ONLY of those who were dissatisfied (9.5%)*

Number of fish	77.3%	**Size of fish**	9.1%	**Unfamiliar with lake**	9.1%
Regulations	4.5%				

All Anglers

9. On average, how many times do you fish Lake Wilgreen each month? (N=361)

≤ 1=	17..2%	**1 - 4=**	55.1%	**5 - 10=**	26.3%	**≥ 10=**	1.4%

10. Do you support or oppose the current regulation on largemouth bass at Lake Wilgreen? (N=362)

Support	93.1%	**Oppose**	5.5%	**No Opinion**	1.4%

10a. If you oppose, what largemouth bass size limit do you prefer at Lake Wilgreen? (N=56)

15" MSL (75.0%); **C&R Only** (15.0%); **12" MSL** (5.0%); **No Size Limit** (5.0%)

SOUTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Conditions encountered during sampling at southeastern district lakes are listed in Table 1.

Lake Cumberland (50,250 acres)

Lake levels in Lake Cumberland rose to 705 msl in 2013 and 723 msl in 2014 with the completion of repairs to Wolf Creek Dam. Sampling completed after 2013 was conducted in areas that were sampled prior to 2007. Samples from 2007-2012 were conducted in areas farther downstream in the embayments due to reduced water levels; therefore, any comparisons of the 2007-2012 data should be interpreted accordingly.

Black Bass Sampling (Spring)

Diurnal electrofishing studies were conducted at Wolf Creek dam, and in the Faubush Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during May 2017 to assess the black bass populations. The length-frequency and catch-per-unit-effort (CPUE) of the black bass species collected in each area is shown in Table 2, and the catch-per-hour (by area and length group) of the three black bass species are shown in Tables 3-6. Catch rates for largemouth and spotted bass were higher in 2017 than in previous sampling years. Table 7 compares the catch-per-hour by length group of black bass in Lake Cumberland to other SEFD lakes sampled in 2017.

Largemouth bass catch rates met two of the four CPUE management objectives (Table 8), and spotted bass met two of the three management objectives (Table 9). The smallmouth bass population did not meet any of the CPUE management objectives (Tables 10).

Largemouth bass populations exhibited excellent size structure, with a PSD value of 90 and an RSD_{15} value of 57 (Table 11). Smallmouth bass and spotted bass populations had a good size structure, with a PSD value of 74 and an RSD_{14} value of 53 for smallmouth bass and a PSD value of 70 and an RSD_{14} value of 20 for spotted bass (Table 11). Table 12 compares the size structure of black bass populations in Lake Cumberland to other SEFD lakes sampled in 2017.

Black Bass Sampling (Fall)

Diurnal electrofishing was conducted in the Fishing Creek embayment during September to index the largemouth bass year class strength (Tables 13 and 14). Catch rates of age-0 largemouth bass were lower in 2017 than rates observed the last two years (Table 14). Table 15 compares the CPUE of age-0 largemouth bass in Lake Cumberland to other SEFD lakes sampled in fall 2017. Relative weight (Wr) values for largemouth bass and spotted bass collected during September sampling are shown in Table 16. Table 17 compares Wr values for black bass in Lake Cumberland to other SEFD lakes sampled in fall 2017.

Crappie Sampling

Fall trap netting was conducted in the Fishing Creek and Wolf Creek embayments of Lake Cumberland during October and November 2017 to assess the crappie population. Length frequency and CPUE for black and white crappie from each area are shown in Table 18. The PSD and RSD_{10} values for white and black crappie are shown in Table 19. Age-growth data from white and black crappie collected in 2017 are shown in Tables 20 and 21, respectively. Age-2 white crappie (73%) dominated the white crappie catch (Table 22). Age-2 black crappie (2015 year class) comprised 55% of the black crappie catch (Table 23). The crappie population assessments (white and black) are shown in Table 24. Both black and white crappie rated poor (Table 24). The crappie population met one of the five management objectives (Table 25). Relative weight (Wr) values for black and white crappie are shown in Table 26. Based on crappie caught during striped bass netting and angler reports, our sampling may not be indicative of how good the crappie population actually is.

Striped Bass Sampling

Gill nets were used in late November and early December 2017 to evaluate the striped bass population in Lake Cumberland. Twenty-five net-nights captured 108 striped bass for a catch rate of 4.3 fish/nn. Length-frequency and CPUE of striped bass are shown in Table 27. Striped bass ranged from 9.0 to 32.0 in with the mode being the 19.0-in class (25 fish). All of the management objectives were met for the striped bass population (Table 28). The age-growth data for striped bass collected during 2017 is shown in Table 29. Eight year-classes were represented in the catch (Table 30). The 2016 (age-1) year class was the most abundant year class collected (51%), which coincides with the increased (pulsed) stocking rate of approximately 14.6 fish/acre in 2016. Mean length of age-2+ fish at capture (2015 year class) was 24.3 in, which exceeded the growth objective (21.0 in) for the striped bass fishery (Table 28). The striped bass assessment score was 13 (rating=good; Table 31). Striped bass relative weight (Wr) values are shown in Table 32.

Cumberland Tailwater

Trout Sampling (Fall)

Nocturnal electrofishing sampling was conducted November 6 and 7, 2017 to assess the trout population in the Lake Cumberland tailwater. Electrofishing was completed in seven different areas of the tailwater. Table 33 has the length-frequency and CPUE for the three trout species collected in each area. Although catch rates of rainbow trout 15.0-17.9 inches increased dramatically in 2017, the increase is due to stocking 15.0 inch rainbow trout in August and September in addition to the average 9.0 inch trout (Table 34). Brown trout catch rates continue to be low and remain at or below the 21-year average for the tailwater (Table 35). Relative weight (Wr) values for each trout species is shown in Table 36.

2017 Daytime Creel Survey

A roving daytime creel survey was conducted on the Cumberland Tailwater from Wolf Creek Dam downstream to Highway 61 Bridge from 1 April-30 November 2017. The tailwater was split into two geographic stratums (upper and lower), and the survey was designed so each stratum could be independently assessed. The upper stratum covered the section from Wolf Creek Dam downstream to Helm's Landing, and the lower section covered the tailwater from Helm's Landing to Highway 61 Bridge. The survey was conducted 18 days per month (10 weekdays and 8 weekend days), and each day consisted of a 6-hour time period. Boat and bank angler counts were averages based on counts taken twice during the 6-hour period. Creel data will be presented for the tailwater as a whole, as well as each stratum (upper and lower).

Cumberland Tailwater Creel Survey (entire tailwater)

Results from the tailwater creel survey are shown in Tables 37-44. Fishing pressure on the tailwater declined for the third consecutive creel. During the 2017 survey, the catch rates for both trout and all species of fish combined increased over previous creel surveys on the tailwater. Trout anglers spent 209,336 hours on the tailwater, which accounted for 91% of the total hours fished. The number of brown trout caught declined in 2017 and was less than half of the observed catch in 2009. The number of rainbow trout caught increased in 2017 and was consistent with the number of trout caught in 2006 before the Lake Cumberland drawdown, which began in 2007. Trout anglers were generally successful, with catch rates of 1.21 fish/hr for bank anglers and 1.59 fish/hr for boat anglers.

Upper Cumberland Tailwater Creel Survey (4.5 river miles)

Results from the upper tailwater creel survey are shown in Tables 45-49. Anglers fished a total of 103,828 hours during 29,391 fishing trips, for an average trip length of 3.5 hours in the upper portion. Anglers harvested a total of 12,388 trout per river mile in the upper portion of the tailwater in 2017. Trout anglers in the upper section caught 1.38 fish/hr and harvested 0.48 fish/hr. Although trout anglers fishing by boat had a slightly higher catch rate, trout anglers who were fishing from the bank had a slightly higher harvest rate than boat anglers.

Lower Cumberland Tailwater Creel Survey (34.3 river miles)

Results from the lower tailwater creel survey are shown in Tables 50-54. Anglers fished a total of 126,167 hours during 27,981 fishing trips, for an average trip length of 4.5 hours in the lower portion. Anglers harvested a total of 692 trout per river mile in the lower portion of the tailwater in 2017. Trout anglers in the lower section had a slightly higher catch rate (1.62 fish/hr) than trout anglers in the upper section (1.38 fish/hr). Trout anglers fishing by boat in the lower section caught 1.68 fish/hr, and trout anglers who were fishing from the bank had catch rate of 1.19 fish/hr.

Cumberland Tailwater Angler Attitude Survey
An angler attitude survey was conducted in conjunction with the creel survey to gather angler opinions about the various fisheries in the Cumberland tailwater (Figure 1). A total of 162 anglers were interviewed in the tailwater. Ninety-six percent of rainbow trout anglers were satisfied with fishing on the tailwater. Brown trout and brook trout anglers had a much lower satisfaction level (57% and 60%, respectively), and the number of fish was listed as the main reason for angler dissatisfaction. In general, anglers were satisfied with the current size and creel limits on the tailwater (87%). Fifty-nine percent of anglers preferred to fish under low flows (1 turbine or less), and 33% of anglers preferred a moderate flow (1-3 turbine) scenario.

Laurel River Lake (6,060 acres)

Black Bass Sampling (Spring)

Electrofishing sampling was conducted during April and May 2017 to assess the black bass population in Laurel River Lake. Electrofishing was conducted in four areas of the lake: 1) dam, 2) Spruce Creek, 3) Laurel River arm, and 4) upper Craigs Creek. Length-frequency and CPUE of the three black bass species collected in each area is shown in Table 55. The catch-per-hour (by area and length group) of the three black bass species are shown in Tables 56-59. Table 7 compares the catch-per-hour by length group of black bass in Laurel River Lake to other SEFD lakes sampled in 2017.

The largemouth bass population met two of the four catch rate objectives (Table 60). Spotted bass met one of the three catch rate management objectives (Table 61). The smallmouth bass population did not meet any of the catch rate management objectives (Table 62).

Smallmouth bass exhibited an excellent size structure, having a PSD value of 90 and an RSD_{14} value of 50 (Table 63). Largemouth and spotted bass had a good size structure, with largemouth bass having a PSD value of 65 and an RSD_{15} value of 34 and spotted bass population having a PSD of 57 and an RSD_{14} of 18 (Table 63). Table 12 compares the size structure values of black bass populations in Laurel River Lake to other SEFD lakes sampled in 2017.

Black Bass Sampling (Fall)

Diurnal electrofishing was conducted in the Laurel River arm on 18 September 2017 to index largemouth bass year class strength (Tables 64 and 65). Although the CPUE of age-0 largemouth bass in 2017 was low, no additional age-0 bass were stocked due to low success of attempted stockings in previous years (Table 65). Relative weight (Wr) values for largemouth and spotted bass collected during September sampling are shown in Table 66.

Walleye Sampling

Gill nets were used in November 2017 to evaluate the walleye population in Laurel River Lake. A total of 177 walleye were captured in 8 net-nights for a catch rate of 22.1fish/nn. Length frequency and CPUE of walleye is shown in Table 67. Walleye ranged from 9.0-24.0 in with the mode being the 11.0-in class (32 fish). Two of the three catch rate management objectives for walleye were met in 2017 (Table 68). Age-growth data for male and female walleye are shown in Tables 69 and 70, respectively. The age-growth for both sexes combined is shown in Table 71. Ten year-classes were represented in the catch, with age-0 (2017 year class) and age-2 (2015 year class) walleye comprising 69% of the catch (Table 72). The walleye assessment score was 14 (rating=excellent; Table 73). Mean length of age-2+ walleye at capture (19.2 in) surpassed the growth objective of 18.0 in (Table 68). Relative weight (Wr) values for walleye are shown in Table 74.

Cedar Creek Lake (784 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Diurnal electrofishing was conducted on 30 May 2017 to assess the largemouth bass population in Cedar Creek Lake. The length-frequency and CPUE of largemouth bass is shown in Table 75. Size structure of largemouth bass was good (PSD=66, RSD_{15}=45; Table 76). The catch-per-hour (by length group) of largemouth bass for 2003-2017 is shown in Table 77. Two of the four CPUE management objectives for the largemouth bass population were met or exceeded (Table 78).

Black Bass Sampling (Fall)
Diurnal electrofishing was conducted on 15 September 2017 to index the largemouth bass year-class strength (Tables 79 and 80). Catch rates of age-0 bass in 2017 were lower than 2016 catch rates but were still high in relation to the 14 year average (Table 80). Relative weight (Wr) values for largemouth bass are found in Table 81.

Chenoa Lake (35 acres; Bell Co.)

Largemouth Bass Sampling (Spring)
Diurnal electrofishing was conducted on 11 April 2017 at Chenoa Lake to assess the largemouth bass population. Length frequency and CPUE for largemouth bass is shown in Table 82. Catch-per-hour (by length group) for largemouth bass is shown in Table 83. The largemouth bass size structure was fair, with a PSD value of 42 (RSD_{15}=13; Table 84).

Largemouth Bass Sampling (Fall)
Diurnal electrofishing was conducted on 5 October 2017 at Chenoa Lake to collect largemouth bass to determine age-growth. Age-growth data from largemouth bass collected in 2017 is shown in Table 85. Relative weight values for largemouth bass are in Table 86.

Lake Linville (358 acres; Rockcastle Co.)

Black Bass Sampling (Spring)
Diurnal electrofishing was conducted on 31 May 2017 at Lake Linville to assess the black bass population. Length frequency and CPUE for the black bass populations are shown in Tables 87-89. Although overall catch rates for largemouth bass have declined over the years, there has been an increase in catch rates of larger-sized bass (Table 88). A population assessment for largemouth bass is shown in Table 90. All of the catch rate management objectives were met (Table 90). The size structure for the largemouth bass population was fair with a PSD value of 48 (RSD_{15}=16), and the spotted bass population is comprised of small individuals (PSD=26, RSD_{14}=2; Table 91).

Largemouth Bass Sampling (Fall)
Diurnal electrofishing was conducted on 4 October 2017 at Linville Lake to collect largemouth bass to determine age-growth. Age-growth data from largemouth bass collected in 2017 is shown in Table 92. Relative weight values for largemouth bass are in Table 93.

Wood Creek Lake (625 acres; Laurel Co.)

Black Bass Sampling (Spring)
Diurnal electrofishing was conducted on 4 May 2017 in the Pump Station and Dock areas of Wood Creek Lake to assess the black bass population. Length frequency and CPUE for black bass are shown in Table 94. The size structure for largemouth bass was poor, having a PSD value of 25 (RSD_{15}=4; Table 95). The spotted bass population also had a poor size structure (PSD=34, RSD_{14}=3; Table 95). Catch-per-hour (by length group) for largemouth and spotted bass are shown in Tables 96 and 97, respectively. The largemouth bass catch rates have been increasing the last few years, due in large part to increasing numbers of bass less than 12.0 in. A largemouth bass population assessment is shown in Table 98. Two of the four catch rate management objectives were met for the largemouth bass population (Table 98).

Black Bass Sampling (Fall)
Diurnal electrofishing was conducted on 26 September 2017 in the Pump Station and Dock areas of Wood Creek Lake to index largemouth bass year class strength (Tables 99 and 100). Catch rates of age-0 largemouth bass in

2017 were lower than average (Table 100); thus, additional age-0 bass were stocked in the lake during the fall. Relative weight values for largemouth and spotted bass are shown in Table 101.

Table 1. Summary of sampling conditions by waterbody, species sampled, and date for the Southeastern Fisheries District in 2017.

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Lake Cumberland											
	Dam	Black bass	5/2/2017	900	shock	sunny, windy, 50s	60	727	60-120	fair	wind, trees, and debris hampered sampling
	Faubush Creek	Black bass	5/8/2017	1015	shock	sunny, 60s	63	727	54	fair	lots of trash, high water was in the trees
	Fishing Creek	Black bass	5/8/2017	1345	shock	sunny, 60s	67	727	42	fair/poor	high water made sample difficult due to trees
	Lily Creek	Black bass	5/2/2017	1200	shock	sunny, windy, 60s	69	727	96	fair	water clearish green
	Fishing Creek	Black bass	9/28/2017	830	shock	sunny, 70s, breezy	77	706	24	good	
	Wolf Creek	Crappie	10/24-10/27		trap net	mostly clear, 40s and 60s, windy	65	704	36	good	
	Fishing Creek	Crappie	10/30-11/2		trap net	sun and rain, 60s	60	705	48	good	
	Beaver Creek	Striped bass	12/4-12/6		gill net	indy 10-20 mph, heavy rains, 40s, 50	56	702	-	good	
	Lily/Wolf	Striped bass	11/27-11/30		gill net	mostly clear, 60s	57	704	96	good	
Cumberland Tailwater											
	Above Helms	Trout	11/6/2017	1800	shock	coudy	-	5580 cfs			
	Below Helms	Trout	11/6/2017	1750	shock	cloudy, north winds at 5-10 mph	61	5580 cfs	36		
	Rainbow Run	Trout	11/6/2017	1745	shock		62	5580 cfs			
	Big Willis	Trout	11/6/2017	1700	shock	overcast, cool, 50s	61	5580 cfs			
	Crocus Creek	Trout	11/6/2017		shock	overcast, 50s	61	5580 cfs			
	Hwy 61 Traces	Trout	11/7/2017	1715	shock	cloudy, overcast, light drizzle, 40s	61	5580 cfs			
	Cloyds	Trout	11/7/2017		shock	overcast, 50s	61	5580 cfs			
Laurel River Lake											
	Dam	Black bass	4/13/2017	845	shock	sunny, 50s, 60s	60	1014	120	good	very clear water
	Spruce Creek	Black bass	4/18/2017	900	shock	cloudy, light rain, 60s	65	1014	108	good	some areas with thick pollen on water surface
	Craig's Creek	Black bass	4/13/2017	1100	shock	sunny, nice 60s	62	1014	120	good	
	312 Bridge	Black bass	5/23/2017	830	shock	cloudy, 60s, 70s	73	1015	24	fair	water murky, dark brown; 1 dipper
	312 Bridge	Black bass	9/18/2017	940	shock	sunny, 70s	74	1011	48	good	
	Entire lake	Walleye	11/13-11/14		gill net	mostly sunny, 40s	58	1009		good	
Cedar Creek Lake		LMB	5/30/2017	745	shock	sunny, breezy, 70s	72	full	36	good	water dark, more brown than green
		LMB	9/15/2017	940	shock	Foggy early, clearing and sunny, 70s	68	full	42	good	vegetation thick in some areas
Chenoa Lake		LMB	4/11/2017	1000	shock	sunny, 60s and 70s	58	full	36	good	
		LMB	10/5/2017		shock		67			good	fish collected for age-growth and condition
Lake Linville		Black bass	5/31/2017	730	shock	sunny, 60s	71	full	24	fair	murky, brown water
		LMB	10/4/2017		shock		71				fish collected for age-growth and condition; 1 dipper
Wood Creek Lake		Black bass	5/4/2017	1000	shock	cloudy, 60s	67	full	84	fair	thick vegetation hampered sample
		Black bass	9/26/2017	830	shock	sunny and warm 70s and 80s	75	full	96	fair	thick vegetation hampered sample

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during May 2017; standard error is in parentheses.

		Inch class																			
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Dam	Largemouth bass			2	1	3	2	6	3	3	5	9	7	14	10	10	8	4	1	88	58.7 (15.9)
	Spotted bass	1	1	6	5	2	1	4	1	7	17	17	17	7						86	57.3 (10.3)
	Smallmouth bass			1	1		1	2		1	1	1		1	1	3		1	1	15	10.0 (4.6)
Faubush	Largemouth bass	1		1			2	3		1	2	9	20	27	17	9	2	3		97	64.7 (7.9)
Creek	Spotted bass	1		3	2	2	4	5	1	2	3	3								26	17.3 (6.3)
	Smallmouth bass													1						1	0.7 (0.7)
Fishing	Largemouth bass	1			2	2	1	1	3	1	2	11	10	10	5	1				50	33.3 (6.5)
Creek	Spotted bass						1	1		5	5	2								14	9.3 (5.7)
	Smallmouth bass																			0	0.0 (0.0)
Lily	Largemouth bass			1	3		1				3	1	7	10	9	2	6	4		47	31.3 (6.9)
Creek	Spotted bass	1		3	5	7	9	9	4	4	9	10	6	3						70	46.7 (2.7)
	Smallmouth bass					1		1				1				1	1			5	3.3 (1.2)
Total	Largemouth bass	2		4	6	5	6	10	6	5	12	30	44	61	41	22	16	11	1	282	47.0 (5.6)
	Spotted bass	3	1	12	12	11	15	19	6	18	34	32	23	10						196	32.7 (5.2)
	Smallmouth bass			1	1	1	1	3		1	1	2		2	1	4	1	1	1	21	3.5 (1.4)

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Table 3. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Lake Cumberland during the period of 2013-2017.

	Stock					Quality					Preferred				
Species/Area	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Largemouth bass															
Dam	4.0	18.7	12.0	46.7	54.7	3.3	17.3	11.3	28.0	45.3	2.7	10.0	8.0	23.3	31.3
Faubush Creek	-	-	-	14.7	63.3	-	-	-	14.0	59.3	-	-	-	8.0	38.7
Fishing Creek	45.3	25.3	61.3	41.3	30.0	21.3	19.3	41.3	25.3	26.0	5.3	6.7	11.3	8.7	10.7
Lily Creek	25.3	72.0	44.0	25.3	28.7	18.7	28.7	32.0	23.3	28.0	6.7	14.0	10.0	11.3	20.7
Mean	21.0	30.7	31.5	32.0	44.2	12.8	17.8	22.2	22.7	39.7	4.7	8.2	8.0	12.8	25.3
Spotted bass															
Dam	26.0	44.7	26.0	41.3	48.7	17.3	24.7	16.7	26.7	43.3	3.3	6.7	6.0	10.0	16.0
Faubush Creek	-	-	-	22.0	13.3	-	-	-	12.0	5.3	-	-	-	1.3	0.0
Fishing Creek	2.7	5.3	12.7	8.0	9.3	0.0	1.3	6.0	1.3	8.0	0.0	0.0	0.7	0.0	0.0
Lily Creek	35.3	44.7	42.0	19.3	40.7	17.3	13.3	31.3	12.7	21.3	2.0	2.7	6.7	2.7	6.0
Mean	20.2	25.0	22.0	22.7	28.0	11.3	10.0	13.8	13.2	19.5	1.5	2.3	3.5	3.5	5.5
Smallmouth bass															
Dam	10.7	21.3	2.7	8.0	8.7	3.3	10.7	2.0	3.3	6.7	2.7	6.0	2.0	2.0	4.7
Faubush Creek	-	-	-	8.7	0.7	-	-	-	6.0	0.7	-	-	-	4.0	0.7
Fishing Creek	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lily Creek	1.3	1.3	18.0	4.7	3.3	1.3	0.0	16.0	4.7	2.0	0.7	0.0	12.7	4.0	1.3
Mean	4.5	7.5	7.8	5.3	3.2	2.0	3.7	6.8	3.5	2.3	1.7	2.0	5.2	2.5	1.7

Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred.

Smallmouth bass and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Cumberland May 2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	2.8	0.7	4.5	1.4	14.3	2.4	25.3	3.5	0.2	0.2	47.0	5.6
2016	5.0	1.8	9.3	3.3	9.8	1.5	12.8	2.4	0.5	0.4	37.0	6.4
2015	6.3	2.3	9.3	2.6	14.2	3.4	8.0	1.7	0.0	0.0	37.8	7.8
2014	9.5	3.7	12.8	4.4	9.7	2.4	8.2	2.0	0.3	0.2	40.2	8.5
2013	1.8	1.1	8.2	2.6	8.2	1.8	4.7	1.1	0.2	0.2	22.8	5.0
2012	15.3	3.8	21.0	3.7	21.7	4.9	11.7	2.4	0.2	0.2	69.7	13.0
2011	5.7	2.7	6.5	2.2	5.2	1.7	3.7	1.1	0.2	0.2	21.0	6.3
2010	12.3	3.0	23.3	5.3	13.7	3.3	10.7	2.0	0.5	0.3	60.0	11.7
2009	20.3	6.5	9.7	3.5	8.5	2.8	8.2	2.3	0.5	0.3	46.7	12.5
2008	7.3	2.3	11.0	2.8	20.2	5.7	18.0	4.0	0.2	0.2	56.5	13.2
2007	8.4	3.2	14.1	4.5	20.9	7.1	15.3	4.1	0.5	0.3	58.6	18.1
2006	0.8	0.4	6.2	2.2	8.8	3.1	10.2	2.6	0.5	0.3	26.0	7.6
2005	0.8	0.5	1.6	0.7	9.9	3.6	5.5	1.3	0.0	0.0	17.7	5.2
2004	0.8	0.3	5.2	1.5	6.9	1.4	6.5	1.6	0.0	0.0	19.5	4.0
2003	2.0	0.8	5.7	1.4	6.1	1.9	8.3	1.9	0.1	0.1	22.1	4.3
2002	0.4	0.2	1.9	0.6	7.7	2.5	6.3	1.0	0.1	0.1	16.3	3.3

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Table 5. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Cumberland during May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	6.5	1.3	6.7	1.4	14.0	2.4	5.5	2.2	0.0	0.0	32.7	5.2
2016	4.8	1.9	7.2	1.2	9.7	2.4	3.5	1.2	0.0	0.0	25.2	4.5
2015	4.2	1.2	6.0	1.2	10.3	2.5	3.5	1.0	0.0	0.0	24.0	4.2
2014	7.2	1.9	11.2	2.5	7.7	2.4	2.3	1.2	0.0	0.0	28.3	6.0
2013	1.8	0.6	7.7	1.6	9.8	2.4	1.5	0.7	0.0	0.0	20.8	3.8
2012	27.3	4.7	20.5	3.9	8.8	2.6	0.7	0.5	0.0	0.0	57.3	10.1
2011	8.7	1.7	12.2	2.1	5.7	2.4	0.3	0.2	0.0	0.0	26.8	4.6
2010	28.3	4.0	26.7	5.5	12.2	2.6	0.8	0.4	0.0	0.0	68.0	9.2
2009	22.7	4.3	20.5	5.1	10.0	2.1	1.0	0.4	0.0	0.0	54.2	10.3
2008	34.7	4.5	26.7	3.7	15.3	4.0	5.0	2.1	0.0	0.0	81.7	11.1
2007	27.1	6.8	27.5	5.0	13.6	3.6	7.0	2.7	0.4	0.2	75.1	13.5
2006	12.0	2.5	16.5	2.3	13.8	3.0	8.0	2.1	0.2	0.2	50.3	7.1
2005	16.3	3.6	9.5	1.4	11.2	2.0	3.1	1.2	0.0	0.0	40.0	6.3
2004	15.6	2.7	25.5	3.9	10.5	2.1	1.9	0.7	0.0	0.0	53.5	7.8
2003	32.6	5.5	31.6	3.8	9.1	1.5	2.9	0.8	0.0	0.0	76.1	8.6
2002	8.1	1.8	10.3	1.7	5.2	1.1	1.5	0.5	0.0	0.0	25.1	3.7

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Table 6. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Lake Cumberland during May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	0.5	0.3	0.7	0.3	0.7	0.4	1.7	0.9	1.2	0.7	3.5	1.4
2016	4.2	2.2	1.2	0.6	1.0	0.4	2.5	0.8	1.0	0.4	8.8	2.6
2015	1.2	0.7	1.0	0.4	1.7	0.6	5.2	1.8	2.0	0.8	9.0	2.4
2014	1.2	0.6	3.2	1.5	1.7	0.7	2.0	1.1	0.8	0.4	8.0	2.8
2013	1.0	0.6	2.3	0.6	0.3	0.2	1.7	0.5	0.3	0.2	5.3	1.3
2012	4.3	1.4	2.3	0.7	0.3	0.2	1.7	0.7	0.5	0.3	8.7	2.1
2011	0.5	0.4	0.3	0.2	0.7	0.3	0.2	0.2	0.2	0.2	1.7	0.5
2010	2.8	0.7	2.5	0.8	1.2	0.4	3.7	1.2	2.3	1.0	10.2	1.9
2009	3.5	1.3	1.5	0.6	0.2	0.2	0.7	0.3	0.2	0.2	5.8	1.5
2008	5.2	1.8	2.0	0.8	1.2	0.5	2.7	1.0	0.8	0.4	11.0	2.8
2007	6.8	2.6	7.1	2.4	3.8	1.3	1.4	0.6	0.5	0.4	19.1	5.4
2006	2.5	0.9	1.2	0.4	0.3	0.3	0.3	0.2	0.2	0.2	4.3	1.2
2005	2.3	0.9	0.8	0.6	1.3	0.5	3.9	1.5	1.3	0.7	8.3	2.3
2004	2.9	1.8	1.9	0.9	1.2	0.5	1.3	0.7	0.0	0.0	7.3	3.1
2003	2.1	1.0	3.9	1.1	1.6	0.6	3.4	1.1	1.0	0.4	11.0	2.7
2002	2.9	1.1	3.5	1.3	2.4	0.8	0.9	0.5	0.1	0.1	9.7	2.9

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Table 7. Catch-per-hour of black bass captured during spring electrofishing on lakes in the Southeastern Fishery District during 2017.

Species/Lake	Stock*	Quality*	Preferred*
Largemouth bass			
Lake Cumberland	44.2	39.7	25.3
Laurel River Lake	70.5	46.0	24.0
Cedar Creek Lake	78.7	52.0	35.3
Chenoa Lake	53.0	22.0	7.0
Lake Linville	121.3	58.7	20.0
Wood Creek Lake	120.7	30.7	5.3
Spotted bass			
Lake Cumberland	28.0	19.5	5.5
Laurel River Lake	16.5	9.3	3.0
Lake Linville	72.7	18.7	1.3
Wood Creek Lake	21.3	7.3	0.7
Smallmouth bass			
Lake Cumberland	3.2	2.3	1.7
Laurel River Lake	1.7	1.5	0.8

*Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred
*Smallmouth and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred

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Table 8. Population assessment for largemouth bass based on spring electrofishing at Lake Cumberland from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE >15.0 in	CPUE >20.0 in	Total score	Assessement rating
Management objective		>13.0 in	>5.0 fish/hr	>10.0 fish/hr	>8.0 fish/hr	>0.5 fish/hr		
2017	Value		3.8	14.3	25.3	0.2		
	Score	4	1	1	4	2	12	F
2016	Value	13.7	9.2	9.8	12.8	0.5		
	Score	4	1	1	2	3	11	F
2015	Value		8.3	14.2	8.0	0.0		
	Score	4	1	1	2	1	9	F
2014	Value		12.8	9.7	8.2	0.3		
	Score	4	2	1	2	2	11	F
2013	Value		6.6	8.2	4.7	0.2		
	Score	4	1	1	1	2	9	F
2012	Value	14.0	21.0	21.7	11.7	0.2		
	Score	4	2	2	2	2	12	F
2011	Value		6.8	5.2	3.7	0.2		
	Score	4	1	1	1	2	9	F
2010	Value		11.5	13.7	10.7	0.5		
	Score	4	1	1	2	3	11	F
2009	Value		25.7	8.5	8.2	0.5		
	Score	4	3	1	2	3	13	G
2008	Value		10.0	20.2	18.0	0.2		
	Score	4	1	2	3	2	12	F
2007	Value	13.4	10.3	20.9	15.3	0.5		
	Score	4	1	2	3	3	13	G
2006	Value		1.2	8.8	10.2	0.5		
	Score	4	1	1	2	3	11	F
2005	Value		1.2	9.9	5.5	0.0		
	Score	4	1	1	1	1	8	P
2004	Value		1.1	7.0	6.5	1.0		
	Score	4	1	1	2	3	11	F
2003	Value		3.0	6.1	8.3	0.1		
	Score	4	1	1	2	1	9	F
2002	Value	13.6	0.4	7.6	6.4	0.1		
	Score	4	1	1	2	1	9	F
2001	Value		2.9	7.7	5.2	0.3		
	Score	4	1	1	1	2	9	F
2000	Value		2.8	9.5	5.2	0.3		
	Score	4	1	1	1	2	9	F

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Table 9. Population assessment for spotted bass based on spring electrofishing at Lake Cumberland from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 11.0-13.9 in	CPUE ≥14.0 in	Total score	Assessement rating
Management objective		≥9.6 in	≥4.0 fish/hr	≥7.0 fish/hr	≥2.0 fish/hr		
2017	Value		0.6	14.0	5.5		
	Score	3	1	4	4	12	G
2016	Value		1.2	9.7	3.5		
	Score	3	2	3	4	12	G
2015	Value		1.7	10.3	3.5		
	Score	3	2	4	4	13	G
2014	Value		1.2	7.7	2.3		
	Score	3	2	2	3	10	G
2013	Value	11.1	0.0	9.8	1.5		
	Score	3	1	3	3	10	G
2012	Value		14.0	8.8	0.7		
	Score	3	4	3	2	12	G
2011	Value		3.9	5.7	0.3		
	Score	3	3	2	1	9	F
2010	Value		9.7	12.2	0.8		
	Score	3	4	4	2	13	G
2009	Value		6.8	10.0	1.0		
	Score	3	4	3	2	12	G
2008	Value	11.0	8.8	15.3	5.0		
	Score	3	4	4	4	15	E
2007	Value		1.3	13.6	7.0		
	Score	4	2	4	4	14	E
2006	Value		1.8	13.8	8.0		
	Score	4	2	4	4	14	E
2005	Value		5.1	11.2	3.1		
	Score	4	4	4	4	16	E
2004	Value		6.0	10.5	1.9		
	Score	4	4	4	3	15	E
2003	Value	11.4	16.7	9.1	2.9		
	Score	4	4	3	4	15	E
2002	Value		5.1	5.2	1.5		
	Score	4	4	1	3	12	G
2001	Value		2.1	4.7	1.6		
	Score	4	3	1	3	11	G
2000	Value		1.9	5.6	1.2		
	Score	4	2	2	2	10	G

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Table 10. Population assessment for smallmouth bass based on spring electrofishing at Lake Cumberland from 1990-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 11.0-13.9 in	CPUE ≥14.0 in	Total score	Assessement rating
Management objective		≥11.0 in	≥2.0 fish/hr	≥3.0 fish/hr	≥2.0 fish/hr		
2017	Value		0.0	0.7	1.7		
	Score	1	1	2	3	7	F
2016	Value		2.8	1.0	2.5		
	Score	1	3	3	4	11	G
2015	Value		0.3	1.7	5.2		
	Score	1	1	3	4	9	F
2014	Value		0.2	1.7	2.0		
	Score	1	1	3	4	9	F
2013	Value		0.3	0.3	1.7		
	Score	1	1	2	3	7	F
2012	Value		2.5	0.3	1.7		
	Score	1	3	2	3	9	F
2011	Value		0.0	0.7	0.2		
	Score	1	1	2	1	5	P
2010	Value	11.3	0.7	1.2	3.7		
	Score	1	2	3	4	10	G
2009	Value		1.8	0.2	0.7		
	Score	2	3	1	2	8	F
2008	Value		2.5	1.2	2.7		
	Score	2	3	3	4	12	G
2007	Value		2.6	3.8	1.4		
	Score	2	3	4	3	12	G
2006	Value		0.0	0.3	0.3		
	Score	2	1	2	2	7	F
2005	Value	12.2	0.8	1.3	3.9		
	Score	2	2	3	4	11	G
2004	Value		1.9	1.2	1.3		
	Score	1	3	3	3	10	G
2003	Value		1.3	1.6	3.4		
	Score	1	2	3	4	10	G
2002	Value		1.7	2.4	0.9		
	Score	1	3	4	3	11	G
2001	Value		0.5	0.4	0.9		
	Score	1	2	2	3	8	F
2000	Value		0.0	1.4	1.1		
	Score	1	1	3	3	8	F

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Table 11. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland during May 2017; 95% confidence limits are in parentheses.

		Largemouth bass			Spotted bass			Smallmouth bass		
Year	Area	No. ≥ stock size	PSD (+/- 95%)	RSD$_{15}$ (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD$_{14}$ (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD$_{14}$ (+/- 95%)
2017	Dam	82	83 (± 8)	57 (± 11)	73	89 (± 7)	33 (± 11)	13	77 (± 24)	54 (± 28)
	Faubush Creek	95	94 (± 5)	61 (± 10)	20	40 (± 22)	0 (± 0)	1	100 (± 0)	100 (± 0)
	Fishing Creek	45	87 (± 10)	36 (± 14)	14	86 (± 19)	0 (± 0)	0	0 (± 0)	0 (± 0)
	Lily Creek	43	98 (± 5)	72 (± 14)	61	52 (± 13)	15 (± 9)	5	60 (± 48)	40 (± 48)
	Total	265	90 (± 4)	57 (± 6)	168	70 (± 7)	20 (± 6)	19	74 (± 20)	53 (± 23)
2016	Total	192	71 (± 6)	40 (± 7)	136	58 (± 8)	15 (± 6)	32	66 (± 17)	47 (± 18)
2015	Total	189	70 (± 7)	25 (± 6)	132	63 (± 8)	16 (± 6)	47	87 (± 10)	66 (± 14)
2014	Total	184	58 (± 7)	27 (± 6)	150	40 (± 8)	9 (± 5)	45	49 (± 15)	27 (± 13)
2013	Total	126	61 (± 9)	22 (± 7)	121	56 (± 9)	7 (± 5)	27	44 (± 19)	37 (± 19)
2012	Total	326	61 (± 5)	21 (± 4)	224	25 (± 6)	2 (± 2)	33	36 (± 17)	30 (± 16)
2011	Total	92	58 (± 10)	24 (± 9)	124	29 (± 8)	2 (± 2)	8	63 (± 36)	13 (± 25)
2010	Total	286	51 (± 6)	22 (± 5)	293	27 (± 5)	2 (± 1)	51	57 (± 14)	43 (± 14)
2009	Total	158	63 (± 8)	31 (± 7)	230	29 (± 6)	3 (± 2)	17	29 (± 22)	24 (± 21)
2008	Total	295	78 (± 5)	37 (± 6)	349	35 (± 5)	9 (± 3)	42	55 (± 15)	38 (± 15)
2007	Total	289	72 (± 5)	30 (± 5)	310	38 (± 5)	13 (± 4)	81	37 (± 11)	10 (± 7)
2006	Total	151	75 (± 7)	40 (± 8)	259	51 (± 6)	19 (± 5)	13	31 (± 26)	15 (± 20)
2005	Total	127	91 (± 5)	32 (± 8)	216	50 (± 7)	11 (± 4)	49	80 (± 11)	59 (± 14)
2004	Total	140	88 (± 6)	39 (± 9)	325	42 (± 13)	12 (± 8)	42	36 (± 8)	8 (± 5)

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Table 12. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Chenoa Lake, Lake Linville, and Wood Creek Lake during 2017; 95% confidence limits are in parentheses.

	Largemouth bass		Smallmouth bass		Spotted bass	
Lake	PSD	RSD_{15}	PSD	RSD_{14}	PSD	RSD_{14}
Lake Cumberland	90 (±4)	57 (±6)	74 (±20)	53 (±23)	70 (±7)	20 (±6)
Laurel River Lake	65 (±5)	34 (±5)	90 (±20)	50 (±33)	57 (±10)	18 (±8)
Cedar Creek Lake	66 (±9)	45 (±9)				
Chenoa Lake	42 (±13)	13 (±9)				
Lake Linville	48 (±7)	16 (±5)			26 (±8)	2 (±3)
Wood Creek Lake	25 (±6)	4 (±3)			34 (±17)	3 (±6)

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Table 13. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Fishing Creek of Lake Cumberland on 28 September 2017; standard error is in parentheses.

	Inch class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE
Largemouth bass	8	3	1		2	3	1			3		4	2	27	18.0 (4.2)
Spotted bass		18	5	1	5	12	10	4	6	10	2	3	1	77	51.3 (9.9)

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Table 14. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples in the Fishing Creek area of Lake Cumberland.

		Age-0		Age-0		Age-0 >5.0 in		Age-1 [a]	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
	Lake Cumberland								
2017	Fishing Creek	4.2	0.5	11.3	4.4	3.3	1.6		
2016	Fishing Creek	6.8	0.2	20.0	9.2	19.3	8.7	4.0	2.1
2015	Fishing Creek	5.1	0.2	18.7	14.1	8.7	6.4	13.3	4.9
2014	Fishing Creek	6.7	0.2	9.3	2.2	9.3	2.2	26.0	4.9
2013	Fishing Creek	6.1	0.1	80.0	23.8	61.3	15.9	26.0	13.6
2012	Fishing Creek	6.1	0.1	96.7	24.6	80.0	19.6	21.8	6.2
2011	Fishing Creek	6.1	0.1	114.7	25.1	102.0	23.2	46.5	7.0
2010	Fishing Creek	5.8	0.1	85.3	9.4	67.3	8.4	16.7	11.5
2009	Fishing Creek	4.8	0.2	42.0	9.5	22.7	6.4	21.3	6.6
2008	Fishing Creek	5.0	0.1	166.0	40.1	80.7	31.3	81.3	13.5
2007	Fishing Creek	5.0	0.3	4.7	3.2	2.7	1.3	24.9	5.5
2006	Fishing Creek	6.3	0.2	22.0	3.1	20.7	2.4	32.0	8.2
2005	Fishing Creek	6.2	0.2	14.0	4.5	13.3	4.1	3.3	1.2
2004	Fishing Creek	6.2	0.1	50.7	8.2	41.3	7.4	4.0	2.1
2003	Fishing Creek	5.8	0.4	6.0	2.7	4.0	2.5	1.3	0.8
2002	Fishing Creek	6.0	0.1	192.7	36.7	160.7	36.3	4.0	1.5

[a] Age-1 largemouth bass CPUE based only on Fishing Creek location

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Table 15. Year class strength at age-0 and mean lengths (in) of largemouth bass collected in September 2017 in electrofishing samples at Lake Cumberland, Laurel River Lake, Cedar Creek Lake, and Wood Creek Lake.

		Age-0		Age-0		Age-0 >5.0 in	
Lake	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error
Lake Cumberland	Fishing Creek	4.2	0.5	11.3	4.4	3.3	1.6
Laurel River Lake	Laurel River Arm	3.6	0.3	7.3	2.4	1.3	1.3
Cedar Creek Lake		4.0	0.1	68.7	15.8	10.7	3.8
Wood Creek Lake		4.1	0.2	16.0	4.4	2.7	1.3

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Table 16. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Fishing Creek of Lake Cumberland on 28 September 2017. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		>15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	4	81 (6)	6	88 (4)	0	0 (0)
	7.0-10.9 in		11.0-13.9 in		>14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	31	95 (1)	15	92 (2)	1	86 (-)

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Table 17. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Chenoa Lake, Lake Linville, and Wood Creek Lake during September and October 2017. Standard error is in parentheses.

		Length group					
Species	Location	No.	Wr	No.	Wr	No.	Wr
Largemouth bass		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	Lake Cumberland (Fishing Creek)	4	81 (6)	6	88 (4)	0	0 (0)
	Laurel River Lake (Laurel River Arm)	12	89 (2)	9	100 (3)	0	0 (0)
	Cedar Creek Lake	29	89 (1)	22	89 (2)	16	95 (2)
	Chenoa Lake	15	80 (1)	16	81 (1)	5	87 (5)
	Lake Linville	32	86 (1)	20	83 (2)	16	87 (3)
	Wood Creek Lake	38	81 (1)	13	85 (7)	1	91 (-)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	Lake Cumberland (Fishing Creek)	31	95 (1)	15	92 (2)	1	86 (-)
	Laurel River Lake (Laurel River Arm)	5	100 (6)	2	110 (1)	0	0 (0)
	Wood Creek Lake	3	97 (6)	3	100 (2)	0	0 (0)

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Table 18. Length frequency and CPUE (fish/nn) for each species of crappie collected in the Fishing Creek (27 net-nights) and Wolf Creek (27 net-nights) embayments of Lake Cumberland in 54 net-nights from 24-27 October and 30 October- 2 November 2017.

		Inch class													
Area	Species	2	3	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. error
Fishing Creek															
	White crappie	1	1	3	5	11	28	17	9	4	1	1	81	3.0	0.9
	Black crappie	2	2	4	14	34	26	12	4				98	3.6	1.0
Wolf Creek															
	White crappie												0	0.0	0.0
	Black crappie	2	3	2	20	18	9	9	5	10	3		81	3.0	0.8
Total															
	White crappie	1	1	3	5	11	28	17	9	4	1	1	81	1.5	0.5
	Black crappie	4	5	6	34	52	35	21	9	10	3		179	3.3	0.6

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Table 19. PSD and RSD_{10} values calculated for crappie collected in trapnets at Lake Cumberland in October and November 2017; 95% confidence limits are in parentheses.

Species		No. stock size	PSD	RSD_{10}
White crappie				
	Fishing Creek	79	76 (± 9)	19 (± 9)
	Wolf Creek	0	0 (± 0)	0 (± 0)
	Lake Cumberland	79	76 (± 9)	19 (± 9)
Black crappie				
	Fishing Creek	94	45 (± 10)	4 (± 4)
	Wolf Creek	76	47 (± 11)	24 (± 10)
	Lake Cumberland	170	46 (± 8)	13 (± 5)

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Table 20. Mean back calculated lengths (in) at each annulus for white crappie collected from Lake Cumberland during 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2016	13	4.1						
2015	36	4.0	7.2					
2014	1	4.5	9.5	11.2				
2010	1	4.0	7.1	9.2	10.6	11.5	12.3	13.4
Mean		4.0	7.3	10.2	10.6	11.5	12.3	13.4
Number		51	38	2	1	1	1	1
Smallest		3.2	5.5	9.2	10.6	11.5	12.3	13.4
Largest		5.5	9.7	11.2	10.6	11.5	12.3	13.4
Std error		0.1	0.2	1.0				
95% CI ±		0.2	0.4	2.0				

Otoliths were used for age-growth determinations; Intercept = 0

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Table 21. Mean back calculated lengths (in) at each annulus for black crappie collected from Lake Cumberland during 2017, including the 95%confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2016	11	4.0			
2015	37	3.8	5.8		
2014	24	3.7	5.9	8.0	
2013	9	4.0	5.8	8.2	10.0
Mean		3.8	5.9	8.1	10.0
Number		81	70	33	9
Smallest		2.4	4.7	6.4	8.9
Largest		4.8	7.1	9.6	11.3
Std error		0.1	0.1	0.1	0.3
95% CI ±		0.1	0.2	0.3	0.6

Otoliths were used for age-growth determinations; Intercept =
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Table 22. Age-frequency and CPUE (fish/nn) of white crappie trap-netted at Lake Cumberland in 54 net-nights in October and November 2017.

	Inch class														
Age	2	3	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std error
0+	1	1										2	2.5	0.0	0.0
1+			3	5	4	6						18	22.2	0.3	0.1
2+					7	22	17	9	4			59	72.8	1.1	0.3
3+										1		1	1.2	0.0	0.0
7+											1	1	1.2	0.0	0.0
Total	1	1	3	5	11	28	17	9	4	1	1	81	100.0	1.5	
%	1.2	1.2	3.7	6.2	13.6	34.6	21.0	11.1	4.9	1.2	1.2				

CPUE of ≥8.0 in (quality size) crappie = 1.1 fish/nn
CPUE of ≥10.0 in (preferred size) crappie = 0.3 fish/nn
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Table 23. Age-frequency and CPUE (fish/nn) of black crappie trap-netted at Lake Cumberland in 54 net-nights in October and November 2017.

	Inch class													
Age	2	3	5	6	7	8	9	10	11	12	Total	%	CPUE	Std error
0+	4	5									9	5.0	0.2	0.1
1+			4	12	7						23	12.8	0.4	0.1
2+			2	22	37	27	10				98	54.7	1.8	0.4
3+					7	8	10	9	5		39	21.8	0.7	0.1
4+							2		5	3	10	5.6	0.2	0.1
Total	4	5	6	34	51	35	22	9	10	3	179	100.0	3.3	
%	2.2	2.8	3.4	19.0	28.5	19.6	12.3	5.0	5.6	1.7				

CPUE of ≥8.0 in (quality size) crappie = 1.4 fish/nn
CPUE of ≥10.0 in (preferred size) crappie = 0.4 fish/nn
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Table 24. Population assessment for white and black crappie from Lake Cumberland trap net data collected in October and November 2017 (scoring based on statewide assessment).

	Species			
	White crappie		Black crappie	
Parameter	Assessment value	Assessment score	Assessment value	Assessment score
CPUE age-1 and older	1.5	1	3.2	2
CPUE age-1	0.3	1	0.4	1
CPUE age-0	0.0	1	0.2	1
CPUE $\geq$ 8.0 in	1.1	1	1.4	2
Mean length age-2 at capture	9.4	2	7.7	1
Instantaneous mortality (Z)	0.729		0.298	
Annual mortality (A)	51.8		25.8	
Total score:		6		7
Assessment rating:		P		P

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Table 25. Population assessment for crappie based on fall trap netting at Lake Cumberland from 1996-2017 (scoring based on statewide assessment).

		CPUE			CPUE			CPUE			CPUE			Mean length				
		≥ age-1			age-1			age-0			≥ 8.0 in			age-2 at capture			Total	Assessement
Year		WC	BC	ALL	WC	BC	ALL	WC	BC	ALL	WC	BC	ALL	WC	BC	ALL	Score	rating
Management objective				≥ 5.0 fish/nn			≥ 3.0 fish/nn			≥ 3.0 fish/nn			≥ 2.0 fish/nn			≥ 9.6 in		
2017	Value	1.5	3.2	4.6	0.3	0.4	0.8	0.0	0.2	0.2	1.1	1.4	2.6	9.4	7.7	8.5		
	Score			2			1			1			2			1	7	P
2015	Value	0.2	3.7	3.9	0.1	1.4	1.5	0.4	0.3	0.7	0.1	1.6	1.7	11.9*	8.4	8.5		
	Score			1			1			1			1			1	5	P
2013	Value	0.2	0.9	1.1	0.0	0.1	0.1	0.0	34.2	34.2	0.2	0.8	1.0	11.9	9.7	9.9		
	Score			1			1			4			1			3	10	F
2011	Value	2.8	2.7	5.5	2.3	2.2	4.5	0.2	23.3	23.5	1.4	0.7	2.0	10.7	9.8	10.2		
	Score			2			3			4			1			4	14	G
2009	Value	0.8	0.7	1.5	0.8	0.6	1.4	0.6	7.3	7.9	0.6	0.3	0.9	-	-	-		
	Score			1			1			4			1			0	7	P
2007	Value	0.3	7.0	7.3	0.2	6.7	6.9	0.0	0.2	0.3	0.3	0.5	0.8	11.2	9.4	9.9		
	Score			3			3			1			1			3	11	F
2005	Value	0.5	5.2	5.7	0.1	2.8	3.0	0.2	1.2	1.4	0.5	1.4	1.9	10.6	8.1	8.8		
	Score			2			2			2			1			1	8	P
2003	Value	2.3	3.5	5.8	1.8	2.7	4.5	0.2	4.5	4.7	1.2	1.2	2.4	10.4	9.8	10.1		
	Score			2			3			4			2			3	14	G
2001	Value	0.4	0.6	1.0	0.1	0.4	0.6	0.3	4.0	4.3	0.3	0.2	0.5	10.4	9.3	9.7		
	Score			1			1			3			1			3	9	F
1998	Value	1.7	0.9	2.7	0.5	0.3	0.9	0.3	0.5	0.8	1.7	0.8	2.5	9.5	-	9.3		
	Score			1			1			1			2			2	7	P
1996	Value	3.3	1.0	4.2	0.5	0.5	1.0	2.7	0.2	2.9	1.5	0.1	1.6	8.7	6.8	8.5		
	Score			2			1			3			1			1	8	P

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Table 26. Number of fish and mean relative weight (Wr) for each length group of crappie collected in Lake Cumberland in October and November 2017. Standard error is in parentheses.

		Length group					
		5.0-7.9 in		8.0-9.9 in		≥10.0 in	
Species	Location	No.	Wr	No.	Wr	No.	Wr
White crappie							
	Fishing Creek	19	92 (2)	44	90 (1)	15	89 (1)
	Wolf Creek	0	-	0	-	0	-
	Lake Cumberland	19	92 (2)	44	90 (1)	15	89 (1)
Black crappie							
	Fishing Creek	52	90 (1)	38	90 (1)	4	88 (2)
	Wolf Creek	40	93 (1)	18	95 (2)	18	92 (1)
	Lake Cumberland	92	92 (1)	56	91 (1)	22	91 (1)

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Table 27. Length frequency and CPUE (fish/nn) of striped bass collected at Lake Cumberland in 25 net-nights on 27-30 November 2017 and 4-6 December 2017.

	Inch class																						
Species	9	10	11	14	15	16	17	18	19	20	23	24	25	26	27	28	29	30	31	32	Total	CPUE	Std. error
Striped bass	3	3	1	1	6	2	5	12	25	4	4	6	9	10	6	4	4	1	1	1	108	4.3	0.8

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Table 28. Population assessment for striped bass based on fall gill netting at Lake Cumberland from 2000-2017.

Year		CPUE ≥age 1	Mean length age-2 at capture	CPUE ≥24.0 in	CPUE age-1	Total score	Assessement rating
Management objective		≥4.0 fish/nn	≥21.0 in	≥1.0 fish/nn	≥2.0 fish/nn		
2017	Value	4.0	24.3	1.7	2.2		
	Score	2	4	4	3	13	G
2016	Value	5.0	22.8	2.7	0.9		
	Score	3	4	4	1	12	G
2015	Value	4.6	22.3	1.5	0.9		
	Score	3	3	4	1	11	G
2014	Value	6.1	21.9	0.6	5.2		
	Score	4	2	1	4	11	G
2013	Value	7.2	22.1	2.8	2.6		
	Score	4	3	4	3	14	E
2012	Value	7.3	20.6	1.9	0.8		
	Score	4	1	4	1	10	G
2011	Value	5.9	20.5	1.2	0.6		
	Score	4	1	3	1	9	F
2009	Value	4.0	21.6	1.2	1.8		
	Score	2	2	3	3	10	G
2008	Value	9.2	22.1	1.5	2.7		
	Score	4	3	4	4	15	E
2007	Value	5.3	23.7	1.2	3.9		
	Score	4	4	3	4	15	E
2006	Value	3.9	22.8	1.6	1.3		
	Score	2	4	4	2	12	G
2005	Value	3.4	23.3	1.5	1.2		
	Score	2	4	4	2	12	G
2004	Value	4.4	23.4	2.1	1.8		
	Score	3	4	4	3	14	E
2003	Value	4.1	21.9	1.2	1.7		
	Score	3	2	3	2	10	G
2002	Value	3.5	22.9	1.3	1.8		
	Score	2	4	3	3	12	G
2001	Value	3.1	21.0	0.1	2.7		
	Score	1	1	1	4	7	F
2000	Value	3.4	23.3	0.7	2.5		
	Score	2	4	1	3	10	G

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Table 29. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2016	37	11.5								
2015	10	12.7	20.6							
2014	17	11.8	19.5	23.8						
2013	12	12.9	19.4	22.7	25.4					
2012	2	13.0	19.2	22.6	25.5	27.3				
2009	2	10.0	17.8	20.6	23.0	24.7	26.2	27.4	28.3	
2008	3	10.3	17.2	21.6	23.5	25.2	26.7	28.2	29.4	30.6
Mean		11.9	19.5	23.0	24.8	25.7	26.5	27.9	29.0	30.6
Number		83	46	36	19	7	5	5	5	3
Smallest		6.5	16.0	20.3	22.3	24.0	25.7	26.9	27.7	28.9
Largest		15.2	22.5	25.4	27.9	29.2	27.3	29.0	30.3	31.7
Std error		0.2	0.2	0.2	0.4	0.6	0.3	0.4	0.5	0.9
95% CI ±		0.5	0.4	0.4	0.8	1.3	0.5	0.7	0.9	1.7

Otoliths were used for age-growth determinations; Intercept = 0
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Table 30. Age-frequency and CPUE (fish/nn) of striped bass gill netted for 25 net-nights at Lake Cumberland in November and December 2017.

	Inch class																							Std
Age	9	10	11	14	15	16	17	18	19	20	23	24	25	26	27	28	29	30	31	32	Total	%	CPUE	error
0	3	3	1																		7	6.5	0.3	0.2
1+				1	6	2	5	12	25	4											55	50.9	2.2	0.6
2+											4	4	1	1							10	9.3	0.4	0.1
3+												1	5	6	4	1					17	15.7	0.7	0.2
4+												1	3	2	2	2	2				12	11.1	0.5	0.1
5+														1				1			2	1.9	0.1	0.0
8+																1	1				2	1.9	0.1	0.0
9+																	1		1	1	3	2.8	0.1	0.1
Total	3	3	1	1	6	2	5	12	25	4	4	6	9	10	6	4	4	1	1	1	108	100.0	4.3	
%	2.8	2.8	0.9	0.9	5.6	1.9	4.6	11.1	23.1	3.7	3.7	5.6	8.3	9.3	5.6	3.7	3.7	0.9	0.9	0.9				

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Table 31. Population assessment for striped bass gill netted at Lake Cumberland in November and December 2017.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	4.0	2
Growth rate (Mean length age 2+ at capture)	24.3	4
Size structure (CPUE >24.0 in)	1.7	4
Recruitment (CPUE age 1)	2.2	3
Instantaneous mortality (Z)	0.458	
Annual mortality (A)	36.7	
Total score		13
Assessment rating		G

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Table 32. Number of fish and mean relative weight (Wr) for each length group of striped bass collected in Lake Cumberland in November and December 2017. Standard error is in parentheses.

Length group					
12.0-19.9 in		20.0-29.9 in		>30.0 in	
No.	Wr	No.	Wr	No.	Wr
49	92 (1)	47	90 (1)	3	86 (4)

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Table 33. Species composition, relative abundance, and CPUE (fish/hr) of trout collected during 8.75 hours of 15-minute nocturnal electrofishing runs for trout in Cumberland tailwater during November 2017; standard error is in parentheses.

		Inch class																							
Area	Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	27	28	Total	CPUE
Above Helms	Rainbow trout		1		3	19	30	33	7	5	3	7	8	6	1									123	98.4 (30.9)
	Brown trout				5	26	37	13	9	4	1	1	1			2		2	2	1			1	105	84.0 (22.2)
	Brook trout				1	1	14	6																22	17.6 (5.5)
Below Helms	Rainbow trout		2			10	26	7	4	5	18	17	8	4										101	80.8 (9.6)
	Brown trout					9	11	10	2		1		1			2						1		37	29.6 (6.0)
	Brook trout				1		8	4																13	10.4 (2.7)
Rainbow Run	Rainbow trout					1	2	6	1	2	2	5	7	3										29	23.2 (5.0)
	Brown trout					3	14	9	2	1	3	1		2	1		1	1						38	30.4 (8.5)
	Brook trout					1		1																2	1.6 (1.6)
Big Willis	Rainbow trout	1		2		5	14	4	3	6	18	22	14	2	1	3								95	76.0 (10.4)
	Brown trout						5	3	1	7	7	1	1		2	1	2	1						31	24.8 (5.6)
	Brook trout						1	2																3	2.4 (1.0)
Crocus Creek	Rainbow trout	1			1	1	11	7	1	5	11	14	12	7	3	1								75	60.0 (11.5)
	Brown trout					2	3	2	2	2	2		1			1	1		1		2			19	15.2 (7.3)
	Brook trout						1																	1	0.8 (0.8)
Hwy 61 Bridge	Rainbow trout			2	9	43	13	3		1		1												72	57.6 (16.2)
	Brown trout						2				3	1	3	1	1					1				12	9.6 (3.3)
	Brook trout						1																	1	0.8 (0.8)
Cloyd's Landing	Rainbow trout			1	10	19	7	4				1	2	2	1	1	1	1						50	40.0 (7.7)
	Brown trout										1							1						2	1.6 (1.0)
	Brook trout																							0	0.0 (0.0)
Total	Rainbow trout	2	3	5	23	98	103	64	16	24	52	67	51	24	6	5	1	1						545	62.3 (6.6)
	Brown trout				5	40	72	37	16	14	18	4	7	3	4	6	4	5	3	2	2	1	1	244	27.9 (5.5)
	Brook trout				2	2	25	13																42	4.8 (1.4)

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Table 34. Fall electrofishing mean CPUE (fish/hr) of 15.0-17.9 in, 18.0-19.9 in, and ≥20.0 in rainbow trout in the Lake Cumberland tailwater from 1995 to 2017. Data collected from sample sites 1-5 each year. *2011 sampling was conducted in February.

	Length group					
	15.0-17.9 in		18.0-19.9 in		≥20.0 in	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	21.8	2.4	1.4	0.5	0.0	
2016	6.2	1.3	1.0	0.4	0.5	0.3
2015	9.0	1.9	1.3	0.6	0.2	0.2
2014	8.6	1.1	3.0	0.7	0.2	0.2
2013	23.2	3.6	0.5	0.3	0.0	
2012	0.5	0.3	0.2	0.2	0.0	
2011	1.1	0.6	0.0		0.2	0.2
2010	1.3	0.5	0.3	0.2	0.0	
2009	5.4	1.6	0.5	0.3	0.0	
2008	18.1	4.3	1.4	0.5	0.0	
2007	25.0	3.5	6.4	1.3	0.6	0.3
2006	29.3	3.0	4.3	1.2	0.3	0.2
2005	9.3	2.4	2.1	0.8	0.0	
2004	2.2	0.8	0.6	0.4	0.0	
2003	2.1	0.7	1.0	0.4	0.2	0.2
2002	10.7	2.4	1.4	0.7	1.0	0.6
2001	21.0	3.7	5.5	1.3	0.7	0.4
2000	9.4	1.3	1.4	0.7	0.5	0.4
1999	1.9	0.5	0.3	0.2	0.3	0.2
1998	0.3	0.2	0.2	0.2	0.2	0.2
1997	1.4	0.5	1.0	0.5	0.3	0.2
1996	1.8	0.6	0.6	0.3	0.5	0.5
1995	0.7	0.5	0.5	0.4	0.5	0.5

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Table 35. Fall electrofishing mean CPUE (fish/hr) of 15.0-17.9 in, 18.0-19.9 in, and ≥20.0 in brown trout in the Lake Cumberland tailwater from 1995 to 2017. Data collected from sample sites 1-5 each year. *2011 sampling was conducted in February.

	Length group					
	15.0-17.9 in		18.0-19.9 in		≥20.0 in	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	1.4	0.5	1.4	0.5	2.6	0.7
2016	4.5	1.1	3.0	0.8	2.2	0.8
2015	5.6	1.8	1.9	0.7	1.9	0.7
2014	7.2	2.1	1.4	0.6	1.6	0.8
2013	2.4	0.8	1.1	0.6	4.6	1.5
2012	2.6	0.8	3.2	1.2	2.7	0.9
2011	6.6	1.2	3.4	0.9	4.0	1.2
2010	3.7	0.9	1.3	0.5	0.6	0.4
2009	9.1	2.0	5.3	1.7	2.7	1.1
2008	14.1	2.9	6.4	1.0	2.6	0.7
2007	29.0	6.2	5.8	1.3	3.4	0.7
2006	30.2	10.1	5.6	1.5	5.0	1.5
2005	14.9	3.1	7.0	1.7	9.3	2.4
2004	11.8	3.3	7.7	2.0	3.2	0.9
2003	20.2	5.0	3.8	1.4	1.9	0.7
2002	31.2	6.6	5.6	1.1	2.9	0.9
2001	30.2	8.7	5.8	1.5	5.2	1.3
2000	18.9	4.7	6.6	1.6	9.0	2.5
1999	6.1	1.1	5.1	1.8	2.6	0.7
1998	6.4	1.2	1.1	0.5	1.8	0.7
1997	2.2	0.7	1.8	0.9	3.2	1.4
1996	6.8	2.5	1.0	0.6	2.0	0.9
1995	0.7	0.4	0.4	0.3		

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Table 36. Number of fish and mean relative weight (Wr) for each species of trout collected in the Cumberland tailwater during November 2017. Standard error is in parentheses.

	Species					
	Rainbow trout		Brown trout		Brook trout	
Location	No.	Wr	No.	Wr	No.	Wr
Above Helms	122	84 (1)	104	88 (1)	22	75 (2)
Below Helms	97	85 (1)	37	89 (2)	13	83 (2)
Rainbow Run	29	92 (2)	38	95 (2)	2	95 (7)
Big Willis	92	91 (2)	31	98 (2)	3	84 (1)
Crocus Creek	68	90 (1)	19	100 (2)	1	74 (-)
Hwy 61	70	93 (1)	12	98 (6)	1	76 (-)
Cloyds	48	102 (2)	2	106 (5)	-	-
Total	526	89 (1)	243	92 (1)	42	79 (2)

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Table 37. Comparison of statistics derived from daytime creel surveys on Lake Cumberland tailwater (Wolf Creek Dam to Hwy 61 bridge) during 1995, 2002, 2006, 2009, and 2017. (rm = river mile)

	1995				2002			
	Rainbow Trout	Brown Trout	Trout Combined	Total	Rainbow Trout	Brown Trout	Trout Combined	Total
Fishing trips								
Number of fishing trips				52,431				104,963
Average trip length				5.1				5.1
Fishing pressure								
Total man-hours			244,107	269,123			516,200	539,034
Standard Error (S.E.)				25,783				39,080
Man hours/rm			6,374	7,027			13,304	13,893
Catch/harvest								
Number of fish caught				108,478				436,649
Number of fish harvested	48,029	13,023	61,052	65,667	184,745	380	185,126	193,169
Pounds of fish harvested	24,809	6,357	31,166	44,428	125,655	2,305	127,961	139,720
Harvest rates								
Fish/hour			0.33	0.24			0.36	0.36
Pounds/hour							0.25	0.26
Fish/rm	1,254	340	1,594	1,715	4,761	10	4,771	4,979
Pounds/rm	648	166	814	1,160	3,239	59	3,298	3,601
Catch rates								
Fish/hour			0.53	0.40			0.77	0.81
Fish/rm				2,832			10,244	11,254
Miscellaneous characteristics (%)								
Male				84				87
Female				16				13
Resident				82				75
Non-resident				18				25
Method (%)								
Still fishing				72				55
Casting				20				24
Fly fishing				7				15
Trolling				1				6

Table 37. Cont.

	2006				2009			
	Rainbow Trout	Brown Trout	Trout Combined	Total	Rainbow Trout	Brown Trout	Trout Combined	Total
Fishing trips								
Number of fishing trips				102,844				73,190
Average trip length				3.9				4.3
Fishing pressure								
Total man-hours			383,660	405,754			213,571	314,949
Standard Error (S.E.)				33,434				19,676
Man hours/rm			9,888	10,458			5,504	8,117
Catch/harvest								
Number of fish caught				326,996				268,390
Number of fish harvested	120,364	2,087	122,451	123,583	65,671	1,349	67,020	110,326
Pounds of fish harvested	77,364	3,269	71,360	90,030	36,027	2,206	38,233	74,315
Harvest rates								
Fish/hour			0.32	0.30			0.31	0.30
Pounds/hour			0.19	0.22			0.18	0.22
Fish/rm	3,102	54	3,156	3,185	1,693	35	1,727	2,843
Pounds/rm	1,994	84	1,839	2,320	929	57	985	1,915
Catch rates								
Fish/hour			0.82	0.81			0.77	0.85
Fish/rm			8,108	8,428			4,238	6,917
Miscellaneous characteristics (%)								
Male				86				85
Female				14				15
Resident				78				85
Non-resident				22				15
Method (%)								
Still fishing				62				66
Casting				26				24
Fly fishing				11				9
Trolling				1				1

Table 37. Cont.

	2017			
	Rainbow Trout	Brow n Trout	Trout Combined	Total
Fishing trips				
Number of fishing trips				60,291
Average trip length				3.8
Fishing pressure				
Total man-hours			209,336	229,994
Standard Error (S.E.)				22,111
Man hours/rm			5,395	5,928
Catch/harvest				
Number of fish caught				259,603
Number of fish harvested	79,449	22	79,471	82,841
Pounds of fish harvested	48,048	117	48,165	57,933
Harvest rates				
Fish/hour			0.38	0.36
Pounds/hour			0.23	0.25
Fish/rm	2,048	1	2,048	2,135
Pounds/rm	1,238	3	1,241	1,493
Catch rates				
Fish/hour			0.97	1.13
Fish/rm			5,216	6,691
Miscellaneous characteristics (%)				
Male				86
Female				14
Resident				79
Non-resident				21
Method (%)				
Still fishing				29
Casting				49
Fly fishing				14
Trolling				8

Table 38. Statistics for boat and bank anglers derived from a daytime creel survey on Lake Cumberland tailwater (Wolf Creek Dam to Hwy 61 bridge) during 2017. (rm = river mile)

	Total		Upper		Lower	
	Bank	Boat	Bank	Boat	Bank	Boat
Fishing trips						
Number of fishing trips	27,705	36,664	17,701	14,286	10,502	20,901
Average trip length	2.6	4.3	2.6	4.1	2.4	4.8
Fishing pressure						
Total man-hours	70,837	159,158	45,687	58,141	25,150	101,017
Standard error (S.E.)	5,062	20,454	3,613	5,159	3,545	19,792
Catch/harvest						
Number of fish caught	62,087	197,516	46,396	79,250	15,691	118,267
Standard error (S.E.)	9,926	37,289	8,505	8,870	5,118	36,219
Number of fish harvested	30,142	52,699	25,675	33,050	4,468	19,649
Standard error (S.E.)	7,261	8,002	7,010	5,175	1,895	6,103
Pounds of fish harvested	14,908	43,025	12,208	29,824	2,701	13,201
Harvest rates						
Fish/hour	0.43	0.33	0.56	0.57	0.18	0.19
Pounds/hour	0.21	0.27	0.27	0.51	0.11	0.13
Fish/rm	776.9	1358.2	5705.6	7344.4	130.3	572.9
Pounds/rm	384.2	1108.9	2712.9	6627.6	78.7	384.9
Catch rates						
Fish/hour	0.88	1.24	1.02	1.36	0.62	1.17
Fish/rm	1600.2	5090.6	10310.2	17611.1	457.5	3448.0
Miscellaneous characteristics (%)						
Male	83	88	83	86	79	92
Female	17	12	17	14	21	8
Resident	83	79	83	83	81	71
Non-resident	17	21	17	17	19	29
Method (%)						
Still fishing	65	11	65	13	63	6
Casting	28	60	28	65	29	51
Fly fishing	6	18	6	9	8	34
Trolling	<1	12	<1	13	0	8

Upper = Wolf Creek Dam to Helms Landing (4.5 river miles)

Lower = Helms Landing to Hwy 61 bridge (34.3 river miles)

Table 39. Fish harvest statistics by species or group at Lake Cumberland tailwater (Wolf Creek Dam to Hwy 61 Bridge) derived from a daytime creel survey during 2017. (rm = river mile)

	Trout group	Rainbow trout	Brow n trout	Brook trout	Morone group	Striped bass	White bass	Walleye	Sauger	Black bass group	Channel catfish	Flathead catfish
No. harvested		79,449	22	-		339	100	959	298		18	64
No. harvested per rm		2,048	1	-		9	3	25	8		0	2
% of total no. harvested		95.1	0.0	-		0.4	0.1	1.1	0.4		0.0	0.1
lbs. harvested		48,048	117	-		4,435	152	2,586	255		78	445
lbs. harvested per rm		1,238	3	-		114	4	67	7		2	11
% of total lbs. harvested		82.9	0.2	-		7.7	0.3	4.5	0.4		0.1	0.8
Mean length (in)		11.5	25.0	15.0		28.8	16.0	19.4	15.3		24.0	26.0
Mean w eight (lb)		0.64	5.38	-		11.69	1.51	2.67	1.22		4.29	6.96
Hours fished for that group/species	209,336				2,244					315		
Hours fished for that group/species per rm	5,395				58					8		
% of all hours	91.0				1.0					0.1		
No./hr. harvested fishing for that group/species	0.37				0.00					0.00		

Table 39. Continued.

	Black crappie	Panfish group	Bluegill	Skipjack	Carp	Paddlefish	Suckers	Anything
No. harvested	8		469	1,639	122	9	27	
No. harvested per rm	0		12	42	3	0	1	
% of total no. harvested	0.0		0.6	2.0	0.1	0.0	0.0	
lbs. harvested	5		68	1,295	335	72	41	
lbs. harvested per rm	0		2	33	9	2	1	
% of total lbs. harvested	0.0		0.1	2.2	0.6	0.1	0.1	
Mean length (in)	11.0		6.0	13.7	18.0	38.0	15.0	
Mean w eight (lb)	0.72		0.14	0.64	2.75	7.90	1.51	
Hours fished for that group		144						17,955
Hours fished for that group per rm		4						463
% of all hours		0.1						7.8
No./hr. harvested fishing for that group		0.00						0.34

Table 40. Length distribution by species for both harvested and released fish in the Lake Cumberland tailwater creel survey (Wolf Creek Dam to Hwy 61 Bridge) during 2017. (Lengths for released fish are estimated.)

	Inch class																														
	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	34	36	37	38	Total
Rainbow trout																															
Harvested				2	1	35	75	384	274	555	163	92		3			1		2	1		1		1			1				1591
Released	3		1	31	6	255	228	610	216	726	102	121	45	109	99	61	20	11		1	4	1									2650
Brow n trout																															
Harvested																							1								1
Released		1		4	6	21	12	120	14	77	19	22	7	8	7	2	1		1	1											323
Brook trout																															
Harvested								1	1				1																		3
Released				2	3	113	178	391	189	318	47	41			2																1284
Striped bass																															
Harvested															2		2									1		2	1		8
Released						8				7		1		1				1		2				1		1				1	23
White bass																															
Harvested														2																	2
Released							1					1																			2
Walleye																															
Harvested														4	3	2	2	3	1	3				1	1						20
Released										1												1									2
Sauger																															
Harvested										1				1		1															3
Released								1																							1
Largemouth bass																															
Harvested																															0
Released										1																					1
Smallmouth bass																															
Harvested																															0
Released									1																						1
Channel catfish																															
Harvested																						1									1
Released																															0
Flathead catfish																															
Harvested																								1							1
Released																															0
Black crappie																															
Harvested									1																						1
Released																															0

Table 40. Continued

	Inch Class																														
	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	34	36	37	38	Total
Bluegill																															
Harvested			1	1	1																										3
Released		3	3																												6
Green sunfish																															
Harvested																															0
Released			1																												1
Shad																															
Harvested																															0
Released		1																													1
Skipjack																															
Harvested						1		4		2		1	10	12	34																64
Released							1			1			1	3	4	6		3													19
Drum																															
Harvested																															0
Released														1																	1
Suckers																															
Harvested													2																		2
Released												1																			1
Paddlefish																															
Harvested																														1	1
Released																															0
Buffalo																															
Harvested																															0
Released																1															1
Lake sturgeon																															
Harvested																															0
Released																												1			1
Carp																															
Harvested																2															2
Released																						4									4
Gar																															
Harvested																															0
Released												6																			6

Table 41. Comparison of length distributions of both harvested and released brown trout in the Lake Cumberland tailwater creel surveys (Wolf Creek Dam to Hwy 61 Bridge) during 1995, 2002, 2006, 2009, and 2017. (Lengths for released fish are estimated.)

		Inch class																								
Year		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	33	Total
1995	Harvested					32	62	73	25	8	2	5	3	3	2	5	3		1								224
	Released			6	13	28	40	67	22	27	2	4	2	2			1										214
	Total			6	13	60	102	140	47	35	4	9	5	5	2	5	4		1								438
2002	Harvested							1		1		2		1			1		1	1		3			2		13
	Released	1	1	9	15	101	86	288	53	209	82	203	123	101	42	29	12	8	2	4		1					1370
	Total	1	1	9	15	101	86	289	53	210	82	205	123	102	42	29	13	8	3	5		4			2		1383
2006	Harvested						1			1		2		1	2			1	1	1				1		1	12
	Released			2	8	30	30	113	25	105	74	84	50	54	36	25	10	4	2	4	3						659
	Total			2	8	30	31	113	25	106	74	86	50	55	38	25	10	5	3	5	3			1		1	671
2009	Harvested						1	2	2	1	1	1		1	1	1		5	4	1	1						22
	Released			2	3	51	56	173	73	146	58	54	61	42	16	16	9	1	1	2							764
	Total			2	3	51	57	175	75	147	59	55	61	43	17	17	9	6	5	3	1						786
2017	Harvested																						1				1
	Released	1		4	6	21	12	120	14	77	19	22	7	8	7	2	1		1	1							323
	Total	1		4	6	21	12	120	14	77	19	22	7	8	7	2	1		1	1			1				324

Table 42. Comparison of length distributions of both harvested and released rainbow trout in the Lake Cumberland tailwater creel surveys (Wolf Creek Dam to Hwy 61 Bridge) during 1995, 2002, 2006, 2009, and 2017. (Lengths for released fish are estimated)

		Inch Class																							
Year		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	26	34	Total
1995	Harvested				1	1	76	311	373	221	137	45	26	15	9	4		2	3	1						1225
	Released				2	10	47	31	93	76	52	16	12		4	3	1									347
	Total				3	11	123	342	466	297	189	61	38	15	13	7	1	2	3	1						1572
2002	Harvested				5	18	135	363	802	852	722	296	295	138	84	68	35	16	7	2	1					3839
	Released	3	1	8	68	53	266	230	575	161	547	115	227	50	73	28	28	3	9	1	5	1	1			2453
	Total	3	1	8	73	71	401	593	1377	1013	1269	411	522	188	157	96	63	19	16	3	6	1	1			6292
2006	Harvested						26	149	454	553	596	304	160	25	8	3	5	3	4	2	1					2293
	Released			4	22	20	97	101	371	142	448	151	180	150	135	64	91	37	15	5		2		1		2036
	Total			4	22	20	123	250	825	695	1044	455	340	175	143	67	96	40	19	7	1	2		1		4329
2009	Harvested						46	276	750	372	397	178	139	5	3	1	1		4	9	1					2182
	Released		1		4	12	89	337	559	129	205	48	55	53	76	29	33	14			2		1			1647
	Total		1		4	12	135	613	1309	501	602	226	194	58	79	30	34	14	4	9	3		1			3829
2017	Harvested				2	1	35	75	384	274	555	163	92		3			1		2	1		1	1	1	1591
	Released	3		1	31	6	255	228	610	216	726	102	121	45	109	99	61	20	11		1	4	1			2650
	Total	3		1	33	7	290	303	994	490	1281	265	213	45	112	99	61	21	11	2	2	4	2	1	1	4241

Table 43. Monthly trout angling success in the Lake Cumberland tailwater (Wolf Creek Dam to Hwy 61 Bridge) during the 2017 creel survey.

Month	Total trout harvested	Total rainbow trout harvested	Total brown trout harvested	Hours fished by trout anglers	Trout caught/hr by trout anglers	harvested/hr by trout anglers
Apr	7,193	7,171	22	20,827	0.84	0.35
May	9,305	9,305	0	20,189	2.23	0.27
Jun	27,007	27,007	0	40,909	1.79	0.57
Jul	16,216	16,216	0	60,115	1.55	0.36
Aug	8,521	8,521	0	26,208	1.61	0.32
Sep	4,679	4,679	0	20,711	1.27	0.27
Oct	3,483	3,483	0	13,113	0.77	0.32
Nov	3,068	3,068	0	7,265	1.08	0.32
Total	79,472	79,450	22	209,337	1.51	0.37

Table 44. Monthly trout angling success by bank and boat anglers at Lake Cumberland tailwater (Wolf Creek Dam to Hwy 61 bridge) during the 2017 creel survey.

	Total trout harvested		Total rainbow trout harvested		Total brown trout harvested		Hours fished by trout anglers		Trout caught/hr by trout anglers		Trout harvested/hr by trout anglers	
Month	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat
Apr	4,261	2,932	4,261	2,910	0	22	9,410	11,410	0.70	0.86	0.38	0.32
May	6,367	2,938	6,367	2,938	0	0	7,577	12,440	0.96	2.81	0.43	0.20
Jun	8,474	18,533	8,474	18,533	0	0	15,577	25,342	1.91	1.75	0.58	0.56
Jul	4,137	12,078	4,137	12,078	0	0	12,181	47,916	1.11	1.62	0.64	0.30
Aug	1,479	7,042	1,479	7,042	0	0	5,987	20,198	1.13	1.64	0.39	0.30
Sep	0,953	3,726	953	3,726	0	0	4,369	16,165	0.62	1.37	0.51	0.25
Oct	1,697	1,787	1,697	1,787	0	0	4,918	7,876	1.01	0.76	0.37	0.30
Nov	1,984	1,084	1,984	1,084	0	0	2,342	4,909	1.68	0.83	0.77	0.15
Total	29,352	50,120	29,352	50,098	0	22	62,361	146,256	1.21	1.59	0.51	0.33

Table 45. Statistics derived from a daytime creel survey on the upper stratum (Wolf Creek Dam to Helms Landing) of Lake Cumberland tailwater during 2017. (rm = river mile)

	Rainbow Trout	Brown Trout	Trout Combined	Total
Fishing trips				
Number of fishing trips				29,391
Average trip length				3.5
Fishing pressure				
Total man-hours			94,570	103,828
Standard Error (S.E.)				6,672
Man hours/rm			21,016	23,073
Catch/harvest				
Number of fish caught				125,646
Number of fish harvested	55,726	22	55,748	58,725
Pounds of fish harvested	34,039	117	34,156	42,032
Harvest rates				
Fish/hour			0.59	0.57
Pounds/hour			0.36	0.40
Fish/rm	12,384	5	12,388	13,050
Pounds/rm	7,564	26	7,590	9,340
Catch rates				
Fish/hour				1.21
Fish/rm				27,921
Miscellaneous characteristics (%)				
Male				85
Female				15
Resident				83
Non-resident				17
Method (%)				
Still fishing				34
Casting				50
Fly fishing				8
Trolling				8

Table 46. Fish harvest statistics by species or group for the upper stratum (Wolf Creek Dam to Helms Landing) of the Lake Cumberland tailwater derived from a daytime creel survey during 2017. (rm = river mile)

	Trout group	Rainbow trout	Brow n trout	Morone group	Striped bass	White bass	Walleye	Sauger	Black bass group	Channel catfish	Flathead catfish	Black crappie
No. harvested		55,726	22		339	100	540	78		18	64	8
No. harvested per rm		12,384	5		75	22	120	17		4	14	2
% of total no.harvested		94.5	0.0		0.6	0.2	0.9	0.1		0.0	0.1	0.0
Lbs. harvested		34,039	117		4,435	152	1,193	100		78	445	5
lbs.harvested per rm		7,564	26		986	34	265	22		17	99	1
% of total lbs. harvested		81.0	0.3		10.6	0.4	2.8	0.2		0.2	1.1	0.0
Mean length (in)		11.4	25.0		28.8	16.0	19.1	16.0		24.0	26.0	11.0
Mean w eight (lb)		0.65	5.38		11.69	1.51	2.53	1.28		4.29	6.96	0.72
Hours fished for that group/species	94,570			804					89			
Hours fished for that group/species per rm	21,016			179					20			
% of all hours	89.5			0.6					0.1			
No./hr. harvested fishing for that group/species	0.48			0.00					0.00			

Table 46. Continued

	Panfish group	Bluegill	Skipjack	Paddlefish	Suckers	Anything
No. harvested		469	1,578	9	27	
No. harvested per rm		104	351	2	6	
% of total no.harvested		0.8	2.7	0.0	0.0	
Lbs. harvested		68	1,285	72	41	
lbs.harvested per rm		15	286	16	9	
% of total lbs. harvested		0.2	3.1	0.2	0.1	
Mean length (in)		6.0	14.2	38.0	15.0	
Mean w eight (lb)		0.14	0.68	7.89	1.51	
Hours fished for that group	144					8,222
Hours fished for that group per rm	32					1,827
% of all hours	0.1					9.7
No./hr. harvested fishing for that group	0.00					0.21

Table 47. Length distribution by species for both harvested and released fish in the upper stratum (Wolf Creek Dam to Helms Landing) of the Lake Cumberland tailwater creel survey during 2017. (Lengths for released fish are estimated.)

	Inch class																													
	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	34	36	37	38	Total
Rainbow trout																														
Harvested			2	1	29	63	321	211	436	127	70		3			1		2	1		1		1			1				1270
Released		1	31	6	185	157	331	120	332	34	47	27	64	54	32	12	6		1	4										1444
Brow n trout																														
Harvested																						1								1
Released			3	3	9	6	54	6	38	14	9	3	3	5	1															154
Brook trout																														
Harvested							1	1																						2
Released			2	3	83	90	253	132	229	25	7			1																825
Striped bass																														
Harvested														2		2									1		2	1		8
Released					8				7		1		1				1		2				1		1				1	23
White bass																														
Harvested													2																	2
Released						1					1																			2
Walleye																														
Harvested													3	3	1	2	2	1	2					1						15
Released									1												1									2
Sauger																														
Harvested													1																	1
Released							1																							1
Largemouth bass																														
Harvested																														0
Released									1																					1
Smallmouth bass																														
Harvested																														0
Released								1																						1
Channel catfish																														
Harvested																					1									1
Released																														0
Flathead catfish																														
Harvested																							1							1
Released																														0
Black crappie																														
Harvested								1																						1
Released																														0

Table 47. Continued

	Inch class																													
	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	34	36	37	38	Total
Bluegill																														
Harvested		1	1	1																										3
Released	3	3																												6
Green sunfish																														
Harvested																														0
Released		1																												1
Shad																														
Harvested																														0
Released	1																													1
Skipjack																														
Harvested							4		2		1	10	12	34																63
Released						1			1			1	3	4	6		3													19
Drum																														
Harvested																														0
Released													1																	1
Suckers																														
Harvested												2																		2
Released											1																			1
Paddlefish																														
Harvested																													1	1
Released																														0
Buffalo																														
Harvested																														0
Released															1															1
Lake sturgeon																														
Harvested																														0
Released																											1			1

Table 48. Monthly trout angling success in the upper stratum (Wolf Creek Dam to Helms Landing) of the Lake Cumberland tailwater during the 2017 creel survey.

Month	Total trout harvested	Total rainbow trout harvested	Total brown trout harvested	Hours fished by trout anglers	Trout caught/hr by trout anglers	Trout harvested/hr by trout anglers
Apr	6,688	6,666	22	14,974	0.87	0.40
May	9,305	9,305	0	14,534	1.32	0.37
Jun	18,213	18,213	0	17,162	1.77	0.75
Jul	6,299	6,299	0	15,753	1.65	0.39
Aug	6,570	6,570	0	10,365	1.83	0.50
Sep	3,277	3,277	0	9,759	1.11	0.40
Oct	3,111	3,111	0	8,740	0.83	0.44
Nov	2,285	2,285	0	3,283	1.39	0.57
Total	55,748	55,726	22	94,570	1.38	0.48

Table 49. Monthly trout angling success by bank and boat anglers in the upper stratum (Wolf Creek Dam to Helms Landing) of the Lake Cumberland tailwater during the 2017 creel survey.

	Total trout harvested		Rainbow trout harvested		Brown trout harvested		Hours fished by trout anglers		Trout caught/hr by trout anglers		Trout harvested/hr by trout anglers	
Month	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat
Apr	4,261	2,427	4,261	2,405	0	22	6,665	8,303	0.99	0.81	0.54	0.32
May	6,367	2,938	6,367	2,938	0	0	7,577	7,030	0.96	1.44	0.43	0.35
Jun	6,804	11,409	6,804	11,409	0	0	7,562	9,611	1.96	1.66	0.81	0.72
Jul	2,747	3,552	2,747	3,552	0	0	8,154	7,599	1.10	2.00	0.52	0.31
Aug	1,055	5,515	1,055	5,515	0	0	3,316	7,017	1.70	1.89	0.47	0.52
Sep	0,568	2,709	568	2,709	0	0	2,671	7,080	0.33	1.28	0.30	0.42
Oct	1,621	1,490	1,621	1,490	0	0	3,509	5,248	0.76	0.87	0.52	0.39
Nov	1,555	0,729	1,555	729	0	0	1,780	1,512	1.93	0.85	0.87	0.28
Total	24,978	30,769	24,978	30,747	0	22	41,234	53,400	1.22	1.43	0.56	0.44

Table 50. Statistics derived from a daytime creel survey on the lower stratum (Helms Landing to Hwy 61 bridge) of Lake Cumberland tailwater during 2017. (rm = river mile)

	Rainbow Trout	Brown Trout	Trout Combined	Total
Fishing trips				
Number of fishing trips				27,981
Average trip length				4.5
Fishing pressure				
Total man-hours (S.E.)			114,767	126,167
Standard Error (S.E.)				21,080
Man hours/rm			3,346	3,678
Catch/harvest				
Number of fish caught				133,958
Number of fish harvested	23,723	0	23,723	24,117
Pounds of fish harvested	14,009	0	14,009	15,902
Harvest rates				
Fish/hour			0.21	0.19
Pounds/hour			0.12	0.13
Fish/rm	692	0	692	703
Pounds/rm	408	0	408	464
Catch rates				
Fish/hour				1.06
Fish/rm				3,905
Miscellaneous characteristics (%)				
Male				90
Female				10
Resident				70
Non-resident				30
Method (%)				
Still fishing				16
Casting				47
Fly fishing				30
Trolling				7

Table 51. Fish harvest statistics by species or group for the lower stratum (Helms Landing to Hwy 61 bridge) of the Lake Cumberland tailwater derived from a daytime creel survey during 2017. (rm = river mile)

	Trout group	Rainbow trout	Book trout	Morone group	Walleye	Sauger	Black bass group	Skipjack	Carp	Anything
No. harvested		23,723	-		419	220		61	122	
No. harvested per rm		692	-		12	6		2	4	
% of total no. harvested		96.7	-		1.7	0.9		0.2	0.5	
lbs. harvested		14,009	-		1,393	155		10	335	
lbs. harvested per rm		408	-		41	5		0	10	
% of total lbs. harvested		88.1	-		8.8	1.0		0.1	2.1	
Mean length (in)		11.7	15.0		20.2	15.0		8.0	18.0	
Mean w eight (lb)		0.63	-		3.08	1.18		0.16	2.75	
Hours fished for that group/species	114,767			1,440			226			9,734
Hours fished for that group/species per rm	3,346			42			7			284
% of all hours	88.4			1.1			0.3			10.2
No./hr. harvested fishing for that group/species	0.29			0.00			0.00			0.45

Table 52. Length distribution by species for both harvested and released fish in the lower stratum (Helms Landing to Hwy 61 bridge) of the Lake Cumberland tailwater creel survey during 2017. (Lengths for released fish are estimated.)

	Inch class																							
	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Total
Rainbow trout																								
Harvested					6	12	63	63	119	36	22													321
Released	3				70	71	279	96	394	68	74	18	45	45	29	8	5				1			1206
Brown trout																								
Harvested																								0
Released		1	1	3	12	6	66	8	39	5	13	4	5	2	1	1		1	1					169
Brook trout																								
Harvested												1												1
Released					30	88	138	57	89	22	34			1										459
Walleye																								
Harvested													1		1		1		1				1	5
Released																								0
Sauger																								
Harvested									1						1									2
Released																								0
Skipjack																								
Harvested					1																			1
Released																								0
Carp																								
Harvested															2									2
Released																					4			4
Gar																								
Harvested																								0
Released											6													6

Table 53. Monthly trout angling success in the lower stratum (Helms Landing to Hwy 61 bridge) of the Lake Cumberland tailwater during the 2017 creel survey.

Month	Total trout harvested	Total rainbow trout harvested	Total brown trout harvested	Hours fished by trout anglers	Trout caught/hr by trout anglers	Trout harvested/hr by trout anglers
Apr	505	505	0	5,853	0.77	0.24
May	0	0	0	5,655	4.58	0.00
Jun	8,794	8,794	0	23,746	1.81	0.44
Jul	9,916	9,916	0	44,363	1.51	0.35
Aug	1,951	1,951	0	15,843	1.46	0.19
Sep	1,401	1,401	0	10,952	1.42	0.16
Oct	372	372	0	4,374	0.65	0.10
Nov	783	783	0	3,982	0.82	0.11
Total	23,722	23,722	0	114,768	1.62	0.29

Table 54. Monthly trout angling success by bank and boat anglers in the lower stratum (Helms Landing to Hwy 61 bridge) of the Lake Cumberland tailwater during the 2017 creel survey.

	Total trout harvested		Rainbow trout harvested		Brown trout harvested		Hours fished by trout anglers		Trout caught/hr by trout anglers		Trout harvested/hr by trout anglers	
Month	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat	Bank	Boat
Apr	0	505	0	505	0	0	2,745	3,107	0.00	1.00	0.00	0.32
May	0	0	0	0	0	0	0,000	5,410	0.00	4.58	0.00	0.00
Jun	1,670	7,124	1,670	7,124	0	0	8,016	15,731	1.86	1.80	0.36	0.46
Jul	1,390	8,527	1,390	8,527	0	0	4,027	40,317	1.12	1.55	0.87	0.30
Aug	424	1,528	424	1,528	0	0	2,671	13,181	0.43	1.51	0.29	0.19
Sep	385	1,016	385	1,016	0	0	1,698	9,085	1.08	1.44	0.85	0.11
Oct	76	297	76	297	0	0	1,410	2,628	1.64	0.55	0.00	0.11
Nov	429	355	429	355	0	0	0,562	3,398	0.89	0.82	0.44	0.09
Total	4,374	19,352	4,374	19,352	0	0	21,129	92,857	1.19	1.68	0.42	0.26

Table 55. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours of 15-minute electrofishing runs for black bass in Laurel River Lake during April and May 2017; standard error is in parentheses.

		Inch class																			
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Dam	Largemouth bass	2		4	5	1	6	1	10	6	6	6	21	9	6	4	5	2		94	62.7 (7.8)
	Spotted bass			1	1					1	2	2	1							8	5.3 (1.7)
	Smallmouth bass	1			1			1						2						5	3.3 (1.9)
Spruce Creek	Largemouth bass		1	3	2	1	10	17	20	5	1	5	7	16	5	13	7	3		116	77.3 (7.6)
	Spotted bass	2		1	5	9	3	4	2	2	3	5	5	2	1					44	29.3 (6.8)
	Smallmouth bass	1											2					1		4	2.7 (1.3)
Laurel River Arm	Largemouth bass	2	3	1	3	5	5	10	15	13	8	18	27	14	4	9	3	1	1	142	94.7 (12.7)
	Spotted bass	1	1		2	2	4	4	5	2	7	2	1		1					32	21.3 (6.5)
	Smallmouth bass									2	1	1								4	2.7 (1.3)
Upper Craigs Creek	Largemouth bass		1	4	5	9	15	9	2	3	5	14	14	23	7	5	4	3		123	82.0 (10.9)
	Spotted bass		4				3	2	5	3	6	3	2	2	3					33	22.0 (5.7)
	Smallmouth bass			1																1	0.7 (0.7)
Total	Largemouth bass	4	5	12	15	16	36	37	47	27	20	43	69	62	22	31	19	9	1	475	79.2 (5.2)
	Spotted bass	3	5	2	8	11	10	10	12	8	18	12	9	4	5					117	19.5 (3.2)
	Smallmouth bass	2		1	1			1		2	1	1	2	2				1		14	2.3 (0.7)

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Table 56. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2013-2017.

	Stock					Quality					Preferred				
Species/Area	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Largemouth bass															
Dam	64.7	26.7	59.3	74.0	54.7	53.3	21.3	45.3	53.3	39.3	12.7	13.3	21.3	21.3	17.3
Spruce Creek	60.0	43.3	54.0	48.7	72.7	49.3	33.3	42.0	45.3	38.0	26.7	17.3	27.3	22.0	29.3
Laurel River Arm	59.3	102.7	87.3	109.3	85.3	42.7	47.3	54.7	70.0	56.7	24.0	24.0	16.0	34.0	21.3
Craigs Cr. headwaters	59.3	60.7	44.0	24.0	69.3	44.7	51.3	36.7	14.7	50.0	21.3	31.3	22.0	5.3	28.0
Mean	60.8	58.3	61.2	64.0	70.5	47.5	38.3	44.7	45.8	46.0	21.2	21.5	21.7	20.7	24.0
Spotted bass															
Dam	6.0	5.3	8.7	9.3	4.0	3.3	2.0	7.3	4.7	4.0	0.7	0.7	2.7	2.7	0.7
Spruce Creek	25.3	14.7	10.7	8.7	24.0	22.7	9.3	7.3	6.0	12.0	6.0	4.7	6.0	4.0	5.3
Laurel River Arm	8.7	18.0	7.3	24.0	18.7	4.7	4.0	4.0	11.3	8.7	0.7	0.0	0.7	1.3	1.3
Craigs Cr. headwaters	36.0	42.0	20.0	17.3	19.3	21.3	25.3	14.0	5.3	12.7	1.3	10.0	4.0	1.3	4.7
Mean	19.0	20.0	11.7	14.8	16.5	13.0	10.2	8.2	6.8	9.3	2.2	3.8	3.3	2.3	3.0
Smallmouth bass															
Dam	2.7	1.3	0.0	7.3	2.0	2.7	1.3	0.0	4.0	1.3	1.3	1.3	0.0	4.0	1.3
Spruce Creek	4.7	4.7	2.0	1.3	2.0	4.7	2.0	2.0	1.3	2.0	2.0	2.0	2.0	1.3	2.0
Laurel River Arm	0.0	0.7	0.0	0.0	2.7	0.0	0.7	0.0	0.0	2.7	0.0	0.7	0.0	0.0	0.0
Craigs Cr. headwaters	1.3	8.0	6.7	6.0	0.0	0.0	7.3	4.0	4.7	0.0	0.0	5.3	3.3	2.7	0.0
Mean	2.2	3.7	2.2	3.7	1.7	1.8	2.8	1.5	2.5	1.5	0.8	2.3	1.3	2.0	0.8

Largemouth bass - ≥8.0 in = stock, ≥12.0 in = quality, ≥15.0 in = preferred.
Smallmouth bass and spotted bass - ≥7.0 in = stock, ≥11.0 in = quality, ≥14.0 in = preferred.
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Table 57. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel River Lake during April and May 2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	8.7	1.3	24.5	3.0	22.0	2.6	24.0	2.2	0.2	0.2	79.2	5.2
2016	6.5	1.5	18.2	3.3	25.2	2.9	20.7	3.0	0.8	0.3	70.5	7.9
2015	11.5	2.6	16.5	2.5	23.0	3.2	21.7	2.2	1.2	0.5	72.7	7.1
2014	5.8	1.2	20.0	4.9	16.8	2.5	21.5	2.6	0.8	0.3	64.2	7.9
2013	5.0	1.2	13.3	2.1	26.3	3.0	21.2	2.1	1.2	0.4	65.8	4.6
2012	6.0	1.2	23.3	3.6	18.8	2.9	18.3	2.0	0.2	0.2	66.5	7.6
2011	11.5	3.7	19.8	4.1	26.7	4.7	20.0	2.9	0.8	0.3	78.0	11.6
2010	15.8	3.0	31.0	4.4	20.7	3.1	21.2	2.4	0.8	0.4	88.7	8.4
2009	13.2	2.4	12.2	2.7	16.8	2.6	20.8	3.2	0.8	0.5	63.0	8.5
2008	37.5	11.5	15.0	2.0	7.8	1.5	17.7	2.7	0.7	0.5	78.0	13.8
2007	2.3	0.8	7.8	1.9	14.5	1.9	21.8	2.6	0.5	0.3	46.5	4.0
2006	20.8	5.7	13.9	2.7	17.1	2.9	19.5	2.8	0.6	0.3	71.4	11.4
2005	6.2	1.2	15.0	2.9	18.5	2.7	22.5	2.9	0.2	0.2	62.2	7.5
2004	3.8	1.5	11.0	1.4	18.5	3.0	14.2	1.9	0.0	0.0	47.5	4.8
2003	9.8	2.9	37.0	5.8	29.3	4.1	13.8	2.0	0.0	0.0	90.0	12.3
2002	21.7	5.0	24.0	3.8	23.3	3.3	8.3	1.4	0.0	0.0	77.3	9.7

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Table 58. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Laurel River Lake during April and May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	4.8	1.1	5.3	0.9	6.3	1.5	3.0	0.8	0.0	0.0	19.5	3.2
2016	4.0	0.9	6.3	1.4	4.5	1.1	2.3	0.7	0.0	0.0	17.2	2.4
2015	2.0	0.7	2.8	0.7	4.8	1.0	3.3	0.9	0.0	0.0	13.0	1.9
2014	3.0	0.7	8.2	1.7	6.3	1.5	3.8	1.2	0.0	0.0	21.3	3.6
2013	3.3	0.8	4.8	1.4	10.8	2.9	2.2	0.7	0.0	0.0	21.2	3.9
2012	6.3	1.6	8.3	1.8	6.8	1.6	1.7	0.5	0.0	0.0	23.2	3.3
2011	7.3	1.4	9.2	1.3	7.5	1.7	2.0	0.5	0.0	0.0	26.0	3.5
2010	25.2	4.2	13.0	2.3	9.0	2.0	4.8	1.2	0.0	0.0	52.0	6.1
2009	6.5	1.5	12.5	2.4	6.8	1.5	2.7	0.8	0.2	0.2	28.5	4.6
2008	20.2	4.2	12.7	2.6	8.5	1.4	2.3	0.6	0.0	0.0	43.7	7.0
2007	12.2	2.3	13.5	2.2	10.7	1.7	2.0	0.6	0.0	0.0	38.3	4.0
2006	15.0	2.4	13.4	1.7	9.1	1.7	2.6	0.7	0.0	0.0	40.2	4.6
2005	4.8	0.8	3.3	0.8	7.7	1.6	3.7	1.1	0.0	0.0	19.5	2.7
2004	3.2	1.0	12.5	2.9	9.8	2.3	2.2	0.7	0.0	0.0	27.7	5.6
2003	23.3	5.3	17.8	3.1	10.2	2.0	0.8	0.5	0.0	0.0	52.2	8.9
2002	13.7	3.2	13.3	1.8	5.5	1.4	0.3	0.2	0.0	0.0	32.8	5.6

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Table 59. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Laurel River Lake during April and May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	0.7	0.4	0.2	0.2	0.7	0.4	0.8	0.4	0.2	0.2	2.3	0.7
2016	0.5	0.3	1.0	0.5	0.5	0.4	2.0	0.6	1.2	0.5	4.0	1.1
2015	0.3	0.3	0.3	0.3	0.2	0.2	1.3	0.5	0.5	0.3	2.2	0.9
2014	0.7	0.3	0.5	0.3	0.5	0.4	2.3	0.6	1.0	0.4	4.0	0.9
2013	0.3	0.2	0.2	0.2	1.0	0.6	0.8	0.4	0.0	0.0	2.3	0.8
2012	0.3	0.2	0.2	0.2	0.3	0.2	1.0	0.4	0.5	0.3	1.8	0.6
2011	1.0	0.4	1.7	0.5	0.5	0.3	0.8	0.4	0.7	0.3	4.0	1.1
2010	10.2	2.2	1.2	0.5	0.7	0.4	2.8	0.7	1.2	0.4	14.8	3.0
2009	1.7	1.2	1.0	0.4	0.7	0.4	3.5	1.5	1.8	0.8	6.8	2.4
2008	1.7	0.7	1.8	0.7	1.3	0.5	3.2	1.2	1.8	0.6	8.0	2.3
2007	2.8	0.8	1.7	0.7	0.3	0.2	1.2	0.5	0.8	0.4	6.0	1.4
2006	0.5	0.3	0.5	0.4	0.2	0.2	1.0	0.6	0.3	0.2	2.1	1.0
2005	0.2	0.2	0.8	0.4	1.5	0.6	5.5	1.5	2.8	1.1	8.0	1.8
2004	2.0	0.6	1.2	0.4	0.7	0.4	1.2	0.5	0.0	0.0	5.0	1.1
2003	8.3	2.2	7.5	1.8	1.8	0.8	2.2	0.8	0.2	0.2	19.8	4.3
2002	8.2	2.5	4.5	1.5	2.2	0.6	0.7	0.3	0.2	0.2	15.5	3.8

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Table 60. Population assessment for largemouth bass based on spring electrofishing at Laurel River Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Total score	Assessement rating
Management objective		≥13.0 in	≥10.0 fish/hr	≥20.0 fish/hr	≥10.0 fish/hr	≥0.5 fish/hr		
2017	Value		4.3	22.0	24.0	0.2		
	Score	3	1	2	4	2	12	F
2016	Value		3.3	25.2	20.7	0.8		
	Score	3	1	3	4	3	14	G
2015	Value		1.3	23.0	21.7	1.2		
	Score	3	1	3	4	3	14	G
2014	Value		1.6	16.8	21.5	0.8		
	Score	3	1	2	4	3	13	G
2013	Value	13.1	1.2	26.3	21.2	1.2		
	Score	3	1	3	4	3	14	G
2012	Value		3.3	18.8	18.3	0.2		
	Score	3	1	2	3	2	11	F
2011	Value		9.2	26.7	20.0	0.8		
	Score	3	1	3	4	3	14	G
2010	Value		6.5	20.7	21.2	0.8		
	Score	3	1	2	4	3	13	G
2009	Value		12.2	16.8	20.8	0.8		
	Score	3	2	2	4	3	14	G
2008	Value	13.3	36.3	7.8	17.7	0.7		
	Score	3	3	1	3	3	13	G
2007	Value		2.1	14.5	21.8	0.5		
	Score	4	1	1	4	3	13	G
2006	Value		18.4	17.1	19.5	0.6		
	Score	4	2	2	3	3	14	G
2005	Value		4.6	18.5	22.5	0.2		
	Score	4	1	2	4	2	13	G
2004	Value		2.6	18.5	14.2	0.0		
	Score	4	1	2	3	1	11	F
2003	Value	13.7	7.8	29.3	13.8	0.0		
	Score	4	1	3	3	1	12	F
2002	Value		18.2	23.3	8.8	0.0		
	Score	4	2	3	2	1	12	F
2001	Value		17.8	22.1	2.5	0.3		
	Score	4	2	2	1	2	11	F
2000	Value		2.3	16.3	2.1	0.1		
	Score	4	1	2	1	1	9	F

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Table 61. Population assessment for spotted bass based on spring electrofishing at Laurel River Lake from 2000-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 11.0-13.9 in	CPUE ≥14.0 in	Total score	Assessement rating
Management objective		≥11.0 in	≥3.0 fish/hr	≥7.0 fish/hr	≥1.0 fish/hr		
2017	Value		1.3	6.3	3.0		
	Score	1	2	2	4	9	F
2016	Value		1.0	4.5	2.3		
	Score	1	2	1	3	7	F
2015	Value		0.3	4.8	3.3		
	Score	1	1	1	4	7	F
2014	Value		0.5	6.3	3.8		
	Score	1	1	2	4	8	F
2013	Value		0.3	10.8	2.2		
	Score	1	1	4	3	9	F
2012	Value	10.0	0.5	6.8	1.7		
	Score	1	1	2	3	7	F
2011	Value		0.8	7.5	2.0		
	Score	2	1	2	3	8	F
2010	Value		2.5	9.0	4.8		
	Score	2	3	3	4	12	G
2009	Value		0.3	6.8	2.7		
	Score	2	1	2	4	9	F
2008	Value		4.0	8.5	2.3		
	Score	2	3	3	3	11	G
2007	Value	10.4	0.8	10.7	2.0		
	Score	2	1	4	3	10	G
2006	Value		4.3	9.1	2.6		
	Score	4	3	3	4	14	E
2005	Value		1.5	7.7	3.7		
	Score	4	2	2	4	12	G
2004	Value		0.0	9.8	2.2		
	Score	4	1	3	3	11	G
2003	Value		2.3	10.2	0.8		
	Score	4	3	3	2	12	G
2002	Value	11.5	2.2	5.5	0.3		
	Score	4	3	2	1	10	G
2001	Value		6.0	8.3	0.1		
	Score	4	4	3	1	12	G
2000	Value		2.6	2.3	0.1		
	Score	4	3	1	1	9	F

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Table 62. Population assessment for smallmouth bass based on spring electrofishing at Laurel River Lake from 1990-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age-1	CPUE 11.0-13.9 in	CPUE ≥14.0 in	Total score	Assessement rating
Management objective		≥13.0 in	≥3.0 fish/hr	≥1.5 fish/hr	≥1.0 fish/hr		
2017	Value		0.3	0.7	0.8		
	Score	3	1	2	2	8	F
2016	Value		0.2	0.5	2.0		
	Score	3	1	2	4	10	G
2015	Value		0.0	0.2	1.3		
	Score	3	1	1	3	8	F
2014	Value		0.0	0.5	2.3		
	Score	3	1	2	4	10	G
2013	Value	13.2	0.0	1.0	0.8		
	Score	3	1	3	2	9	F
2012	Value		0.0	0.3	1.0		
	Score	4	1	2	3	10	G
2011	Value		0.3	0.5	0.8		
	Score	4	1	2	2	9	F
2010	Value		3.8	0.7	2.8		
	Score	4	4	2	4	14	E
2009	Value		0.3	0.7	3.5		
	Score	4	1	2	4	11	G
2008	Value	13.6	0.8	1.3	3.2		
	Score	4	2	3	4	13	G
2007	Value		1.2	0.3	1.2		
	Score	4	2	2	3	11	G
2006	Value		0.4	0.2	1.0		
	Score	4	2	1	3	10	G
2005	Value		0.1	1.5	5.5		
	Score	4	1	3	4	12	G
2004	Value		0.4	0.7	1.2		
	Score	4	2	2	3	11	G
2003	Value	13.6	4.0	1.8	2.2		
	Score	4	4	3	4	15	E
2002	Value		6.0	2.2	0.7		
	Score	4	4	4	2	14	E
2001	Value		3.4	2.8	1.1		
	Score	4	3	4	3	14	E
2000	Value		0.9	1.3	0.6		
	Score	4	2	3	2	11	G

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Table 63. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April and May 2017; 95% confidence limits are in parentheses.

		Largemouth bass			Spotted bass			Smallmouth bass		
Year	Area	No. ≥ stock size	PSD (+/- 95%)	RSD_{15} (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD_{14} (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD_{14} (+/- 95%)
2017	Dam	82	72 (± 10)	32 (± 10)	6	100 (± 0)	17 (± 33)	3	67 (± 65)	67 (± 65)
	Spruce Creek	109	52 (± 9)	40 (± 9)	36	50 (± 17)	22 (± 14)	3	100 (± 0)	100 (± 0)
	Laurel River Arm	128	66 (± 8)	25 (± 8)	28	46 (± 19)	7 (± 10)	4	100 (± 0)	0 (± 0)
	Upper Craigs Creek	104	72 (± 9)	40 (± 9)	29	66 (± 18)	24 (± 16)	0	0 (± 0)	0 (± 0)
	Total	423	65 (± 5)	34 (± 5)	99	57 (± 10)	18 (± 8)	10	90 (± 20)	50 (± 33)
2016	Total	384	72 (± 5)	32 (± 5)	89	46 (± 10)	16 (± 8)	22	68 (± 20)	55 (± 21)
2015	Total	367	73 (± 5)	35 (± 5)	70	70 (± 11)	29 (± 11)	13	69 (± 26)	62 (± 28)
2014	Total	350	66 (± 5)	37 (± 5)	120	51 (± 9)	19 (± 7)	22	77 (± 18)	64 (± 21)
2013	Total	365	78 (± 4)	35 (± 5)	114	68 (± 9)	11 (± 6)	13	85 (± 20)	38 (± 28)
2012	Total	363	61 (± 5)	30 (± 5)	124	41 (± 9)	8 (± 5)	9	89 (± 22)	67 (± 33)
2011	Total	399	70 (± 4)	30 (± 5)	132	43 (± 8)	9 (± 5)	21	38 (± 21)	24 (± 19)
2010	Total	437	57 (± 5)	29 (± 4)	211	39 (± 7)	14 (± 5)	41	51 (± 15)	41 (± 15)
2009	Total	299	76 (± 5)	42 (± 6)	145	39 (± 8)	11 (± 5)	36	69 (± 15)	58 (± 16)
2008	Total	243	63 (± 6)	44 (± 6)	193	34 (± 7)	7 (± 4)	38	71 (± 15)	50 (± 16)
2007	Total	265	82 (± 5)	49 (± 6)	192	40 (± 7)	6 (± 3)	27	33 (± 18)	26 (± 17)
2006	Total	316	72 (± 5)	39 (± 5)	193	38 (± 7)	8 (± 4)	10	70 (± 30)	60 (± 32)
2005	Total	336	73 (± 5)	40 (± 5)	98	69 (± 9)	22 (± 8)	47	89 (± 9)	70 (± 13)
2004	Total	262	75 (± 5)	32 (± 6)	158	41 (± 19)	26 (± 17)	27	46 (± 8)	8 (± 4)

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Table 64. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake on 18 September 2017; standard error is in parentheses.

		Inch class														
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE
Laurel River Arm	Largemouth bass	3	5	1	2	1	2	4	5	1	2	5	1	3	35	23.3 (5.0)
	Spotted bass	1		1	2	1	2	2	2		1	1			13	8.7 (2.4)

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Table 65. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Laurel River Lake.

		Age-0		Age-0		Age-0 ≥5.0 in		Age-1[a]	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017	Laurel River Arm	3.6	0.3	7.3	2.4	1.3	1.3		
2016	Laurel River Arm	3.4	0.1	24.0	4.8	2.7	1.3	4.7	1.9
2015	Laurel River Arm	3.5	0.1	5.3	2.0	0.0	0.0	6.7	2.5
2014	Laurel River Arm	4.4	0.1	19.3	4.3	4.0	1.0	4.0	1.5
2013	Laurel River Arm	4.0	0.1	21.3	6.6	2.7	1.3	6.7	2.2
2012	Laurel River Arm	4.6	0.1	11.3	3.6	3.3	1.9	4.0	2.1
2011 [b]	Laurel River Arm	4.1	0.3	10.7	5.6	3.3	1.9	6.0[c]	0.9
2010 [b]	Laurel River Arm	5.4	0.4	2.7	0.8	2.0	0.9	31.5[d]	7.5
2009	Laurel River Arm	3.8	0.3	6.0	3.2	0.7	0.7	19.3	7.0
2008 [b]	Laurel River Arm	3.2	0.3	1.3	0.8	0.0	0.0	14.0[e]	4.6
2007 [b]	Laurel River Arm	3.5	0.1	5.3	4.6	0.0	0.0	118.9[f]	12.4
2006 [b]	Laurel River Arm	3.7	0.1	12.7	4.9	0.7	0.7	5.4[g]	2.1
2005 [b]	Laurel River Arm	4.4	0.2	14.0	3.5	3.3	1.6	58.3[h]	9.2
2004	Laurel River Arm	4.9	0.2	14.0	5.8	8.0	3.4	8.3	2.4
2003	Laurel River Arm	3.4	0.1	36.7	14.0	0.7	0.7	2.6	1.0
2002	Laurel River Arm	4.5	0.1	30.7	5.8	8.7	3.5	10.3	4.1

[a] Age-1 largemouth bass CPUE based only on Laurel River Arm location

[b] Age-0 largemouth bass stocked in the fall

[c] Includes bass stocked in fall 2011; CPUE of fin-clipped bass=0.0 fish/hr

[d] Includes bass stocked in fall 2010; CPUE of fin-clipped bass=8.0 fish/hr

[e] Includes bass stocked in fall 2008; CPUE of fin-clipped bass=8.0 fish/hr

[f] Includes bass stocked in fall 2007; CPUE of fin-clipped bass=108.0 fish/hr

[g] Includes bass stocked in fall 2006; CPUE of fin-clipped bass=2.0 fish/hr

[h] Includes bass stocked in fall 2005; CPUE of fin-clipped bass=36.0 fish/hr

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Table 66. Number of fish and mean relative weight (Wr) for each length group of black bass collected at 312 Bridge in Laurel River Lake on 18 September 2017. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	12	89 (2)	9	100 (3)	0	0 (0)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	5	100 (6)	2	110 (1)	0	0 (0)

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Table 67. Length frequency and CPUE (fish/nn) of walleye collected from Laurel River Lake in 8 net-nights in November 2017.

	Inch class																	
Species	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	Total	CPUE	Std. error
Walleye	3	16	32	15	12	9	2	1	7	9	29	22	12	6	2	177	22.1	4.6

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Table 68. Population assessment for walleye based on fall gill netting at Laurel River Lake from 1990-2017 (scoring based on statewide assessment).

Year		Parameters				Total score	Assessment rating
		CPUE > age-1+	Mean length age-2+ at capture	CPUE > 20.0 in	CPUE age-1+		
Management objective		>10.0 fish/nn	>18.0 in	>2.5 fish/nn	>4.0 fish/nn		
2017	Value	11.4	19.2	5.3	1.3		
	Score	4	4	4	2	14	E
2015	Value	16.5	19.5	8.5	4.9		
	Score	4	4	4	4	16	E
2013	Value	18.5	19.4	7.9	4.6		
	Score	4	4	4	4	16	E
2011	Value	15.1	19.1	4.3	1.2		
	Score	4	4	4	2	14	E
2009	Value	15.3	19.0	7.2	5.1		
	Score	4	4	4	4	16	E
2007	Value	21.6	19.1	6.5	8.3		
	Score	4	4	4	4	16	E
2005	Value	25.1	19.5	9.3	8.0		
	Score	4	4	4	4	16	E
2002	Value	10.6	18.8	0.6	6.1		
	Score	4	4	2	4	14	E
1993	Value	4.3	18.6	0.5	2.4		
	Score	3	4	1	3	11	G
1991	Value	3.7		0.8	0.5		
	Score	2	4	2	1	9	F
1990	Value	4.7		1.5	1.5		
	Score	3	4	3	2	12	G

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Table 69. Mean back calculated lengths (in) at each annulus for male walleye collected from Laurel River Lake during 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	8
2016	9	10.5								
2015	20	11.5	17.0							
2014	8	9.2	16.0	18.4						
2013	7	10.3	15.4	18.2	19.7					
2012	8	10.4	16.4	18.9	20.1	21.1				
2011	4	11.3	16.0	17.9	19.2	20.1	20.8			
2010	3	9.7	14.9	17.5	19.0	19.8	20.7	21.2		
2009	1	9.9	15.3	17.3	18.9	19.9	20.6	20.9	21.1	
2008	1	11.2	16.0	18.2	19.2	20.2	20.8	21.4	21.8	22.1
Mean		10.6	16.3	18.3	19.6	20.5	20.8	21.2	21.5	22.1
Number		61	52	32	24	17	9	5	2	1
Smallest		6.8	12.7	16.7	18.4	19.1	19.8	20.5	21.1	22.1
Largest		13.7	19.1	21.1	22.2	23.4	21.6	21.7	21.8	22.1
Std error		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
95% CI ±		0.4	0.4	0.3	0.4	0.5	0.4	0.4	0.6	

Otoliths were used for age-growth determinations; Intercept = 0
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Table 70. Mean back calculated lengths (in) at each annulus for female walleye collected from Laurel River Lake during 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2015	4	12.5	17.9		
2013	1	11.0	17.6	20.2	22.4
Mean		12.2	17.9	20.2	22.4
Number		5	5	1	1
Smallest		9.1	16.0	20.2	22.4
Largest		14.3	18.9	20.2	22.4
Std error		1.0	0.5		
95% CI ±		2.0	1.1		

Otoliths were used for age-growth determinations;
Intercept = 0
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Table 71. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Laurel River Lake during 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2016	10	10.6								
2015	24	11.6	17.1							
2014	8	9.2	16.0	18.4						
2013	8	10.4	15.7	18.4	20.0					
2012	8	10.4	16.4	18.9	20.1	21.1				
2011	4	11.3	16.0	17.9	19.2	20.1	20.8			
2010	3	9.7	14.9	17.5	19.0	19.8	20.7	21.2		
2009	1	9.9	15.3	17.3	18.9	19.9	20.6	20.9	21.1	
2008	1	11.2	16.0	18.2	19.2	20.2	20.8	21.4	21.8	22.1
Mean		10.8	16.4	18.4	19.7	20.5	20.8	21.2	21.5	22.1
Number		67	57	33	25	17	9	5	2	1
Smallest		6.8	12.7	16.7	18.4	19.1	19.8	20.5	21.1	22.1
Largest		14.3	19.1	21.1	22.4	23.4	21.6	21.7	21.8	22.1
Std error		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
95% CI ±		0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.6	

Otoliths were used for age-growth determinations; Intercept = 0
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Table 72. Age-frequency and CPUE (fish/nn) of walleye gill netting for 8 net-nights at Laurel River Lake during November 2017.

	Inch class																		
Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	%	CPUE	Std error
0	3	16	32	15	12	8										86	48.6	10.8	2.7
1						1	2	1	5	1						10	5.6	1.3	0.4
2									2	7	23	3	1			36	20.3	4.5	1.5
3										1	6	6				13	7.3	1.6	0.4
4												6	4		1	11	6.2	1.4	0.3
5												2	5	2	1	10	5.6	1.3	0.3
6												3	1	1		5	2.8	0.6	0.2
7												2		2		4	2.3	0.5	0.1
8													1			1	0.6	0.1	0.1
9														1		1	0.6	0.1	0.1
Total	3	16	32	15	12	9	2	1	7	9	29	22	12	6	2	177	100.0	22.1	
%	1.7	9.0	18.1	8.5	6.8	5.1	1.1	0.6	4.0	5.1	16.4	12.4	6.8	3.4	1.1				

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Table 73. Population assessment for walleye gill netted at Laurel River Lake in November 2017 (scoring based on statewide assessment).

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	11.4	4
Growth rate (Mean length age 2+ at capture)	19.2	4
Size structure (CPUE >20.0 in)	5.3	4
Recruitment (CPUE age 1)	1.3	2
Total score		14
Assessment rating		E
Instantaneous mortality (Z)	0.339	
Annual mortality (A)	28.7	

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Table 74. Number of fish and mean relative weight (Wr) for each length group of walleye collected in Laurel River Lake during November 2017. Standard error is in parentheses.

Length group					
10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr
82	95 (1)	47	96 (1)	38	99 (1)

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Table 75. Length frequency and CPUE (fish/hr) of largemouth bass collected at Cedar Creek Lake in 1.5 hours (0.75 hours in lower end; 0.75 hours upper end; 15-min runs) of diurnal electrofishing on 30 May 2017.

		Inch class																					
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Lower	Largemouth bass		9	10	17	9	6	3	7	1	3	2	4	2	5	2	1	1			82	109.3	5.8
Upper	Largemouth bass	1	2	1	8	10	11	4	4	4	5	1	10	9	12	13	3	2	1	2	103	137.3	14.1
Total	Largemouth bass	1	11	11	25	19	17	7	11	5	8	3	14	11	17	15	4	3	1	2	185	246.7	19.9

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Table 76. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake on 30 May 2017; 95% confidence levels are in parentheses.

	Lower Lake			Upper Lake			Total		
Year	No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)	No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)	No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
2017[a]	37	54 (± 16)	30 (± 15)	81	72 (± 10)	52 (± 11)	118	66 (± 9)	45 (± 9)
2016[a]	73	67 (± 11)	47 (± 12)	104	75 (± 8)	52 (± 10)	177	72 (± 7)	50 (± 7)
2015[b]	95	79 (± 8)	52 (± 10)	107	81 (± 7)	53 (± 9)	202	80 (± 6)	52 (± 7)
2014	237	82 (± 5)	48 (± 6)	345	81 (± 4)	47 (± 5)	582	82 (± 3)	47 (± 4)
2013	448	69 (± 4)	33 (± 4)	299	66 (± 5)	36 (± 5)	747	68 (± 3)	34 (± 3)
2012	406	56 (± 5)	27 (± 4)	409	60 (± 5)	30 (± 4)	815	58 (± 3)	29 (± 3)
2011	283	55 (± 6)	22 (± 5)	172	62 (± 7)	31 (± 7)	455	57 (± 5)	25 (± 4)
2010	386	43 (± 5)	22 (± 4)	310	48 (± 6)	23 (± 5)	696	45 (± 4)	22 (± 3)
2009	260	55 (± 6)	27 (± 5)	208	50 (± 7)	27 (± 6)	468	53 (± 5)	27 (± 4)
2008	249	39 (± 6)	27 (± 6)	177	45 (± 7)	26 (± 6)	426	42 (± 5)	27 (± 4)
2007	322	36 (± 5)	22 (± 5)	145	49 (± 8)	36 (± 8)	467	40 (± 4)	26 (± 4)
2006	238	36 (± 6)	31 (± 6)	99	55 (± 10)	43 (± 10)	337	42 (± 5)	35 (± 5)
2005	228	83 (± 5)	50 (± 7)	95	93 (± 6)	63 (± 10)	323	86 (± 4)	54 (± 6)
2004	277	66 (± 6)	6 (± 3)	178	76 (± 7)	5 (± 3)	455	70 (± 5)	6 (± 3)

[a] diurnal sampling

[b] sampling effort was reduced to 1.5 hours beginning in 2015

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Table 77. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Cedar Creek Lake from 2003-2017.

		Length group											
		<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in			
Year	Area	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	Total	Std. err.
2017	Total	44.7	8.9	26.7	6.5	16.7	2.6	35.3	9.3	2.0	0.9	123.3	9.3
2016	Total	19.3	5.0	33.3	3.2	26.0	5.7	58.7	8.2	5.3	1.7	137.3	7.5
2015	Total	14.0	4.8	26.7	4.2	37.3	5.7	70.7	6.1	5.3	1.3	148.7	8.7
2014	Total	6.3	1.7	30.3	6.0	57.7	8.8	78.3	12.0	5.7	1.1	172.6	25.7
2013	Total	6.3	2.1	69.1	3.7	72.0	8.1	72.3	5.0	10.3	2.3	219.7	12.1
2012	Total	21.4	7.4	98.6	8.5	67.7	7.1	66.6	7.8	7.4	1.6	254.3	17.4
2011	Total	69.4	13.1	55.4	7.2	41.7	4.4	32.9	5.8	4.3	1.1	199.4	18.6
2010	Total	36.1	8.1	105.3	10.0	45.0	5.8	42.8	6.5	4.1	1.3	229.2	15.8
2009	Total	91.1	26.7	63.4	7.7	34.0	4.3	36.3	6.1	5.1	1.0	224.9	25.3
2008	Total	70.9	13.7	70.9	9.1	18.3	2.5	32.6	5.1	4.3	1.8	192.6	20.6
2007	Total	30.3	8.5	79.7	19.0	18.9	4.2	34.9	2.1	3.4	0.6	163.7	28.2
2006	Total	24.0	6.9	56.3	15.6	6.6	1.5	33.4	3.7	0.3	0.3	120.3	24.5
2005	Total	79.7	21.1	12.9	4.8	30.0	5.1	49.4	7.9	0.0	0.0	172.0	33.4
2004	Total	27.9	6.6	34.5	4.6	74.7	10.2	6.3	2.0	0.0	0.0	143.3	16.1
2003	Total	165.8	23.3	12.5	4.1	17.3	2.4	0.5	0.3	0.0	0.0	196.0	24.7

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Table 78. Population assessment for largemouth bass based on spring electrofishing at Cedar Creek Lake from 2003-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE ≥15.0 in	CPUE ≥20.0 in	Total score	Assessement rating
Management objective		≥11.5 in	≥16.0 fish/hr	≥20.0 fish/hr	≥30.0 fish/hr	≥4.0 fish/hr		
2017	Value		44.7	16.7	35.3	2.0		
	Score	4	3	2	4	3	16	G
2016	Value		16.0	26.0	58.7	5.3		
	Score	4	2	3	4	4	17	E
2015	Value	12.0	8.0	37.3	70.7	5.3		
	Score	4	2	3	4	4	17	E
2014	Value		3.7	57.7	78.3	5.7		
	Score	4	1	4	4	4	17	E
2013	Value		4.9	72.0	72.3	10.3		
	Score	4	1	4	4	4	17	E
2012	Value		16.3	67.7	66.6	7.4		
	Score	4	2	4	4	4	18	E
2011	Value		68.6	41.7	32.9	4.3		
	Score	4	4	3	4	4	19	E
2010	Value	13.5	35.5	45.0	42.8	4.1		
	Score	4	3	4	4	4	19	E
2009	Value		92.6	34.0	36.3	5.1		
	Score	4	4	3	4	4	19	E
2008	Value		72.6	18.3	32.6	4.3		
	Score	4	4	2	4	4	18	E
2007	Value	12.0	26.6	18.9	34.9	3.4		
	Score	4	3	2	4	3	16	G
2006	Value		23.1	6.6	33.4	0.3		
	Score	4	3	1	4	2	14	G
2005	Value	14.0	1.7	30.0	49.4	0.0		
	Score	4	1	3	4	1	13	G
2004	Value		5.4	74.7	6.3	0.0		
	Score	4	1	4	2	1	12	F
2003	Value		6.0	17.3	0.5	0.0		
	Score	4	1	2	1	1	9	F

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Table 79. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 1.5 hours of nocturnal electrofishing (0.75 hours in lower end; 0.75 hours in upper end; 15-minute runs) at Cedar Creek Lake on 15 September 2017; standard error is in parentheses.

	Inch class																				
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Lower		2	14	23	8	1	8	3	5	3	3	5	3	3	2		2	1		86	114.7 (33.7)
Upper	1	14	18	15	7	1	1	3	5	5	2	5	4	2	2	2	3	2	2	94	125.3 (20.8)
Total	1	16	32	38	15	2	9	6	10	8	5	10	7	5	4	2	5	3	2	180	120.0 (17.9)

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Table 80. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Cedar Creek Lake.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017	4.0	0.1	68.7	15.8	10.7	3.8		
2016	4.0	0.1	131.3	45.2	36.7	10.1	44.7	8.9
2015	3.4	0.1	50.0	18.6	4.0	1.5	16.0	4.5
2014	3.8	0.2	19.3	7.6	3.3	1.2	8.0	4.0
2013	3.5	0.2	9.4	3.9	0.3	0.3	3.7	1.2
2012	4.0	0.2	18.3	7.6	7.1	1.8	4.9	2.1
2011	4.2	0.1	27.1	4.0	6.0	1.1	16.3	6.5
2010	5.0	0.1	59.5	15.8	33.4	6.1	68.6	12.9
2009	4.1	0.1	17.4	4.3	3.7	1.8	35.5	7.9
2008	4.7	0.1	55.7	8.6	24.9	5.4	92.6	26.9
2007	5.4	0.0	32.9	7.8	28.6	6.6	72.6	13.5
2006	4.7	0.1	43.7	11.3	17.7	5.3	26.6	7.4
2005	4.8	0.1	55.7	9.5	28.0	7.7	23.1	6.7
2004	4.8	0.0	17.4	3.1	12.9		1.7	0.9

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Table 81. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected in Cedar Creek Lake on 15 September 2017. Standard error is in parentheses.

		Length group					
		8.0-11.9 in		12.0-14.9 in		>15.0 in	
Species	Area	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	14	88 (1)	11	87 (4)	5	91 (5)
	Upper	15	89 (2)	11	92 (2)	11	97 (2)
	Total	29	89 (1)	22	89 (2)	16	95 (2)

sedyoycc.d17

Table 82. Length frequency and CPUE (fish/hr) of largemouth bass collected at Chenoa Lake in 1.0 hour (7.5-min runs) of diurnal electrofishing on 11 April 2017.

	Inch class																	Std.
Species	3	6	7	8	9	10	11	12	13	14	15	16	18	21	23	Total	CPUE	error
Largemouth bass	2	2	6	3	9	6	13	7	5	3	1	2	1	2	1	63	63.0	10.0

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Table 83. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Chenoa Lake on 11 April 2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	10.0	3.3	31.0	5.3	15.0	4.1	7.0	2.4	3.0	2.1	63.0	10.0
2014	16.0	4.8	52.0	14.7	22.0	3.3	15.0	7.6	2.0	1.3	105.0	20.1
2011	35.2	7.1	35.2	7.8	63.2	9.7	8.8	2.5	0.8	0.8	142.4	18.7
2008	24.0	4.5	49.6	14.1	63.2	10.7	20.0	4.3	1.6	1.1	156.8	23.2
2006	28.0	12.8	44.0	5.7	68.0	9.6	16.8	3.4	3.2	1.5	156.8	19.8

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Table 84. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in Chenoa Lake on 11 April 2017; 95% confidence levels are in parentheses.

Year	No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
2017	53	42 (± 13)	13 (± 9)
2014	89	42 (± 10)	17 (± 8)
2011	134	67 (± 8)	8 (± 5)
2008	166	63 (± 7)	15 (± 5)
2006	161	66 (± 7)	13 (± 5)

sedpsdcl.d17

Table 85. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Chenoa Lake during fall 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2016	3	4.9							
2015	6	4.1	8.5						
2014	6	4.6	8.4	10.5					
2013	9	4.0	7.6	10.0	11.3				
2012	3	3.3	7.0	8.7	11.0	12.0			
2011	4	4.5	8.2	9.9	11.5	12.4	13.5		
2010	5	4.3	8.0	10.6	11.5	12.5	13.5	14.3	
2009	1	3.8	9.5	11.8	13.7	14.5	15.3	16.0	16.4
Mean		4.2	8.0	10.1	11.5	12.5	13.6	14.6	16.4
Number		37	34	28	22	13	10	6	1
Smallest		3.0	6.7	8.4	10.3	11.1	11.7	13.1	16.4
Largest		6.0	9.5	11.8	13.7	14.5	16.2	16.0	16.4
Std error		0.1	0.1	0.2	0.2	0.3	0.5	0.5	
95% CI ±		0.2	0.3	0.3	0.4	0.6	0.9	0.9	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcll.d17

Table 86. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected at Chenoa Lake on 5 October 2017. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	15	80 (1)	16	81 (1)	5	87 (5)

sedwrcl.d17

Table 87. Length frequency and CPUE (fish/hr) of black bass collected at Lake Linville in 1.5 hours (15-min runs) of nocturnal electrofishing on 31 May 2017.

	Inch class																						
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std. error
Largemouth bass	1	10	8	14	14	13	32	35	14	21	13	24	15	4	1	2	2	4	1	1	229	152.7	6.7
Spotted bass	6	39	3	7	23	23	13	22	6	15	5	2									164	109.3	34.4

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Table 88. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Linville on 31 May 2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	31.3	7.8	62.7	9.6	38.7	5.5	20.0	4.7	4.0	1.5	153.7	6.7
2014	19.3	7.3	95.3	16.4	74.7	7.1	12.0	3.4	2.0	1.4	201.3	19.9
2012	47.3	10.6	135.3	26.2	42.0	5.2	12.0	2.7	0.7	0.7	236.7	40.3
2011	48.0	7.8	108.7	11.0	22.0	5.5	9.3	2.7	1.3	1.3	188.0	18.0
2010	52.0	25.1	194.7	45.4	39.3	8.4	10.7	2.2	4.7	1.2	296.7	71.5
2009	55.6	10.8	93.2	10.9	8.4	1.5	10.4	1.6	2.4	0.9	167.6	17.1
2008	54.0	13.5	144.4	19.9	12.4	3.9	18.4	4.6	2.8	1.2	229.2	28.0
2007	46.4	15.7	101.6	19.6	13.2	1.9	25.6	3.6	4.8	2.1	186.8	32.0
2006	10.0	2.5	47.3	12.6	22.0	4.0	10.0	2.3	2.7	1.3	89.3	11.2

sedpsdll.d17

Table 89. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Linville on 31 May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017	52.0	22.3	38.7	10.4	17.3	4.7	1.3	0.8	0.0	0.0	109.3	34.4
2014	24.7	8.0	49.3	9.4	18.0	6.2	2.0	0.9	0.0	0.0	94.0	19.3
2012	16.7	6.7	66.7	11.8	22.0	4.5	2.7	0.8	0.0	0.0	108.0	18.3
2011	22.7	5.7	47.3	8.0	9.3	4.0	1.3	0.8	0.0	0.0	80.7	14.4
2010	32.0	8.3	114.0	22.3	20.0	5.3	0.7	0.7	0.0	0.0	166.7	34.4
2009	62.4	11.6	64.0	9.2	2.8	1.0	0.4	0.4	0.0	0.0	129.6	19.5
2008	96.0	14.5	60.4	8.6	8.0	2.2	1.6	0.9	0.0	0.0	166.0	23.6
2007	76.0	26.0	44.8	10.4	15.2	4.5	2.0	1.2	0.4	0.4	138.0	36.5
2006	24.0	7.0	35.3	7.1	10.0	2.7	2.0	1.4	0.0	0.0	71.3	14.5

sedpsdll.d17

Table 90. Population assessment for largemouth bass based on spring electrofishing at Lake Linville from 2002-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessement rating
Management objectives		≥ 10.8 in	≥ 16.0 f/h	≥ 20.0 f/h	≥ 17.0 f/h	≥ 2.0 f/h		
2017	Value	12.3	30.7	38.7	20.0	4.0		
	Score	4	3	3	3	4	17	E
2014	Value		19.3	74.7	12.0	2.0		
	Score	3	2	4	2	3	14	G
2012	Value	11.3	47.3	42.0	12.0	0.7		
	Score	3	3	3	2	1	12	G
2011	Value		48.0	22.0	9.3	1.3		
	Score	3	3	2	2	2	12	G
2010	Value		47.3	39.3	10.7	4.7		
	Score	3	3	3	2	4	15	G
2009	Value		52.0	8.4	10.4	2.4		
	Score	3	3	1	2	3	12	G
2008	Value		34.8	12.4	18.4	2.8		
	Score	3	2	1	3	3	12	G
2007	Value	11.1	39.2	13.2	25.6	4.8		
	Score	3	2	1	3	4	13	G
2006	Value		6.5	22.0	10.0	2.7		
	Score	3	1	2	2	3	11	F
2002	Value	11.7	4.0	12.0	14.7	1.3		
	Score	4	1	1	2	2	10	F

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Table 91. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Linville on 31 May 2017; 95% confidence limits are in parentheses.

	Largemouth bass			Spotted bass		
Year	No. ≥ stock size	PSD (+/- 95%)	RSD_{15} (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD_{14} (+/- 95%)
2017	182	48 (± 7)	16 (± 5)	109	26 (± 8)	2 (± 3)
2014	273	48 (± 6)	7 (± 3)	133	23 (± 7)	2 (± 3)
2012	284	29 (± 5)	6 (± 3)	146	25 (± 7)	3 (± 3)
2011	210	22 (± 6)	7 (± 3)	96	17 (± 7)	2 (± 3)
2010	367	20 (± 4)	4 (± 2)	229	14 (± 4)	0 (± 1)
2009	280	17 (± 4)	9 (± 3)	247	3 (± 2)	0 (± 1)
2008	438	18 (± 4)	11 (± 3)	288	8 (± 3)	1 (± 1)
2007	351	28 (± 5)	18 (± 4)	204	21 (± 6)	2 (± 2)
2006	119	40 (± 9)	13 (± 6)	83	22 (± 9)	4 (± 4)
2002	56	32 (± 11)	15 (± 8)	32	20 (± 13)	3 (± 4)

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Table 92. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Lake Linville during fall 2017, including the 95% confidence interval (CI) for each mean length per age group.

		Age								
Year	No.	1	2	3	4	5	6	7	8	9
2016	15	5.2								
2015	25	5.4	10.0							
2014	9	5.2	10.2	12.3						
2013	2	6.8	10.1	12.8	14.7					
2012	6	6.8	11.3	13.2	14.5	15.2				
2011	8	6.4	10.3	13.0	14.2	15.2	16.1			
2010	1	5.4	8.3	9.5	11.3	11.8	12.3	12.8		
2009	2	6.1	10.2	12.7	14.3	15.8	16.7	17.4	18.0	
2008	1	5.4	8.9	9.7	11.6	12.8	14.3	14.7	15.1	15.5
Mean		5.7	10.2	12.6	14.1	15.0	15.8	15.6	17.1	15.5
Number		69	54	29	20	18	12	4	3	1
Smallest		3.5	8.3	9.5	11.3	11.8	12.3	12.8	15.1	15.5
Largest		8.2	12.5	15.5	16.2	17.2	18.5	18.9	19.7	15.5
Std error		0.1	0.1	0.3	0.3	0.4	0.6	1.3	1.4	
95% CI ±		0.3	0.3	0.6	0.7	0.8	1.2	2.5	2.8	

Otoliths were used for age-growth determinations; Intercept = 0
sedaglll.d17

Table 93. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected at Lake Linville on 4 October 2017. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	32	86 (1)	20	83 (2)	16	87 (3)

sedwrll.d17

Table 94. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 4 May 2017; standard error is in parentheses.

		Inch class																		
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	21	Total	CPUE
Pump Station	Largemouth bass	1	1		3	4	5	9	10	10	12	10	3	3	1		1		73	97.3 (17.0)
	Spotted bass				2	4	4	6	5	5	5	2	2			1			36	48.0 (16.2)
Dock	Largemouth bass		12	55	54	27	20	42	21	19	12	13	9		2	3		1	290	386.7 (61.7)
	Spotted bass							1			1								2	2.7 (2.7)
Total	Largemouth bass	1	13	55	57	31	25	51	31	29	24	23	12	3	3	3	1	1	363	242.0 (70.8)
	Spotted bass				2	4	4	7	5	5	6	2	2			1			38	25.3 (12.5)

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Table 95. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Wood Creek Lake on 4 May 2017; 95% confidence limits are in parentheses.

		Largemouth bass			Spotted bass		
Year	Area	No. ≥ stock size	PSD (+/- 95%)	RSD_{15} (+/- 95%)	No. ≥ stock size	PSD (+/- 95%)	RSD_{14} (+/- 95%)
2017*	Pump Station	59	31 (± 12)	3 (± 5)	30	33 (± 17)	3 (± 7)
	Dock	122	23 (± 7)	5 (± 4)	2	50 (± 98)	0 (± 0)
	Total	181	25 (± 6)	4 (± 3)	32	34 (± 17)	3 (± 6)
2016*	Total	110	42 (± 9)	8 (± 5)	23	26 (± 18)	0 (± 0)
2015	Total	259	41 (± 6)	10 (± 4)	37	30 (± 15)	0 (± 0)
2014	Total	334	34 (± 5)	10 (± 3)	61	21 (± 10)	0 (± 0)
2013	Total	256	23 (± 5)	9 (± 4)	79	14 (± 8)	1 (± 2)
2012	Total	215	20 (± 5)	5 (± 3)	60	17 (± 10)	0 (± 0)
2011	Total	185	39 (± 7)	16 (± 5)	47	17 (± 11)	0 (± 0)
2010	Total	181	52 (± 7)	15 (± 5)	55	20 (± 11)	0 (± 0)
2009	Total	241	55 (± 6)	17 (± 5)	69	16 (± 9)	1 (± 3)
2008	Total	223	40 (± 6)	19 (± 5)	66	12 (± 8)	2 (± 3)
2007	Total	223	32 (± 6)	24 (± 6)	109	23 (± 8)	5 (± 4)
2006	Total	165	56 (± 8)	38 (± 7)	93	44 (± 10)	11 (± 6)
2005	Total	138	74 (± 7)	23 (± 7)	86	57 (± 11)	13 (± 7)

* Lower lake area was not sampled
sedpsdwc.d17

Table 96. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Wood Creek Lake during May 2017.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017*	121.3	48.5	90.0	19.9	25.3	4.3	5.3	1.7	0.7	0.7	242.0	70.8
2016*	40.0	14.5	42.7	9.0	24.7	3.2	6.0	0.9	0.7	0.7	113.3	21.3
2015	11.7	2.4	51.3	10.6	26.3	6.0	8.7	2.0	1.3	0.6	98.0	15.8
2014	19.0	4.2	74.0	13.4	25.7	4.7	11.7	3.1	1.0	0.7	130.3	19.8
2013	16.7	5.4	65.3	12.1	12.0	1.8	8.0	1.6	1.0	0.5	102.0	17.7
2012	13.7	4.6	57.0	15.2	11.0	2.5	3.7	0.9	0.3	0.3	85.3	19.4
2011	28.3	5.8	37.7	5.9	14.3	3.3	9.7	2.7	1.0	0.5	90.0	12.9
2010	27.5	9.2	43.0	11.3	33.5	5.2	14.0	2.8	2.5	1.1	118.0	26.6
2009	6.7	3.1	36.0	7.5	31.0	2.5	13.3	3.6	2.7	0.9	87.0	14.1
2008	6.7	3.6	44.7	6.8	15.3	2.7	14.3	2.4	2.0	0.8	81.0	12.3
2007	6.7	2.3	50.3	8.5	6.0	1.2	18.0	3.3	1.3	0.6	81.0	12.5
2006	30.3	7.0	24.3	6.2	10.0	2.1	20.7	5.0	2.0	1.0	85.3	17.5
2005	4.0	2.0	14.4	3.6	28.0	4.4	12.8	2.3	3.2	1.7	59.2	9.3

* Lower lake area was not sampled
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Table 97. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Wood Creek Lake during May 2017.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2017*	6.7	4.0	11.3	5.6	6.7	4.0	0.7	0.7	0.0	0.0	25.3	12.5
2016*	5.3	4.6	9.3	5.7	4.0	2.5	0.0	0.0	0.0	0.0	18.7	10.6
2015	4.3	1.7	7.3	2.1	3.7	0.9	0.0	0.0	0.0	0.0	15.3	3.9
2014	6.3	2.5	13.7	2.7	4.3	1.5	0.0	0.0	0.0	0.0	24.3	5.1
2013	6.0	2.0	19.7	5.4	3.3	1.7	0.3	0.3	0.0	0.0	29.3	7.0
2012	17.7	4.4	11.0	2.3	3.3	1.2	0.0	0.0	0.0	0.0	32.0	7.1
2011	16.3	4.2	9.0	2.8	2.7	1.2	0.0	0.0	0.0	0.0	28.0	7.3
2010	13.5	5.5	19.0	2.9	5.5	1.3	0.0	0.0	0.0	0.0	38.0	8.0
2009	16.7	4.9	15.7	3.4	3.3	1.0	0.3	0.3	0.0	0.0	36.0	6.5
2008	11.7	3.3	16.7	2.9	2.3	1.2	0.3	0.3	0.0	0.0	31.0	5.4
2007	14.7	3.9	20.7	3.8	6.7	1.6	1.7	1.0	0.0	0.0	43.7	7.5
2006	13.7	2.7	14.0	2.8	10.3	2.2	3.3	1.0	0.0	0.0	41.3	6.0
2005	8.8	2.9	13.6	5.5	15.2	2.8	4.4	1.3	0.0	0.0	42.0	10.2

* Lower lake area was not sampled
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Table 98. Population assessment for largemouth bass based on spring electrofishing at Wood Creek Lake from 2005-2017 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	CPUE age 1	CPUE 12.0-14.9 in	CPUE >15.0 in	CPUE >20.0 in	Total score	Assessement rating
Management objectives		>11.5 in	>8.0 fish/hr	>20.0 fish/hr	>17.0 fish/hr	>2.0 fish/hr		
2017	Value		105.3	25.3	5.3	0.7		
	Score	3	4	2	1	2	12	F
2016	Value		29.3	24.7	6.0	0.7		
	Score	3	3	2	2	2	12	F
2015	Value		5.0	26.3	8.7	1.3		
	Score	3	1	3	2	2	11	F
2014	Value	11.3	6.0	25.7	11.7	1.0		
	Score	3	1	3	2	2	11	F
2013	Value		14.0	12.0	8.0	1.0		
	Score	3	2	1	2	2	10	F
2012	Value		4.3	11.0	3.7	0.3		
	Score	3	1	1	1	2	8	P
2011	Value		24.8	14.3	9.7	1.0		
	Score	3	3	2	2	2	12	F
2010	Value	11.4	15.1	33.5	14.0	2.5		
	Score	3	2	3	3	3	14	G
2009	Value		5.3	31.0	13.3	2.7		
	Score	4	1	3	3	3	14	G
2008	Value		5.7	15.3	14.3	2.0		
	Score	4	1	2	3	3	13	G
2007	Value		5.3	6.0	18.0	1.3		
	Score	4	1	1	3	2	11	F
2006	Value		11.8	10.0	20.7	2.0		
	Score	4	2	1	3	3	13	G
2005	Value	12.3	2.4	28.0	12.8	3.2		
	Score	4	1	3	2	3	13	G

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Table 99. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 26 September 2017; standard error is in parentheses.

		Inch class															
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE
Pump station	Largemouth bass	1		3	2	1	1	1	2	5	3	4				23	30.7 (7.1)
	Spotted bass		1	1	1	1		1	3		2					10	13.3 (3.5)
Dock	Largemouth bass		10	6	2	3	10	7	3	10	7	4	3	2	1	68	90.7 (4.8)
	Spotted bass										1					1	1.3 (1.3)
Total	Largemouth bass	1	10	9	4	4	11	8	5	15	10	8	3	2	1	91	60.7 (14.0)
	Spotted bass		1	1	1	1		1	3		3					11	7.3 (3.2)

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Table 100. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in fall (September and October) electrofishing samples at Wood Creek Lake.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year Class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2017 [a]	4.1	0.2	16.0	4.4	2.7	1.3		
2016	4.0	0.1	74.7	22.6	8.7	1.6	105.3	43.5
2015	4.2	0.1	32.7	7.8	8.0	2.2	29.3	12.8
2014 [a]	3.7	0.2	2.7	0.9	0.0	0.0	5.0	1.0
2013 [a]	3.4	0.2	11.3	3.0	1.0	0.5	6.0	1.7
2012	4.3	0.1	34.7	10.1	8.3	4.2	14.0	4.9
2011 [a]	4.0	0.1	12.3	4.1	0.7	0.7	4.3[b]	1.6
2010	5.0	0.1	36.7	14.9	18.0	6.6	24.8	6.0
2009 [a]	3.7	0.4	2.7	1.7	0.7	0.5	15.1[c]	7.4
2008	3.8	0.1	13.3	3.2	1.0	0.7	5.3	2.7
2007	4.2	0.1	13.3	7.6	2.7	1.2	5.7	3.2
2006 [a]	4.4	0.3	3.7	1.7	0.7	0.5	5.3[d]	2.4
2005	4.0	0.1	23.7	11.9	3.3	1.4	11.8	4.4
2004	4.2	0.1	17.9	4.8	4.3	1.5	2.4	1.2

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[a] Age-0 largemouth bass stocked in the fall

[b] Includes fish stocked in fall 2011; CPUE stocked fish=1.0 fish/hr

[c] Includes fish stocked in fall 2009; CPUE stocked fish=10.0 fish/hr

[d] Includes fish stocked in fall 2006; CPUE stocked fish=0.3 fish/hr

Table 101. Number of fish and mean relative weight (Wr) for each length group of black bass collected at Wood Creek Lake during 26 September 2017. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	38	81 (1)	13	85 (7)	1	91 (-)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	3	97 (6)	3	100 (2)	0	-

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EASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 shows sampling conditions by water body for eastern fishery district lakes in 2017.

Buckhorn Lake

During January, muskellunge were sampled via boat electrofishing (Tables 2-3). Water clarity was murky with a secchi reading of 10.0 in (Table 1). This may have hindered observation and sampling of some fish. Some larger fish ≥ 36.0 in were observed and not caught. Fish were sampled from 11.0-38.0 in (Table 2). The largest fish collected was 38.8 in and 16.87 lbs and was a female. An assessment rating of "Poor" was observed for the fishery (Table 3). Muskellunge (420, 11.8 in) were stocked in September. Stocking sites included the marina and Trace Fork boat ramps. These fish were marked with a caudal fin microwire tag.

Spring and fall electrofishing was used to sample black bass (Tables 4-9). Spring sampling was shortened due to a rain event and fall sampling was shortened due to conflicts with a bass tournament. Largemouth bass were sampled from 3.0-20.0 inches in the spring sample (Table 4). Recent spring assessment ratings for largemouth bass have been "Good" (Table 7). Fall sampling observed age-0 largemouth bass numbers to be above average (Table 9) and no supplemental stocking of fingerlings occurred. A high number of age-0 fish each year is necessary for over-wintering recruitment at this lake.

White crappie were sampled with trap nets in the fall. Fish were sampled from 2.5-12.0 in (Table 10). PSD, RSD, age and growth, and age frequency are listed in Tables 11-13. Mean age-2 length at capture was 7.5 in and the population assessment observed a rating of "Good" (Table 14). This mean length of 7.5 in is an improvement over the last data acquired in 2015. This is still slightly lower than the 8.0-8.3 in value observed prior to the 9.0-in minimum length regulation implemented in 2007. Future management may require this regulation to be removed to improve growth rates and reduce small fish numbers. However, increased natural mortality, poor recruitment years, and spillway loss could also lead to natural reduction in numbers.

Additional fish stocking occurred throughout the year at the tailwater area below the dam. Approximately 5,000 rainbow trout (8.0-12.0 in) were stocked during the months of April-June and October-November.

Habitat projects were completed in summer and fall. A total of 6 shallow water brushpiles were refurbished and 1 new Christmas tree reef, 10 new pallet structures, and 1 plastic tree site were constructed. In addition, 425 lbs of winter wheat was sowed onto exposed mud flats.

Carr Creek Lake

Electrofishing was used to sample black bass in the spring and fall (Tables 15-20). Some of the total CPUE's for largemouth bass have been high in recent years due to spring vs fall stocking of fingerlings (Table 16). The largemouth bass assessment rating was "Good" (Table 18). Angler success has been good with tournament numbers increasing on weekends as well as during nighttime during the weekdays. Below average age-0 largemouth bass numbers were observed in the fall (Table 20). During March 2018, a total of 7,000 largemouth bass fingerlings will be stocked to supplement the 2017 age-0 class.

Tables 21-22 contain information from spring electrofishing for walleye. Total CPUE was similar to recent years (Table 21). Larger size fish have been infrequent in recent sampling efforts (Table 21). This may be a result of previous broodfish collection at the lake and/or poor sampling conditions for larger fish. An estimated 35,022 walleye (1.5 in) were stocked in May.

Early spring electrofishing was used to collect black and white crappie (Tables 23-28). Black and black-nosed black crappie, and white crappie were sampled. The fishery has a special regulation of a 9.0-in minimum size limit. During the fall of 2009, a research study was initiated on white crappie recruitment. Totals of 5,440, 9,676, 3,822, 17,814, and 18,160 white crappie were stocked from 2009-2013, respectively. The total CPUE has fluctuated greatly from year to year (Table 24), but crappie populations can be cyclic in numbers. Tables 26-27 contain age and growth data for black and white crappie. Small fish were not collected, whereby no age-2 or younger fish are included in the age and growth data. Most fish collected were ages 3-8 for both black and white crappie (Table 28).

Tailwater stockings included 1000 rainbow trout/month during the months of 4, 5, 6, 10, and 11.

Fish habitat work consisted of refurbishing 2 shallow water brushpiles and preparation with the habitat branch crew for a large-scale project in future. Preparation included several meetings and collection of materials for early 2018 deployment. Several spot treatments of herbicide were applied to dense areas of hydrilla and 200 grass carp were stocked in October to assist with hydrilla removal.

A day (1 March-31 October) and night (1 May-31 August) creel survey was conducted at Carr Creek Lake during 2017. Both day and night surveys were random roving creel designs (date and time) and the lake was treated as one area. Day surveys consisted of 2, 6-hour periods (morning starting at 600hrs and afternoon starting at 1300hrs) and night surveys of 1, 6-hour period starting at dusk. Angler counts would be conducted in the middle of each respective 6-hour time period. Data from the day and night creel survey is presented in Tables 29-38.

The 2017 day creel survey (1 March-31 October) produced more fishing trips and angler hours than the last survey in 2009 (1 April-31 October) on the lake. During 2017, the total number of day fishing trips was 7,706 at the lake (Table 29). A total of 2,387 day fishing trips occurred during the 2009 creel survey. During 2017, the total number of night fishing trips was 2,576 at the lake (Table 29). A total of 2,614 night fishing trips occurred during the 2009 creel survey. The significant number of angler trips and hours occurring at night even though the calendar time was of shorter duration was expected due to the popularity of night tournaments. Total angler hours were 25,667 during the day and 10,438 at night in 2017 and 17,643 and 13,462 for day and night surveys, respectively in 2009. Angler success rates at the lake during the day in 2017 were 25.97% for panfish, 17.24% for catfish, 15.94% for crappie, 10.00% for walleye, and 0.67% for black bass (Table 30). Angler success rates at the lake during the day in 2009 were 40.68% for panfish, 29.41% for catfish, 28.41% for crappie, 26.87% for walleye, and 3.93% for black bass. Angler success rates at the lake during the night in 2017 were 0.00% for panfish, 12.64% for catfish, 12.64% for crappie, 16.67% for walleye, and 0.61% for black bass (Table 31). Angler success rates at the lake during the night in 2009 were 18.18% for panfish, 15.38% for catfish, 33.33% for crappie, 32.00 for walleye, and 3.85% for black bass. During the 2017-day survey, bluegill were the most numerous caught fish (Table 30) while largemouth bass were most numerous in the night survey (Table 31). Largemouth bass were the most numerous fish caught during both the day and night surveys of 2009.

An angler attitude survey was conducted in conjunction with the angler creel survey at the lake to obtain further information. Anglers were asked to answer a series of questions regarding the fishery at Carr Creek Lake (Appendix A). Anglers were surveyed throughout the creel during 2017 with anglers only being asked the questions once. A total of 43 surveys were completed during the lake creel. Black bass at 74.4% (N=32) were the most popular species fished for on the lake followed by bluegill/redear at 53.3% (N=23), crappie at 48.8% (N=21), catfish at 37.2% (N=16), and walleye at 30.2% (N=13). Level of fishing satisfaction was asked for several fish groups or species and only one category was observed to exceed 50.0% of anglers being somewhat to very satisfied. This was catfish at 64.3%. Angler responses found 42.9% to fish tournaments with 0.0% using the KDFWR tournament website registration page. Approximately 76.2% of anglers were aware of KDFWR placing fish habitat in the lake and 72.7% of anglers said this improved their fishing.

Cranks Creek Lake

Black bass were sampled in the spring and fall with boat electrofishing (Tables 39-44). Largemouth bass comprise the major fishery and in recent years are producing a good number of trophy size fish. During spring, largemouth bass were sampled from 3.0-23.5 in (Table 39). The CPUE of largemouth bass $\geq$ 20.0 in (8.8 fish/hr) is higher than historical lake values. With high catch-and-release rates and continuance of the trout stocking program, this lake

will continue to provide good opportunity for large fish. Fall age-0 CPUE was above average (Table 44) and no supplemental stocking of largemouth bass fingerlings occurred in the fall.
Brittle naiad has become a nuisance in shallow upper lake areas and requires some herbicide application at boat access areas. However, this thick growth of aquatic vegetation has correlated with a trend of increased quality fisheries for largemouth bass, white crappie, and redear sunfish.

Rainbow trout were stocked at 1,250/mo during January, April, May, and October for a total of 5,000 fish. No fish habitat work was performed in 2017. Repair work was finished on the boat ramp access near the marina and a new courtesy dock was installed. Some herbicide was applied at this ramp access for brittle naiad control.

Dewey Lake

Black bass sampling was completed during the spring and fall of 2017 (Tables 45-50). Since the loss of the dense hydrilla infestation at the lake, the smaller largemouth bass size group CPUE's are running at average or below average and CPUE's of length groups 15.0 in and greater are average or above average (Table 46). Also, angler success with numbers of keeper-size fish continues to improve. The largemouth bass assessment rating has rated "Good" from 2013-2017 (Table 48). The total CPUE of age-0 fish was above average (Table 50) and no supplemental age-0 fingerling bass were stocked in 2017.

Fish stockings consisted of blue catfish and musky in the lake and rainbow trout in the tailwater. A total of 11,000 blue catfish (5.0-9.0 in) were stocked in April and an additional 11,000 (6.0-8.0 in) were stocked in October. Muskellunge (12.7 in; 376 fish) were stocked in late July. Rainbow trout were stocked in the tailwater of Dewey Lake in April, May, October, and November (1,000/mo; 8.0-12.0 in).

A good amount of new and refurbished fish habitat structures were completed. This work consisted of 9 new shallow water brushpiles, 6 refurbished shallow water brushpiles, 5 new deep water brushpiles, 1 refurbished deep water brushpile, 1 new stake bed, 2 refurbished stake beds, 1 hinge-cut tree, and 200lbs of wheat seed sowed. Maintenance was performed at Stratton Branch boat ramp with sediment removal and with mowing of bank access in this area. Additional maintenance occurred at the Jenny Wiley State Park campground boat access with signage and courtesy dock maintenance.

Fishtrap Lake

Black bass were sampled in the spring and fall with boat electrofishing. Spring data can be found in Tables 51-54. This lake experienced an extreme drawdown of approximately 42 ft during the winter of 2016-2017 for hydraulic gate repairs in the dam. During 2017, this appeared to create a "new lake effect" with spawning and recruitment. However, there was loss of larger fish through the spillway during the winter drawdown. The largemouth bass spring assessment decreased to a rating of "Fair" (Table 54). This could be attributed to lower scores in older-age length groups. This fishery is expected to return to a "Good" assessment value quickly. Fall length frequencies and CPUE for smallmouth, spotted, and largemouth bass are presented in Table 55. Age-0 largemouth bass numbers were average (Table 56), however a decision was made to add a light supplemental stocking of approximately 4,000 fingerlings in March 2018. Age and growth data was collected for largemouth bass from the fall sampling (Table 57). Mean length of age-3 fish was 11.8 in and approximately equal to the last value of 11.7 in obtained in 2010.

Trap nets were utilized in the fall to sample white crappie for population evaluation (Tables 58-62). A total of 20 net-nights were used and with a lot of moving of net locations to improve catches to no avail (Table 58). There was difficulty with sampling of small fish and this was also observed during 2015 trap net sampling. However, primarily catching larger crappie in the trap nets fit with angler rod and reel reports. Additionally, the high PSD and RSD values from the trap netting agree with this trend (Table 59). Age and growth data is provided in Table 60. The mean length of age-2 fish at capture was 9.6 in (Table 62). This is the highest value ever obtained from trap netting. The assessment value obtained was "Good" and similar to the last sample in 2015 with age-0 and age-1 scores lowering the value some (Table 62).

Several fish stockings occurred during the year at Fishtrap Lake. A total of 11,460 blue catfish (6.0-9.0 in) were stocked in the lake during April and an additional 11,000 (6.0-8.0 in) blue catfish were stocked in October. During May, native strain walleye (9,000; 2.3 in) were stocked in the Levisa Fork River upstream of Fishtrap Lake. Hybrid striped bass (25,400; 1.5 in) were stocked in June. Rainbow trout (10,000) were stocked in the tailwater (2,000/mo for months 4, 5, 6, 10, and 11). Fish habitat work consisted of 3 new Christmas tree and hardwood brushpiles in deep water. Approximately 18 Christmas trees were collected at the lake drop-off site.

Fishpond Lake

Largemouth bass were sampled via nocturnal electrofishing at Fishpond Lake (32 acres) on 12 April 2017 (Tables 63-65). Fish were collected from 6.0-23.0 in (Table 63) and length group CPUE's were fairly consistent with previous years (Table 64). This lake continues its trophy bass status with the high PSD and RSD_{15} values (Table 65). With these high PSD and RSD values, it is important to continue to observe recruitment of young fish or supplemental stocking may have to occur some years.

Additional management at Fishpond Lake entails fertilization and some fish stockings. Spring lake fertilization is conducted in order to increase zooplankton density for young-of-year fishes and to limit the filamentous algae growth. This lake is typically very clear and shoreline areas clog with filamentous algae without the addition of fertilizer in the spring. A total of 5,000 rainbow trout (8.0 in) are stocked annually during January, April, May, and October. Channel catfish (9.0 in) are stocked every other year.

Martins Fork Lake

Flooding prevented spring sampling during 2016 and 2017. Fall electrofishing was conducted for black bass and walleye population assessment (Tables 66-67). Largemouth bass were collected from 3.0-21.0 in (Table 66) and age-0 numbers were above average (Table 67), whereby no supplemental stocking of fingerling bass was done. Similar to sampling in 2016, there were no walleye collected in this sample. However, anglers are catching some of the native strain walleye in the lake now. The native strain walleye have been stocked annually since 2013. During 2019, in addition to CPUE and length frequency data collection for black bass and walleye, there will be additional early spring electrofishing for walleye broodfish acquisition.

Native strain walleye and rainbow trout were stocked in 2017. A total of 10,027 native strain walleye (2.3 in) were stocked in June. Rainbow trout were stocked at the tailwater throughout the year for an approximate total of 3,750 fish (750 fish/month for months 4, 5, 6, 10, and 11).

One new Christmas tree brushpile was constructed in the lake in 2017. Christmas tree brushpile construction and stake bed habitat is planned for the lake in 2018.

Paintsville Lake

Tables 68-73 contain spring and fall black bass electrofishing data. Although implemented in 2002, the 12.0- to 14.9-in slot length limit has not showed a trend towards increasing fish numbers in the protected slot as expected (Table 69). It has been recommended to remove the largemouth bass slot length regulation for 2019 and revert back to the statewide 12-in minimum size limit. The largemouth bass assessment rated "Fair" (Table 71). The CPUE assessment parameter for fish 12.0-14.9 in continually scores low affecting lower scoring (Table 71). Age-0 largemouth bass CPUE's continue above average (Table 73) and has coincided with the establishment of several non-native aquatic plants at the lake.

The lake received a stocking of 4,500 rainbow trout (8.0-12.0 in) during February. Some holdover trout are observed each year during bass and walleye sampling. The tailwater trout fishery received 20,000 rainbow trout from April to November and 300 brown trout in April.

Fish habitat work consisted of plastic structures and brushpile construction. Ten plastic tree structures were deployed at one site, one new Christmas tree brushpile and three new hardwood/Christmas tree brushpiles were constructed. No herbicide applications were done at boat access points during the year.

Pikeville City Lake

This lake was sampled in the spring with boat electrofishing to evaluate the largemouth bass population (Tables 74-76). Fish were sampled from 3.0-21.0 in (Table 74). The fishery remains popular with anglers and has numerous large fish as shown by the PSD and RSD_{15} values (Table 76). The PSD and RSD_{15} values are high, but expected with the current catch-and-release-only management regulation. No fish were observed with disease or health issues during this sampling effort and there is still some annual recruitment of young fish.

The primary fisheries at Pikeville City Lake (20 acres) are largemouth bass, bluegill, white crappie, common carp, and channel catfish. This lake has a catch-and-release only regulation for largemouth bass and contains gizzard shad. During 2017, some new stocking programs were initiated (rainbow trout and channel catfish). Rainbow trout stockings will total 2,500 fish a year with 1,250 in March and 1,250 in November. A total of 600 channel catfish will be stocked every other year (even years) in summer.

Yatesville Lake

Electrofishing was utilized to sample black bass during the spring and fall (Tables 77-82). The largemouth bass spring assessment of “Good” with a value of 16 had not been this high since 2007 (Table 80). This is good for the fishery with the numerous fishing tournaments and pressure that occurs there. PSD and RSD_{15} values remain good for the largemouth bass fishery (Table 79). The fishery continues to be dominated by largemouth bass with spotted bass accounting for 10% or less of the population. Age-0 largemouth bass CPUE’s were above average in the fall sampling (Table 82) and no supplemental stocking of fingerlings occurred in the fall.

Rainbow trout were stocked in the tailwater of Yatesville Lake at 750 fish/month for months 4, 5, and 11 (2,250 fish total). Fish habitat was added with 1 plastic tree structure site and 3 new hardwood brushpiles.

Table 1. Summary of 2017 sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level (elev ft)	Secchi (in)	Pertinent sampling comments[a,b]
Buckhorn Lake	Musky	1/4	1100	shock	sunny/clear	47.0	761.38	10	outflow: 1000CFS; bp: 29.92; cond: 245; 2 boats (w/Habitat Branch); whole lake
Buckhorn Lake	LMB	5/9	1100	shock	cloudy	68.0	782.20	73	bp: 30.01; outflow: 400CFS; whole lake; water clear
Buckhorn Lake	LMB	9/18	2000	shock	pt. cloudy	80.0	782.00	65	outflow: minimum; cond: 397; bp: 30.02; whole lake - bass tournament
Buckhorn Lake	Crappie	11/13	1000	trap net	cloudy/rain	53.0	768.00		upper lake; bp: 30.41; outflow: 378CFS;
Carr Creek Lake	Crappie	2/10	1000	shock	cloudy	44.0	1017.10	36	outflow: 95CFS; bp: 30.42; Cond: 441; whole lake
Carr Creek Lake	Crappie	2/20	1000	shock	clear	52.0	1017.10	30	bp: 30.26;
Carr Creek Lake	Crappie	4/13	1000	shock			1028.00		additional sampling for CPUE
Carr Creek Lake	walleye	2/21	1000	shock	cloudy	50.0	1017.10	104	broodfish collection and sample; cond: 491; bp: 30.08; whole lake
Carr Creek Lake	LMB	5/3	1000	shock	clear	74.0	1028.10	56	bp: 30.10; cond:555; 2 boats; whole lake; water stained
Carr Creek Lake	LMB	9/13	2000	shock	cloudy	74.5	1028.00	132	minimum outflow; bp: 29.86; Cond: 620; 1 boat; whole lake
Cranks Creek Lake	LMB	4/18	1000	shock	cloudy/rain	66.0	normal	74	cond: 189; 1 boat; whole lake; water stained
Cranks Creek Lake	LMB	9/20	1000	shock	pt. cloudy	79.0	normal		cond: 215; 1 boat; whole lake
Dewey Lake	LMB	4/17	1000	shock	cloudy/rain	67.0	650.50	53	outflow: 293CFS; bp: 30.10; 1 boat; whole lake; water stained
Dewey Lake	LMB	9/14	2000	shock	cloudy	74.0	650.50	80	bp: 29.92; Cond: 518; outflow: 76.5CFS; 2 boats; whole lake
Fish Pond	LMB	4/12	1000	shock	clear	66.0	normal	186	1 boat used
Fishtrap Lake	LMB	5/10	2000	shock	pt. cloudy	65.0	757.90	44	outflow: 948.8CFS; cond: 411; bp: 29.99; 1 boat; whole lake
Fishtrap Lake	LMB	10/23	1000	shock	cloudy/rain	68.0	756.30	116	outflow: 78.2CFS; bp: 29.87; age and growth collection; 2 boats
Fishtrap Lake	Crappie	11/27	1000	trap net	clear	43.5	739.00		outflow: variable 602-406CFS; bp: 30.31; upper (middle) lake @ WP
Martins Fk Lake	walleye	3/2	1000	shock	clear	47.0	1305.90	50	exploratory native walleye broodfish sample; Martins Fk. Creek arm
Martins Fk Lake	LMB	9/20	1000	shock	cloudy	79.0	1310.03	104	outflow: minimum; bp: 30.04; cond: 165; 1 boat; whole lake
Paintsville Lake	Walleye	2/22	1000	shock	cloudy,rain	56.0	709.5		bp: 29.96; 2 boats; broodfish collection; lower lake
Paintsville Lake	LMB	4/19	2000	shock	cloudyrain	67.0	709.9	98	outflow: 187.7CFS; cond: 109; bp: 30.21; 2 boats; whole lake
Paintsville Lake	LMB	10/18	2000	shock	pt. cloudy	70.0	709.6	61	outflow: 25.3CFS; bp: 30.23; cond: 123; 2 boats; whole lake
Pikeville City Lake	LMB	4/4	1000	shock	cloudy/windy	58.0	1/2' over	30	cond: 395; bp: 29.77; water stained; 1 boat; whole lake
Yatesville Lake	LMB	4/26	2000	shock	clear	69.0	630.5	90	cond: 131; bp: 29.69; water clear; 2 boats; whole lake
Yatesville Lake	LMB	9/26	2000	shock	clear	83.0	630.20	66	outflow: 39.8CFS; cond: 165; bp: 29.93; 2 boats; whole lake

[a] cond = conductivity in µS/cm

[b] bp = barometric pressure in inches

L= lower lake

U= upper lake

Table 2. Length frequency and electrofishing CPUE (fish/hr) of muskellunge collected during spring sampling on Buckhorn Lake from 1998-2017; numbers in parentheses are standard errors. Results from 2002 are from fall electrofishing.

	Inch class																																						
Year	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	Total	CPUE
1998	1	1	2	7	4	1	1				1	4	3	1	1	1						1		1	1			1	1										33	6.6 (2.9)
1999		1	1	2	3	3	1			1	3	6	6	11	4	4	3				3	2	1		2	1		1											59	10.9 (4.4)
2000		1	3	2	3	1								4				1	2		7	1		1	1			2	1				1						31	8.2 (0.5)
2001					4	1	1				1			1									1		1	1		1									1		13	3.2 (0.7)
2002							1							2	1						3	1		1			2				1								12	6.0 (0.8)
2003	1		5	2	1	1									2	1	1		1	1	2	1	1				1									1			22	7.1 (1.9)
2004			2	9	23	16	2				1		6	7	19	9				3	5	6	6	6	4	5	7	5	8	3	1	1					1		155	16.7 (2.1)
2005					4	5	2					1		2	2							1			1			2	1	1	3		1				1		27	6.3 (1.7)
2006			1	8	10	6								1	2	3						1	1		1	3	2	1	1	1	1	1	1						45	14.2 (2.2)
2007					1	1	2	1					2	3	6	2		1			1		2		1	2		1	2		1	1				1		1	32	13.7 (4.5)
2008				2	6	10	6	1						1	1	3				1		1	5	2			1				1			1			1		43	8.3 (1.6)
2009	1			2	4	11	12	6					1		1	3	2	3	1	1		1	1	4	3	3	3		1		2				1		1		68	17.6 (3.4)
2010			1	4	13	18			1	1	1	1		6	6	10	6	1		2	3	2	1	3	2	1	2	1	4	3	1	1					1		96	12.9 (1.6)
2011			4	5	17	14	3					2		3	3	1				1		3	1	3		3	2	1	1		1			1					69	12.6 (2.7)
2012		1		1	8	20	2					1	2	1	6	1	1					1		2		1	3	2	2	1			1						57	13.4 (1.8)
2013			3	6	3							1											1	1			1												16	4.3 (0.9)
2014		1	2	1	6	2						1	2	1	4								1		1				1		1		2						26	7.4 (1.9)
2015	no sample																																							
2016				2	2	4						2	1	2			1						1	1		1	1		1	1					1				21	7.0 (3.3)
2017		3	7	1							1				1	1				2	2	1	1						2										22	6.8 (1.1)

EFDBLMSS.D98-D10, D12, D14, D16-D17

LFRBHLSP.D11, D13

Table 3. Population assessment for muskellunge from Buckhorn Lake (1,230 acres) captured during spring electrofishing from 2000-2017. Assessment scores for 2002 were derived from fall electrofishing data. Actual values are in parentheses. Scoring based on statewide assessment.

	Year														
Parameter	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2016	2017
CPUE age 1	1	2	3	2	4	1	3	4	3	4	4	2	2	2	2
	(0.5)	(3.3)	(5.9)	(2.5)	(7.9)	(1.7)	(4.8)	(9.3)	(5.1)	(7.8)	(7.5)	(3.2)	(3.4)	(2.7)	(3.4)
CPUE ≥20.0 in	3	2	4	2	3	4	2	4	4	2	3	1	2	2	1
	(5.5)	(3.9)	(11.1)	(3.7)	(6.3)	(12.0)	(3.8)	(7.7)	(7.8)	(4.7)	(5.9)	(1.1)	(4.0)	(4.3)	(3.4)
CPUE ≥30.0 in	3	1	4	2	4	4	2	4	3	2	2	1	1	2	1
	(4.0)	(2.0)	(6.3)	(2.6)	(4.4)	(5.3)	(2.2)	(4.7)	(3.4)	(2.9)	(3.1)	(0.8)	(1.7)	(2.3)	(1.9)
CPUE ≥36.0 in	3	1	4	4	4	4	1	3	3	2	4	1	2	3	1
	(1.5)	(0.7)	(2.8)	(2.1)	(2.5)	(2.5)	(0.6)	(1.8)	(1.7)	(1.1)	(2.1)	(0.3)	(1.1)	(1.3)	(0.6)
CPUE ≥40.0 in	3	2	2	4	4	4	3	4	3	3	2	1	4	2	1
	(0.5)	(0.3)	(0.3)	(1.1)	(1.0)	(1.6)	(0.5)	(1.0)	(0.4)	(0.4)	(0.2)	(0.0)	(0.9)	(0.3)	(0.0)
Total score	13	8	17	14	19	17	11	19	16	13	15	6	11	11	6
Assessment	Good	Poor	Excellent	Good	Excellent	Excellent	Fair	Excellent	Good	Good	Good	Poor	Fair	Fair	Poor

EFDBLMSS.D00-D10, D12, D14, D16-D17
LFRBHLSP.D11, D13

Table 4. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 1.5 hours of 15-minute electrofishing samples at Buckhorn Lake (1,230 acres) on 9 May 2017; numbers in parentheses are standard errors.

		Inch class																			
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	
Lower	Largemouth bass	1	8	17	17	5	1	8	14	8	14	14	6		3	1		1	1	119	158.67	(23.36)
Upper	Largemouth bass		12	37	31	9		10	10	9	8	8	2	4	2		1			143	190.67	(33.81)
Total	Largemouth bass	1	20	54	48	14	1	18	24	17	22	22	8	4	5	1	1	1	1	262	174.67	(19.72)

EFDBLLSS.D17

Table 5. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Buckhorn Lake (1,230 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	22.7	3.5	18.7	2.3	28.3	3.8	6.3	1.2	0.0		76.0	6.9
2004	38.0	6.2	51.7	6.5	29.3	4.2	4.3	1.2	0.0		123.3	11.6
2005	17.0	3.5	45.0	5.1	38.3	5.5	8.3	1.2	0.3	0.3	108.7	7.9
2006	14.2	2.2	35.2	4.6	40.5	5.1	15.2	3.4	0.3	0.3	105.1	11.0
2007	14.5	4.3	26.0	2.7	20.5	3.3	14.0	2.4	0.5	0.5	75.0	6.0
2008	14.8	5.5	27.0	7.2	21.4	3.3	13.8	1.8	0.0		77.0	12.0
2009	41.2	3.5	32.0	7.7	17.2	4.8	14.5	3.0	0.0		104.8	13.2
2010	21.2	4.5	31.8	6.6	18.3	3.7	10.7	2.6	0.4	0.4	82.0	11.7
2011	no sample											
2012	32.5	6.3	26.5	5.3	7.5	0.9	3.5	1.2	0.5	0.5	70.0	8.3
2013	no sample											
2014	9.3	3.4	25.3	6.3	6.0	1.7	2.7	1.3	0.0		43.3	9.9
2015	56.4	6.0	29.8	5.2	27.1	5.3	3.6	1.2	0.9	0.6	116.9	9.1
2016	no sample											
2017	91.3	19.9	40.0	4.3	34.7	7.1	8.7	2.4	0.7	0.7	174.7	19.7

EFDBLLSS.D03-D17

Table 6. PSD and RSD$_{15}$ values for largemouth bass in each area of Buckhorn Lake (1,230 acres) on 9 May 2017. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass		
Area	No.	PSD	RSD$_{15}$
Lower	71	56 (48-68)	8 (2-15)
Upper	54	46 (33-60)	13 (4-22)
Total	125	52 (43-61)	10 (5-16)

EFDBLLSS.D17

Table 7. Population assessment for largemouth bass collected during spring at Buckhorn Lake (1,230 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year									
Parameter	2005	2006	2007	2008	2009	2010	2012	2014	2015	2017
Mean length age 3 at capture	3	3	3	3	3	3	3	2	2	2
	(12.6)	(12.6)	(12.6)	(12.6)	(13.3)	(13.3)	(13.3)	(12.1)	(12.1)	(12.1)
Spring CPUE age 1	2	1	2	1	4	3	3	1	4	4
	(16.3)	(11.2)	(13.0)	(11.19)	(43.8)	(26.1)	(36.1)	(8.7)	(56.0)	(90.7)
Spring CPUE 12.0-14.9 in	4	4	2	2	2	2	1	1	3	4
	(38.3)	(40.5)	(20.5)	(21.4)	(17.2)	(18.3)	(7.5)	(6.0)	(27.1)	(34.7)
Spring CPUE ≥15.0 in	2	3	3	3	3	2	1	1	1	2
	(8.3)	(15.2)	(14.0)	(13.8)	(14.5)	(10.7)	(3.5)	(2.7)	(3.6)	(8.7)
Spring CPUE ≥20.0 in	2	2	3	1	1	2	2	1	3	3
	(0.3)	(0.3)	(0.5)	(0.0)	(0.0)	(0.4)	(0.5)	(0.0)	(0.9)	(0.7)
Total score	13	13	13	10	13	12	10	6	13	15
Assessment rating	Good	Good	Good	Fair	Good	Fair	Fair	Poor	Good	Good
Instantaneous mortality (z)	0.67	0.48	0.45	0.42	0.64	0.73	0.77			
Annual mortality (A)	48.70	38.00	36.40	34.20	47.40	51.80	54.90			

EFDBLLSS.D03-D10, D12, D14-D17
EFDBLLAS.D04, D09
EFDBLLAF.D14

Table 8. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1.25 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 18 September 2017; numbers in parentheses are standard errors.

Area	Inch class															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE
Lower	1	18	30	25	7	1	4	3	6	1	1	1	2		100	200.0 (68.0)
Upper	3	29	59	24	4	2	5	7	3	7	2		1	2	148	197.3 (24.9)
Total	4	47	89	49	11	3	9	10	9	8	3	1	3	2	248	198.4 (25.5)

EFDBLLSF.D17

Table 9. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Buckhorn Lake (1,230 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	4.5	0.1	99.3	7.4	38.7	2.6	19.2	3.3
2003	4.7	0.5	106.0	13.8	39.7	4.6	35.5	5.4
2004	3.6	0.0	176.7	34.0	9.3	4.6	16.3	3.5
2005	4.0	0.2	44.7	6.6	10.0	3.5	11.2	2.1
2006	4.2	0.2	17.6	4.1	5.3	1.9	13.0	3.7
2007	4.5	0.2	18.8	6.4	9.6	3.4	11.2	3.8
2008	4.9	0.1	21.4	3.7	9.9	2.3	43.8	3.5
2009			no fall sample				26.1	5.2
2010	4.3	0.1	67.0	5.0	22.5	5.8	no spring sample	
2011	4.5	0.1	126.7	26.7	42.0	10.0	36.1	6.5
2012	5.0	0.2	39.0	9.6	21.0	7.2	no spring sample	
2013	4.1	0.1	68.8	10.8	16.8	4.3	8.7	3.5
2014	4.4	0.1	86.5	24.9	26.5	8.6	56.0	6.0
2015	4.2	0.1	80.0	15.9	17.6	2.0	no spring sample	
2016	5.0	0.0	169.7	44.0	85.7	23.9	90.7	20.0
2017	4.6	0.1	161.6	20.1	49.6	9.4		

EFDBLLSF.D02-D08, D10-D17
EFDBLLAS.D04, D09
EFDBLLAF.D14
EFDBLLSS.D03-D17

Table 10. Length frequency and CPUE (fish/net-night) for white crappie collected at Buckhorn Lake (1,230 acres) in 13 net-nights 14-15 November 2017. SE= standard error of CPUE.

Inch class													
2	3	4	5	6	7	8	9	10	11	12	Total	CPUE	SE
22	240	26	85	91	154	118	59	13	8	1	817	62.9	15.0

EFDBLCTF.D17

Table 11. PSD and RSD_{10} values calculated for white crappie collected in trap nets at Buckhorn Lake (1,230 acres) on 14-15 November 2017; 95% confidence intervals are in parentheses.

No. $\geq$stock size	PSD	RSD_{10}
529	38 (34-42)	4 (3-6)

EFDBLCTF.D17

Table 12. Mean back-calculated length (in) at each annulus for white crappie collected from Buckhorn Lake (1,230 acres) November 2017, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6	7	8
2016	25	3.9							
2015	44	4.3	6.2						
2014	25	4.2	6.6	8.2					
2013	7	4.1	5.8	7.8	9.0				
2012	3	4.5	6.6	7.8	9.6	10.9			
2011	3	4.1	6.0	7.2	8.2	9.5	10.2		
2010	2	4.7	6.6	7.6	8.4	9.4	10.6	11.6	
2009	1	4.6	6.5	7.3	8.0	8.6	9.0	9.4	10.3
Mean	110	4.2	6.3	8.0	8.8	9.8	10.1	10.9	10.3
Smallest		3.2	4.8	6.7	7.6	8.6	9.0	9.4	10.3
Largest		5.2	7.9	9.7	10.2	11.3	11.4	12.5	10.3
STD error		0.0	0.1	0.1	0.2	0.3	0.4	0.9	
95% CI LO		4.1	6.2	7.8	8.4	9.2	9.4	9.1	
95% CI HI		4.2	6.4	8.2	9.2	10.5	10.9	12.6	

Intercept = 0

EFDBLCAF.D17

Table 13. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 13 net-nights at Buckhorn Lake (1,230 acres) 14-15 November 2017; numbers in parentheses are standard errors.

	Inch class														
Age	2	3	4	5	6	7	8	9	10	11	12	Total	Age%	CPUE	
0	22	240	7									269	33	20.7	(7.6)
1			20	80	12							112	14	8.6	(3.0)
2				5	79	145	84	12				325	40	25.0	(8.3)
3						9	34	35	9	1		88	11	6.7	(2.0)
4								12	2	2		16	2	1.2	(0.4)
5										2	1	3	0	0.3	(0.1)
6									2	1		3	0	0.2	(0.1)
7										1		1	0	0.1	(0.0)
8									1			1	0	0.1	(0.0)
Total	22	240	27	85	91	154	118	59	14	7	1	818			
%	3	29	3	10	11	19	14	7	2	1	0				

CPUE of ≥8 in (quality size) = 27.3

CPUE of ≥10 in (preferred size) = 2.8

EFDBLCAF.D17

EFDBLCTF.D17

Table 14. Population assessment scores for white crappie collected from Buckhorn Lake (1,230 acres). Actual values are in parantheses. Scoring based on statewide assessment.

	Year								
Parameter	2005	2006	2007	2008	2010	2011	2013	2015	2017
CPUE age-1 and older	4	4	4	4	4	4	4	4	4
	(14.8)	(191.4)	(32.5)	(60.7)	(54.0)	(299.7)	(52.1)	(54.6)	(42.2)
CPUE age 1	3	4	2	4	4	4	4	4	4
	(7.4)	(58.6)	(3.0)	(14.5)	(32.9)	(155.8)	(28.4)	(12.3)	(8.6)
CPUE age 0	1	4	2	2	4	4	4	4	4
	(0.4)	(29.8)	(0.6)	(0.4)	(22.3)	(51.0)	(50.0)	(10.0)	(20.7)
CPUE ≥ 8.0 in.	3	4	3	3	4	4	4	4	4
	(4.1)	(17.8)	(5.5)	(5.9)	(12.6)	(54.7)	(10.9)	(27.3)	(15.3)
Mean age 2 length @ capture	2	1	1	1	1	2	1	1	1
	(8.3)	(7.1)	(6.3)	(6.3)	(7.7)	(8.2)	(6.9)	(7.2)	(7.5)
Total score	13	17	12	14	17	18	17	17	17
Assessment rating	Good	Excellent	Fair	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Instantaneous mortality (z)	1.30	1.52	1.74	1.03	0.87	0.98	0.89	0.61	0.88
Annual Mortality (A)	72.80	78.00	82.50	64.40	58.20	62.40	59.30	45.90	58.40

EFDBLCTF.D03-D17
EFDBLCAF.D03-D17

Table 15. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.0 hours of 15-minute electrofishing samples at Carr Creek Lake (710 acres) on 3 May 2017; numbers in parentheses are standard errors.

		Inch class																			
Area	Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower	Smallmouth bass														1					1	1.0 (1.0)
	Spotted bass			7	3	1	5	1		1	1	3	1							23	23.0 (8.1)
	Largemouth bass	4	7	10	4	7	11	9	3	2	9	6	4	6	3	1				86	86.0 (24.1)
Upper	Smallmouth bass																			0	0.0
	Spotted bass			7	5	5		4	2	1		2								26	26.0 (7.4)
	Largemouth bass	8	8	11	5	9	5	4	3	5		3	7	8		3	1		1	81	81.0 (12.5)
Total	Smallmouth bass														1					1	0.5 (0.5)
	Spotted bass			14	8	6	5	5	2	2	1	5	1							49	24.5 (5.1)
	Largemouth bass	12	15	21	9	16	16	13	6	7	9	9	11	14	3	4	1		1	167	83.5 (12.6)

EFDCLLSS.D17

Table 16. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carr Creek Lake (710 acres) from 2002-2017. SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	116.3	14.2	16.9	1.7	12.3	1.6	7.1	1.2	0.0		152.7	13.3
2003	67.6	11.3	15.9	2.2	11.1	1.5	10.7	1.5	0.4	0.3	105.2	14.4
2004	135.0	17.7	24.4	5.3	8.4	1.4	9.0	1.2	0.2	0.2	176.9	18.8
2005	20.0	2.7	19.8	1.6	24.8	2.4	14.0	1.8	0.3	0.3	78.6	4.9
2006	22.3	7.0	30.9	4.8	27.9	3.3	29.9	3.1	0.7	0.5	111.0	10.2
2007	8.0	1.9	20.8	4.7	18.6	3.4	15.7	3.6	0.5	0.5	63.0	5.5
2008	3.0	1.3	16.4	2.6	24.7	5.4	23.7	3.3	0.5	0.5	67.8	8.4
2009	5.1	0.7	10.3	2.6	17.1	3.0	16.0	3.4	0.6	0.6	48.6	6.1
2010	13.8	3.2	10.8	2.6	10.8	2.1	12.6	3.5	0.9	0.6	47.9	4.8
2011	11.0	4.4	10.5	2.6	5.5	1.3	16.0	4.5	1.0	1.0	43.0	9.8
2012	15.0	3.1	21.5	3.5	9.0	1.5	13.5	3.5	1.5	0.7	59.0	8.4
2013	113.3	51.4	20.0	4.5	16.0	3.7	16.7	2.2	2.7	1.3	166.0	53.2
2014	115.0	23.6	48.0	7.8	25.0	4.3	18.5	3.5	1.0	0.7	206.5	18.1
2015	69.5	23.2	18.5	4.1	15.5	3.7	22.0	6.1	1.0	0.7	125.5	28.5
2016	30.0	7.6	40.0	11.9	10.7	3.0	15.3	3.6	0.0		96.0	16.8
2017	28.5	6.6	25.5	7.1	12.5	3.3	17.0	3.1	0.5	0.5	83.5	12.6

BBRPSCFL.D02-D05

EFDCLLSS.D06-D10, D12-D17

Table 17. PSD and RSD values for each species of black bass collected in each area of Carr Creek Lake (710 acres) on 3 May 2017. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Smallmouth bass			Spotted bass			Largemouth bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}	No.	PSD	RSD_{14}
Lower	1	100	100	16	38 (13-62)	25 (3-47)	61	51 (38-64)	23 (12-34)
Upper	0			19	26 (6-47)	11 (0-25)	49	57 (43-71)	41 (27-55)
Total	1	100	100	35	31 (16-47)	17 (5-30)	110	54 (44-63)	31 (22-40)

EFDCLLSS.D17

Table 18. Population assessment for largemouth bass collected from Carr Creek Lake (710 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Mean length age-3 at capture	4	4	4	4	4	4	4	4	4	4	4	4
	(13.2)	(13.2)	(12.6)	(12.6)	(12.6)	(12.6)	(12.6)	(13.5)	(13.5)	(13.5)	(13.5)	(13.5)
Spring CPUE age-1	2	2	1	1	2	2	2	4	4	4	3	3
	(21.1)	(7.6)	(2.4)	(3.1)	(10.0)	(9.0)	(13.9)	(114.7)	(116.0)	(71.0)	(35.3)	(31.0)
Spring CPUE 12.0-14.9 in	3	2	2	2	1	1	1	2	2	2	1	1
	(27.9)	(18.6)	(24.7)	(17.1)	(10.8)	(5.5)	(9.0)	(16.0)	(25.0)	(15.5)	(10.7)	(12.5)
Spring CPUE ≥15.0 in	4	3	3	3	2	3	3	3	3	3	3	3
	(29.9)	(15.7)	(23.7)	(16.0)	(12.6)	(16.0)	(13.5)	(16.7)	(18.5)	(18.5)	(15.3)	(17.0)
Spring CPUE ≥20.0 in	2	2	2	2	2	2	2	3	2	2	1	2
	(0.7)	(0.5)	(0.5)	(0.6)	(0.9)	(1.0)	(1.5)	(2.7)	(1.0)	(1.0)	(0.0)	(0.5)
Total score	15	13	12	12	11	12	12	16	15	15	12	13
Assessment rating	Good	Good	Fair	Fair	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Instantaneous mortality (z)	0.43	0.37	0.41	0.74	0.34	0.27	0.44					
Annual mortality (A)	35.10	30.90	33.50	52.30	29.10	23.80	35.80					

BBRPSCFL.D04-D05
EFDCLLSS.D06-D17
EFDCLLAS.D08
EFDCLLAF.D13

Table 19. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 1.5 hours of 15-minute nocturnal electrofishing samples at Carr Creek Lake (710 acres) on 13 September 2017; numbers in parentheses are standard errors.

		Inch class																		
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE
Lower	Smallmouth bass							1											1	1.3 (1.3)
	Spotted bass	2	3	1		1	1	2	4		1								15	20.0 (8.3)
	Largemouth bass	9	3	1	1		1	2	1	2	2	1	2	1			1		27	36.0 (6.1)
Upper	Smallmouth bass																		0	0.0
	Spotted bass							5	1	1	1								8	10.7 (5.8)
	Largemouth bass	1	2	6	5	2	8	2	2	1	3	1	2	2	1			1	39	52.0 (20.1)
Total	Smallmouth bass							1											1	0.7 0.67
	Spotted bass	2	3	1		1	1	7	5	1	2								23	15.3 (5.0)
	Largemouth bass	10	5	7	6	2	9	4	3	3	5	2	4	3	1	0	1	1	66	44.0 (10.7)

EFDCLLSF.D17

Table 20. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected by electrofishing at Carr Creek Lake (710 acres). CPUE=fish/hr, SE=standard error.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	4.4	0.1	14.0	5.4	5.8	2.3	133.8*	17.5
2004	5.2	0.0	132.0	17.3	88.2	12.7	18.8	2.6
2005	4.7	0.1	15.8	6.7	5.6	1.7	21.3	6.7
2006	4.2	0.2	11.0	4.1	3.0	1.0	7.6	2.0
2007	3.7	0.5	5.0	2.2	1.0	0.7	2.4	1.2
2008	4.3	0.2	15.2	6.6	3.8	1.7	3.1	0.8
2009	3.6	0.3	12.5	2.8	3.5	1.6	10.0	2.5
2010	4.6	0.2	13.5	4.4	5.0	1.7	9.0	3.1
2011	4.6	0.1	17.6	5.7	7.2	3.0	13.2	2.6
2012	4.3	0.2	34.5	10.9	11.5	4.0	114.7*	51.8
2013	4.4	0.2	14.0	4.6	4.8	1.8	116.0*	23.8
2014	4.4	0.3	13.3	4.2	5.3	1.7	71.0*	23.2
2015	4.7	0.2	45.3	9.6	16.0	6.1	35.3	8.0
2016	4.6	0.1	32.0	7.9	10.4	3.0	31.0	6.4
2017	3.9	0.2	19.3	5.8	4.7	1.9		

* Includes supplemental spring stocked fish

BBRWRCFL.D03-D05
BBRSCCFL.D03
EFDCLLSF.D06-D17
EFDCLLAS.D08
EFDCLLSS.D06-D17
EFDCLLAF.D13

Table 21. Length frequency and CPUE (fish/hr) of walleye collected at Carr Creek Lake (710 acres) during daytime spring electrofishing.

	Inch class																							
Year	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total	CPUE	SE
2000							5	28	10	6	8	2	3	3	1		1	6	4	1			78	20.8	4.6
2001							2	4	3	14	8	6	2	2	1				2				44	20.4	4.7
2002														no sample											
2003		2	1			1	1	2			3	7		4	2		1	1	1	1	1		28	26.7	8.5
2004											1	3	13	10	13	13	4	3	1				61	27.1	7.4
2005									1	1	2	10	2	10	6	5	4	3	1	1			46	28.2	5.0
2006											1	4	6	7	9	9	8	3	4	2	2		55	31.3	5.4
2007								1		1	2	4	3	11	15	8	4	4	5	2			60	32.9	7.4
2008									1	2	5	12	16	19	21	19	15	14	7	3	1	1	136	12.8	1.2
2009								1	4	3	9	18	21	17	15	13	10	11	2				124	21.3	1.3
2010								6	8	7	7	10	15	16	14	16	13	8	8	9		1	138	12.7	3.3
2011	1	1				1			2	6	8	8	5	15	7	11	5	5	2	3	1		81	15.4	5.2
2012								1	1	2	1	13	19	22	14	4	4	5	1				87	20.8	2.5
2013									3	2	8	11	13	16	21	9	2	2	1				88	10.7	1.4
2014									1		2	14	9	12	10	6	1		1				56	11.8	2.9
2015								2	3	7	9	13	14	11	12	7	3	1					82	21.6	17.4
2016									3	3	7	16	21	26	18	13	1	4	1				113	20.6	2.3
2017								1			6	7	18	13	13	9	2		1	1			71	21.9	3.1

EFDCLWSS.D00-D17

Table 22. Spring electrofishing catch rate (fish/hr) for each age of walleye collected from Carr Creek Lake (710 acres) from 2008-2017.

Age	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1										
2	0.6	2.0	2.1	1.3	1.6	1.0	0.9	3.2	1.8	1.5
3	3.4	7.2	3.2	5.0	7.8	4.2	4.5	9.1	8.1	9.0
4	3.2	5.5	2.6	3.6	5.1	2.6	3.6	5.2	5.2	5.7
5	1.7	2.4	1.4	1.6	2.9	1.2	1.3	1.6	2.4	2.4
6	0.6	0.8	0.3	0.4	0.9	0.5	0.4	0.6	0.8	0.8
7	0.7	0.8	0.4	0.4	0.5	0.1	0.1	0.2	0.2	0.2
8	0.9	1.0	0.9	0.7	0.8	0.5	0.5	0.6	0.8	0.9
9	1.1	1.4	0.8	1.0	1.2	0.5	0.5	0.7	1.0	0.9
10	0.2	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.3	0.4

EFDCLWSS.D08-D17

EFDCLWAS.D03, D09

Table 23. Length frequency and CPUE (fish/hr) of crappie collected by electrofishing at Carr Creek Lake (710 acres) on 10 and 20 February and 13 April 2017; numbers in parentheses are standard errors.

	Inch class										
Species	6	7	8	9	10	11	12	13	14	Total	CPUE
White crappie	7	12	10	8	6	6	11	13	5	78	39.0 (12.1)
Black crappie	6	7	7	5	5	2	1	1	1	35	17.5 (5.0)

EFDCLCSS.D17

Table 24. Spring electrofishing CPUE (fish/hr) for each length group of black and white crappie collected at Carr Creek Lake (710 acres). SE=standard error.

	Length group															
	≥8.0 in				≥10.0 in				≥8.0 in		≥10.0 in		Total			
	WC		BC		WC		BC		all crappie		all crappie		WC		BC	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2007	10.1	9.1	3.8	3.0	6.2	5.3	0.7	0.7	13.9	12.1	6.9	5.1	27.8	26.0	6.9	5.3
2008	1.3	0.8	1.0	0.4	0.8	0.5	0.2	0.1	2.3	1.0	0.9	0.5	1.7	1.0	1.6	0.7
2009	1.3	0.6	4.6	2.2	0.8	0.4	0.6	0.4	5.9	2.8	1.4	0.6	1.6	0.5	7.5	4.8
2010	2.5	1.9	2.4	1.0	2.2	1.8	0.8	0.3	4.9	2.3	2.9	2.0	4.9	3.5	6.1	2.3
2011	2.0	1.3	1.3	0.8	0.7	0.7	0.4	0.3	3.3	1.2	1.1	0.6	21.7	14.1	3.5	0.9
2012	3.1	1.3	11.3	9.1	1.4	0.8	0.9	0.7	14.4	9.4	2.4	1.2	8.7	3.9	16.7	12.9
2013	14.0	4.3	10.5	2.9	2.0	1.1	1.0	0.7	24.5	4.9	3.0	1.0	85.0	19.9	41.0	10.8
2014	41.6	11.4	8.0	3.1	22.4	8.6	1.6	1.6	49.6	11.1	24.0	9.6	280.0	69.5	28.8	5.6
2017	29.5	9.8	11.0	3.4	20.5	8.3	5.0	2.1	40.5	11.1	25.5	9.1	39.0	12.1	17.5	5.0

EFDCLCSS.D07-D17

Table 25. PSD and RSD_{10} values for black and white crappie taken in spring electrofishing samples at Carr Creek Lake (710 acres) on 10 and 20 February and 13 April 2017; 95% confidence intervals are in parentheses.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	78	76 (66-85)	53 (41-64)
Black crappie	35	63 (47-79)	29 (13-44)

EFDCLCSS.D17

Table 26. Mean back-calculated length (in) at each annulus for white crappie collected from Carr Creek Lake (710 acres) on 10 and 20 February 2017, including 95% confidence intervals.

Year		Age							
class	No.	1	2	3	4	5	6	7	8
2014	6	4	5.9	7.1					
2013	20	4.3	6.4	8.0	9.2				
2012	14	4.4	6.0	7.1	8.2	9.3			
2011	13	4.9	6.8	8.4	9.9	11.6	12.7		
2010	4	4.4	6.1	7.4	8.6	9.7	10.7	12.1	
2009	2	4.8	6.7	7.9	8.6	9.3	10.2	12.1	13.7
Mean	59	4.5	6.3	7.7	9.0	10.3	12.0	12.1	13.7
Smallest		3.4	4.7	5.6	6.0	6.6	9.0	9.8	13.4
Largest		5.7	8.1	11.2	12.9	14.0	14.7	13.3	14.0
STD error		0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.3
95% CI LO		4.3	6.1	7.4	8.5	9.5	11.2	11.0	13.1
95% CI HI		4.6	6.5	8.1	9.6	11.0	12.8	13.2	14.3

Intercept = 0

EFDCLCAS.D17

Table 27. Mean back-calculated length (in) at each annulus for black crappie collected from Carr Creek Lake (710 acres) on 10 and 20 February 2017, including 95% confidence intervals.

Year		Age									
class	No.	1	2	3	4	5	6	7	8	9	10
2014	1	3.8	6.3	7.6							
2013	3	3.9	5.6	7.5	8.9						
2012	8	4.1	5.6	6.9	7.8	8.7					
2011	5	4.0	5.4	6.3	7.1	8.0	8.9				
2010	6	3.6	5.4	6.5	7.3	8.0	8.9	9.6			
2009	6	3.6	5.3	6.3	7.0	7.5	8.0	8.5	8.9		
2007	1	3.2	4.6	5.3	5.9	6.0	6.2	6.4	6.6	6.9	7.1
Mean	30	3.8	5.5	6.6	7.5	8.0	8.5	8.8	8.6	6.9	7.1
Smallest		2.6	4.3	5.2	5.7	6.0	6.2	6.4	6.6	6.9	7.1
Largest		4.8	6.4	8.9	10.6	10.6	10.6	11.7	11.1	6.9	7.1
STD error		0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6		
95% CI LO		3.7	5.2	6.3	7.0	7.5	7.7	7.8	7.4		
95% CI HI		4.0	5.7	7.0	7.9	8.5	9.2	9.8	9.8		

Intercept = 0

EFDCLCAS.D17

Table 28. Spring electrofishing catch rate (fish/hr) for each age of white and black crappie collected from Carr Creek Lake (710 acres).

	Year													
	2009		2010		2011		2012		2013		2014		2017	
Age	WC	BC	WC	BC	WC	BC	WC	BC	WC	BC	WC	BC	WC	BC
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
2	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0						
3	0.1	0.0	0.9	0.0	5.1	0.0	1.9	1.3	30.7	10.6	124.9	8.0	3.4	0.6
4	0.1	0.5	0.5	0.4	4.1	0.2	1.5	3.2	12.9	10.4	30.4	6.3	12.0	1.4
5	0.5	3.1	2.1	1.8	4.2	0.9	1.9	2.5	12.9	2.9	37.4	1.8	9.3	4.3
6	0.5	2.4	1.0	1.0	4.6	0.6	1.9	5.7	15.6	10.7	43.2	6.2	9.6	2.8
7	0.3	0.0	0.3	0.0	0.2		0.5	2.9	3.7	4.0	12.3	3.7	3.0	3.3
8	0.2	0.3	0.1	0.6	0.2		0.6	0.0	4.0		18.0		1.7	3.1
9							0.4	0.3	0.3	0.9	0.8	0.5		
10							0.0	0.0				0.8		0.6
11							0.0	0.0						
12							0.0	0.8		1.2				
13							0.1	0.0			1.0			

EFDCLWSS.D07-D17
EFDCLCSS.D13-D17
EFDCLCAS.D07, D12, D17
WC=white crappie
BC=black crappie

Table 29. Fish harvest statistics derived from day (1 March-31 October) and night (1 May-31 August) creel surveys at Carr Creek Lake (710 acres) in 2017.

	Day	Night
Fishing trips		
No. of fishing trips (per acre)	7,706 (10.85)	2,576 (3.63)
Fishing pressure		
Total angler hours (S.E.)a	25,667 (811.61)	10,438 (773.53)
Man-hours/acre	36.15	14.7
Catch/harvest		
No. of fish caught (S.E.)	23,809 (2,927.51	7,426 (1,323.28)
No. of fish harvested (S.E.)	2,237 (566.35)	531 (238.4)
Lb of fish harvested	2,873	503
Harvest rates		
Fish/hour	0.08	0.05
Fish/acre	3.15	0.75
Lb/acre	4.05	0.71
Catch rate		
Fish/hour	0.91	0.68
Fish/acre	33.53	10.46
Miscellaneous characteristics (%)		
Male	85.70	85.31
Female	14.30	14.69
Resident	98.41	99.44
Non-resident	1.59	0.06
Method (%)		
Still fishing	39.28	51.13
Casting	59.31	47.74
Trotline/Jugging	1.06	1.13
Trolling	0.26	
Spider Rigging	0.09	
Mode (%)		
Boat	82.88	65.25
Bank	14.03	25.42
Dock	3.09	9.32

aS.E. = standard error

Table 30. Fish harvest statistics derived from a daytime creel survey at Carr Creek Lake (710 acres) from 1 March through 31 October 2017.

	Channel Catfish	Flathead Catfish	Warmouth	Bluegill	Spotted Bass	Largemouth Bass	White Crappie	Black Crappie	Walleye	Smallmouth Bass	Common Carp	White Bass	Rock Bass	Green Sunfish
No. caught	1609	21	709	10953	594	7924	1529	20	54	85	7	4	30	266
(per acre)	(2.27)	(0.03)	(1.00)	(15.43)	(0.84)	(11.16)	(2.15)	(0.03)	(0.08)	(0.12)	(0.01)	(0.01)	(0.04)	(0.38)
No. harvested	527	4	33	1356	64	72	138	12	26					
(per acre)	(0.74)	(0.01)	(0.05)	(1.91)	(0.09)	(0.10)	(0.19)	(0.02)	(0.04)					
% of total no. harvested	23.58	0.19	1.49	60.63	2.87	3.21	6.15	0.55	1.14					
Lb harvested	2225.7	54.4	1.5	156.4	37.2	192.2	66.2	4.6	105.0					
(per acre)	(3.14)	(0.08)	(0.00)	(0.22)	(0.05)	(0.27)	(0.09)	(0.01)	(0.15)					
% of total lb harvested	77.48	1.89	0.05	5.44	1.30	6.69	2.30	0.16	3.66					
Mean length (in)	20.8	32.0	4.0	5.6	11.6	17.5	11.0	9.0	22.8					
Mean w eight (lb)	3.12	12.98	0.04	0.12	0.71	2.83	0.65	0.37	4.11					

	Walleye	Catfish group	Panfish group	Black bass group	Crappie group	Anything
No. of fishing trips for that species	72	412	569	3914	476	2263
% of all trips	0.94	5.35	7.38	50.79	6.18	29.37
Hours fished for that species	241.29	1372.12	1894.83	13035.03	1586.09	7537.48
(per acre)	(0.34)	(1.93)	(2.67)	(18.36)	(2.23)	(10.62)
No. harvested fishing for that species	12	445	768	36	142	
Lb harvested fishing for that species	51.10	2133.20	85.90	71.10	65.00	
No./hour harvested fishing for that species	0.04	0.31	0.57	0.00	0.10	
% success fishing for that species	10.00	17.24	25.97	0.67	15.94	8.05

Table 31. Fish harvest statistics derived from a night creel survey at Carr Creek Lake (710 acres) from 1 May through 31 August 2017.

	Channel catfish	Flathead Catfish	Bluegill	Largemouth Bass	White Crappie	Walleye	Smallmouth Bass	Spotted Bass	Rock Bass	Warmouth
No. caught	1,033	27	1,582	3,056	1,123	39	13	215	13	326
(per acre)	(1.46)	(0.04)	(2.23)	(4.30)	(1.58)	(.0.55)	(0.02)	(0.30)	(0.02)	(0.46)
No. harvested	226	13	206	13	40	33				
(per acre)	0.32	0.02	0.29	0.02	0.06	0.05				
% of total no. harvested	42.62	2.40	38.81	2.40	7.58	6.19				
Lb harvested	206.2	136.2	24.0	22.0	28.1	86.6				
(per acre)	0.29	0.19	0.03	0.03	0.04	0.12				
% of total lb harvested	40.99	27.07	4.77	4.37	5.59	17.21				
Mean length (in)	14.0	30.0	4.9	15.0	11.5	20.0				
Mean weight (lb)	0.93	10.69	0.09	1.73	0.74	2.79				

	Walleye	Catfish group	Black bass group	Panfish group	Crappie group	Anything
No. of fishing trips for that species	141	630	1136	29	120	519
% of all trips	5.48	24.47	44.10	1.14	4.67	20.14
Hours fished for that species	571.65	2553.97	4603.26	118.91	487.65	2102.43
(per acre)	(0.81)	(3.60)	(6.48)	(0.17)	(0.69)	(2.96)
No. harvested fishing for that species	33	193	13		20	
Lb harvested fishing for that species	86.4	188.9	22.5		17.4	
No./hour harvested fishing for that species	0.04	0.13	0.00		0.04	
% success fishing for that species	16.67	12.64	0.61	0.00	12.64	6.35

Table 32. Species composition and length distribution of each species of fish harvested (H) and released (R) from a daytime creel survey on Carr Creek Lake (710 acres) from 1 March to 31 October 2017.

		Inch class																									
Species		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	28	30	32
Common Carp	H																										
	R																			7							
Walleye	H																	9			9			7			
	R											9		9					10								
Channel Catfish	H												19	74	46	9	9	9		28	9	93	46	102	83		
	R				10		52	83	135	177	239	166	166	21		21									11		
Flathead Catfish	H																										4
	R														8										8		
Bluegill	H	20	233	395	405	303																					
	R	796	3928	3501	885	448	10	10	18																		
Spotted Bass	H							13	13	13	13		12														
	R				25	25	132	25	108	33	41	66	25	17	25			7									
Largemouth Bass	H														10	31	30										
	R						1433	530	1897	837	1450	514	364	249	273	133	75	58	33	6							
Smallmouth Bass	H																										
	R								14	28	28										15						
White Crappie	H							61	38	8	30																
	R			388	457	397	139		10																		
Black Crappie	H							12																			
	R																										
Rock Bass	H																										
	R		8	8	8	6																					
Warmouth	H		33																								
	R	126	378	135	27	9																					
Green Sunfish	H																										
	R		53	106	53	54																					
White Bass	H																										
	R															4											

Table 33. Species composition and length distribution of each species of fish harvested (H) and released (R) from a night creel survey on Carr Creek Lake (710 acres) from 1 May to 31 August 2017.

		Inch class																							
Species		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	23	24	26	28	30
Warmouth	H																								
	R	91	91	117		27																			
Walleye	H															11			11	10					
	R											6													
Channel Catfish	H							8		24	40		48	48	24	16	8						10		
	R			9	9	65	56	28	158	139	130	102	56	37					9			8			
Flathead Catfish	H																								12
	R																							13	
Bluegill	H		26	77	52	51																			
	R	37	307	516	369	135		12																	
Rock Bass	H																								
	R					12																			
Spotted Bass	H																								
	R		11			11	34		34	23	45	11	23	23											
Largemouth Bass	H													12											
	R						321	117	593	476	642	438	204	49	88	68	39	8							
Smallmouth Bass	H																								
	R										6	6													
White Crappie	H								10	20			10												
	R		77	87	358	406	87	39	19				9												

Table 34. Monthly black bass angling success at Carr Creek Lake during the 2017 day and night creel survey period.

	Total no. of bass caught		Total no. of bass harvested		No. of black bass fishing trips		Hours fished by bass anglers		Bass caught by bass anglers		Bass caught/hour by bass anglers		Bass harvested by bass anglers		Bass harvested/hour by bass anglers	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
March	811				707		2356		737		0.307					
April	835		49		582		1938		393		0.220					
May	2542	1427	20	13	443	352	1474	1427	2237	1300	1.087	0.860	14	13	0.006	0.008
June	1317	801	36		530	315	1764	1276	996	690	0.495	0.512				
July	281	958			195	421	648	1707	281	952	0.406	0.485				
August	683	98	12		286	48	952	193	515	75	0.467	0.394	12		0.011	
September	1383		19		738		2456		1277		0.464		10		0.004	
October	751				434		1446		709		0.470					
Total	8,603	3,284	136	13	3,914	1,136	13,035	4,603	7,145	3,017	3.916	2.251	36	13	0.021	0.008
Mean											0.490	0.563			0.007	0.008

Table 35. Monthly crappie angling success at Carr Creek Lake during the 2017 creel survey period.

	Total no. of crappie caught		Total no. of crappie harvested		No. of crappie fishing trips		Hours fished by crappie anglers		Crappie caught by crappie anglers		Crappie caught/hour by crappie anglers		Crappie harvested by crappie anglers		Crappie harvested/hour by crappie anglers	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
March	597		125		174		579		516		0.659		118		0.151	
April	504		25		151		504		478		0.935		24		0.048	
May	80	51			38	10	127	40	53		0.606					
June	285	635		28	22	70	72	283	285	428	2.286	1.211		14		0.039
July	33	309		13	10	41	34	165	17	38	0.500	0.238		6		0.040
August		128			59		195									
September	29				7		23									
October	21				15		51		13		0.536					
Total	1,549	1,123	150	41	476	120	1,586	488	1,362	466			142	20		
Mean											0.92	0.72			0.10	0.04

Table 36. Monthly walleye angling success at Carr Creek Lake during the 2017 creel survey period.

	Total no. of		Total no. of		No. of walleye		Hours fished by		Walleye caught		Walleye		Walleye		Walleye	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
March																
April	12		12		16		53		12		0.137		12		0.137	
May	20	13	13	13	16	69	55	278		13		0.033		13		0.033
June		14		14	32	26	108	106		14		0.092		14		0.092
July		13		6		31		123		12		0.084		6		0.042
August	12					16		65								
September	10															
October																
Total	54	40	25	33	64	142	216	572	12	39			12	33		
Mean											0.14	0.07			0.14	0.06

Table 37. Catch and harvest statistics derived from a daytime creel survey at Carr Creek Lake (710 acres) for largemouth bass, white crappie, black crappie, and walleye caught and released by all anglers from 1 March to 31 October 2017.

	Largemouth bass				White crappie				Black Crappie			
		Catch & release				Catch & release				Catch & release		
	Harvest	12-14.9	≥15.0	Total	Harvest	<9.0	≥9.0	Total	Harvest	<9.0	≥9.0	Total
Total number	72	2,328	828	7,924	138	1,381	10	1,529	12	7	0	20
Total weight (lb)	192.2	1,524.0	543.5	5,334.7	66.2	128.0	0.7	194.9	4.6	1.9	0.0	6.5
Mean length (in)	17.5				11.0				9.0			
Mean weight (lb)	2.83				0.65				0.37			
Rate (fish/hour)	0.002				0.006				0.000			

	Walleye			
		Catch & release		
	Harvest	8-14.9	≥15.0	Total
Total number	27	9	19	54
Total weight (lb)	105.0	14.0	26.5	145.5
Mean length (in)	22.8			
Mean weight (lb)	4.11			
Rate (fish/hour)	0.001			

Table 38. Catch and harvest statistics derived from a night creel survey at Carr Creek Lake (710 acres) for largemouth bass, white crappie, black crappie, and walleye caught and released by all anglers from 1 May to 31 August 2017.

	Largemouth bass				White crappie				Black Crappie			
		Catch & release				Catch & release				Catch & release		
	Harvest	12-14.9	≥15.0	Total	Harvest	<9.0	≥9.0	Total	Harvest	<9.0	≥9.0	Total
Total number	13	1,284	252	3,056	40	1,015	68	1,123	0	0	0	0
Total weight (lb)	22.0	1,001.0	197.6	2,396.6	28.1	126.0	8.3	162.4				
Mean length (in)	15.0				11.5							
Mean weight (lb)	1.73				0.74							
Rate (fish/hour)	0.001				0.004							

	Walleye			
		Catch & release		
	Harvest	8-14.9	≥15.0	Total
Total number	33	6	0	39
Total weight (lb)	86.6	4.0		90.6
Mean length (in)	20.0			
Mean weight (lb)	2.79			
Rate (fish/hour)	0.003			

Table 39. Length frequency and CPUE (fish/hr) of black bass collected in 1.25 hours of 15-min electrofishing runs at Cranks Creek Lake (219 acres) on 18 April 2017; numbers in parentheses are standard errors.

	Inch class																								
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE
SB			2		2	4	2	1	1															12	9.6 (6.6)
LMB		4	35	38	15	4	11	23	25	19	10	7	6	1	2	3	1	1	4	3		4		216	172.8 (17.8)

SB = spotted bass
LMB = largemouth bass
EFDCCLSS.D17

Table 40. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cranks Creek Lake (219 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2000	51.33	11.05	24.67	3.78	2.67	1.33	2.00	1.37	2.00	1.37	80.67	12.45
2001	20.00	6.37	22.00	8.31	2.67	1.33	2.00	0.89	0.67	0.67	46.67	13.84
2002						no sample						
2003						no sample						
2004	40.67	7.55	40.00	5.75	3.33	1.91	4.00	2.07	0.67	0.67	88.00	11.12
2005	59.20	16.56	70.40	10.48	4.00	1.26	6.40	2.04	2.40	0.98	140.00	17.34
2006						no sample						
2007						no sample						
2008	33.00	7.90	51.00	6.61	27.00	4.43	8.00	3.65	3.00	1.91	119.00	8.23
2009						no sample						
2010	80.80	27.64	43.20	10.38	9.60	2.99	14.40	2.04	4.80	2.33	148.00	41.18
2011	57.60	6.01	52.00	10.51	9.60	1.60	11.20	3.88	5.60	3.49	130.40	15.42
2012	34.40	12.04	32.80	4.63	5.60	2.40	8.80	2.33	2.40	0.98	81.60	14.46
2013						no sample						
2014						no sample						
2015	27.20	5.99	76.00	8.29	15.20	0.80	13.60	2.40	6.40	1.60	132.00	10.81
2016						no sample						
2017	76.80	14.28	62.40	13.89	18.40	2.71	15.20	3.88	8.80	3.80	172.80	17.82

EFDCCLSS.D00-D17

Table 41. PSD and RSD values for each species of black bass in each area of Cranks Creek Lake (219 acres) on 18 April 2017. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass		
	No.	PSD$_8$	RSD$_{15}$	No.	PSD$_7$	RSD$_{14}$
Total	120	35 (26-44)	16 (9-22)	8	0	0

EFDCCLSS.D17

Table 42. Population assessments for largemouth bass collected from Cranks Creek Lake (219 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year						
Parameter	2005	2008	2010	2011	2012	2015	2017
Mean length age 3 at capture	3	3	3	3	3	1	1
	(11.2)	(11.2)	(11.2)	(11.2)	(11.2)	(10.0)	(10.0)
Spring CPUE age 1	3	3	4	3	3	2	4
	(50.40)	(23.00)	(68.80)	(45.60)	(28.00)	(19.20)	(72.80)
Spring CPUE 12.0-14.9 in	1	3	1	1	1	2	2
	(4.00)	(27.00)	(9.60)	(9.60)	(5.60)	(15.20)	(18.40)
Spring CPUE ≥15.0 in	2	2	3	2	2	3	3
	(6.40)	(8.00)	(14.40)	(11.20)	(8.80)	(13.60)	(15.20)
Spring CPUE ≥20.0 in	3	3	4	4	3	4	4
	(2.40)	(3.00)	(4.80)	(5.60)	(2.40)	(6.40)	(8.80)
Total score	12	13	15	13	12	12	14
Assessment rating	Fair	Good	Good	Good	Fair	Fair	Good
Instantaneous mortality (z)	0.48	0.52	0.49	0.56	0.53		
Annual mortality (A)	38.40	40.60	38.90	43.10	40.90		

EFDCCLAS.D08
EFDCCLAF.D13
EFDCCLSS.D05-D17

Table 43. Length frequency and CPUE (fish/hr) of black bass collected in 0.75 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 20 September 2017; numbers in parentheses are standard errors.

	Inch class																					
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
LMB	5	21	22	5	5	17	5	8	5	11	2	2		1								109	145.3 (10.4)

LMB = largemouth bass
EFDCCLSF.D17

Table 44. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Cranks Creek Lake (219 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age-0		Age-0		Age-0 $\geq$5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
1999							44.3	10.4
2000							14.3	4.8
2001	5.0	0.1	27.3	5.2	13.3	3.0		
2002	5.1	0.1	34.4	10.6	20.8	7.7		
2003							15.0	4.3
2004							50.4	15.3
2005								
2006								
2007	4.3	0.1	32.0	8.7	7.2	2.9	23.0	7.3
2008								
2009	3.9	0.1	64.0	29.8	7.2	4.8	68.8	26.1
2010	4.3	0.1	93.3	28.5	16.0	6.1	45.6	6.0
2011	5.3	0.1	51.2	5.4	34.4	5.3	28.0	10.7
2012	4.1	0.1	66.4	27.4	10.4	5.3		
2013	3.9	0.2	11.2	5.4	0.8	0.8		
2014	4.0	0.1	104.8	24.5	20.8	5.1	19.2	5.3
2015	4.3	0.2	37.0	14.6	9.0	3.0		
2016	4.1	0.1	70.4	29.7	2.4	1.0	72.8	12.6
2017	4.2	0.1	77.3	11.6	13.3	3.5		

EFDCCLSF.D01-D02, D07, D09-D17
EFDCCLAS.D08
EFDCCLSS.D00-D17
EFDCCLAF.D13

Table 45. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 1.5 hours of 15-minute nocturnal electrofishing samples by area at Dewey Lake (1,100 acres) on 17 April 2017. Standard errors are in parentheses.

		Inch class																			
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Lower	Spotted bass		1		2	2			1											6	8.0 (4.0)
	Largemouth bass	1	2	5	8	1	2	13	3	4	5	4	12	8	10	2	2		1	83	110.0 (13.9)
Upper	Spotted bass		1		1															2	2.7 (1.3)
	Largemouth bass		4	7	3	3	8	4	3	4	3	2	4	4	2	1	3	1	1	57	76.0 (6.1)
Total	Spotted bass		2		3	2			1											8	5.3 (2.2)
	Largemouth bass	1	6	12	11	4	10	17	6	8	8	6	16	12	12	3	5	1	2	140	93.3 (10.3)

EFDDLLSS.D17

Table 46. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Dewey Lake (1,100 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1987	44.6		38.3		12.0		0.6		0.0		95.4	
1988	84.0		40.7		26.7		2.0		0.0		154.7	
1989	75.0		27.5		10.8		7.0		0.0		120.7	
1990	58.8		68.0		32.0		11.4		0.6		171.4	
1991	73.8		50.6		18.4		3.5		0.2		146.4	
1992	57.4		64.1		17.2		7.4		0.2		146.1	
1993	43.7		71.8		15.6		8.8		0.8		140.0	
1994						no sample						
1995	46.6		59.6		28.5		3.6		0.0		138.3	16.9
1996						no sample						
1997	15.3		53.3		32.3		11.0		1.0		112.0	12.2
1998	20.1		51.4		43.2		7.2		0.6		122.0	8.5
1999	78.9		34.6		39.5		12.8		0.5		165.8	12.7
2000	62.2	4.7	44.0	4.4	23.6	3.5	10.3	1.3	0.1		140.1	9.5
2001	150.1	17.2	57.8	5.7	26.9	2.7	17.8	1.6	0.6		252.6	22.8
2002						no sample						
2003	71.1	10.1	55.6	4.4	23.1	1.8	22.0	2.1	0.7		171.8	14.6
2004	96.2	11.9	34.7	3.8	20.0	3.2	17.5	2.6	1.0		168.3	13.9
2005	39.3	5.0	59.2	6.3	31.0	3.2	24.5	1.9	0.3		153.9	12.8
2006	32.3	5.7	66.4	8.6	24.2	3.6	24.9	3.6	0.7		147.8	10.0
2007	54.9	9.6	80.8	9.8	35.1	5.0	30.2	4.1	1.5	0.7	200.9	19.9
2008	87.4	10.4	86.5	9.5	21.6	3.6	16.3	3.4	0.8	0.5	211.7	12.4
2009	83.7	12.7	62.8	6.3	18.8	1.9	14.4	3.4	0.5	0.5	179.8	16.9
2010	42.6	5.9	98.0	27.6	12.3	2.8	8.3	2.0	0.0	0.0	161.2	33.0
2011						no sample						
2012	27.2	4.6	63.2	7.0	34.9	3.9	10.7	2.5	0.4	0.4	136.0	8.6
2013	20.8	3.9	92.8	14.8	54.0	6.5	17.2	1.9	1.2	0.6	184.8	20.8
2014	12.4	2.6	40.4	8.1	31.2	6.6	20.0	2.1	1.2	0.9	104.0	16.2
2015	21.2	3.0	35.2	5.2	43.2	5.4	24.0	4.2	0.8	0.5	123.6	11.2
2016	22.5	3.1	25.5	4.9	47.0	5.4	24.0	3.5	1.0	0.7	119.0	9.9
2017	22.7	5.7	27.3	7.1	20.0	5.4	23.3	4.3	1.3	0.8	93.3	10.3

EFDDLLSS.D87-D02, D06-D10, D12-D17
BBRPSDEW.D03-D05

Table 47. PSD and RSD values for each species of black bass collected in each area of Dewey Lake (1,100 acres) during spring 2017. Numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Lower		67 (55-78)	35 (23-46)	3		
Upper		53 (37-68)	30 (16-44)	0		
Total	106	61 (67-80)	33 (24-42)	3	0	0

EFDDLLSS.D17

Table 48. Population assessment for largemouth bass collected from Dewey Lake (1,100 acres). Actual values are in parentheses. Scoring based on statewide assessment.

	Year										
Parameter	2006	2007	2008	2009	2010	2012	2013	2014	2015	2016	2017
Mean length age-3 at capture	1	1	2	2	2	2	2	2	2	2	2
	(10.5)	(10.5)	(11.3)	(11.3)	(11.3)	(11.3)	(11.2)	(11.2)	(11.2)	(11.2)	(11.2)
Spring CPUE age-1	3	4	4	4	2	2	2	1	2	2	2
	(27.9)	(49.0)	(49.5)	(55.6)	(16.4)	(19.5)	(20.8)	(10.8)	(17.2)	(20.5)	(21.3)
Spring CPUE 12.0-14.9 in	3	4	2	2	1	4	4	4	4	4	2
	(24.2)	(35.1)	(21.6)	(18.8)	(12.3)	(34.9)	(54.0)	(31.2)	(43.2)	(47.0)	(20.0)
Spring CPUE ≥15.0 in	4	4	3	3	2	2	3	4	4	4	4
	(24.9)	(30.2)	(16.3)	(14.4)	(8.3)	(10.7)	(17.2)	(20.0)	(24.0)	(24.0)	(23.3)
Spring CPUE ≥20.0 in	3	4	3	3	1	2	3	3	3	3	4
	(0.7)	(1.5)	(0.8)	(0.5)	(0.0)	(0.4)	(1.2)	(1.2)	(0.8)	(1.0)	(1.3)
Total score	14	17	14	14	8	12	14	14	15	15	14
Assessment rating	Good	Excellent	Good	Good	Poor	Fair	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.41	0.39	0.56	0.48	0.77	0.64					
Annual mortality (A)	33.50	32.10	42.80	38.40	53.90	35.80					

BBRPSDEW.D04-D05
EFDDLLSS.D06-D10, D13-D17
EFDDLLAS.D08
EFDDLLAF.D13

Table 49. Length-frequency distribution of each black bass species captured during 2.0 hours of 15-minute nocturnal electrofishing runs at Dewey Lake (1,100 acres) on 14 September 2017. Standard errors are in parentheses.

		Inch class																					
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower	Spotted bass		2	12	1	1	1	2	2	1	1	1										24	24.0 (11.0)
	Largemouth bass	1	10	26	14	7	4	9	7	3	2		3	1	2	3	1	1				94	94.0 (14.1)
Upper	Spotted bass							1														1	1.0 (1.0)
	Largemouth bass	3	14	13	11	1	4	10	11	5	5	3	1	8	7	4	13	10	5		2	130	130.0 (24.3)
Total	Spotted bass		2	12		1	1			1												17	8.5 (6.7)
	Largemouth bass	4	24	39	25	8	8	19	18	8	7	3	4	9	9	7	14	11	5		2	224	112.0 (14.7)

EFDDLLSF.D17

Table 50. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Dewey Lake (1,100 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.0	0.0	75.6	14.2	37.6	9.4	61.2	9.4
2003	4.9	0.1	38.9	10.6	15.1	3.8	79.7	10.5
2004	5.2	0.1	45.2	7.1	25.4	4.6	24.8	4.1
2005	4.4	0.1	58.7	16.1	16.9	6.6	27.9	5.5
2006	5.1	0.1	39.0	9.9	21.3	5.8	49.0	9.2
2007	4.8	0.1	54.3	12.8	21.2	4.2	49.5	10.0
2008	5.0	0.1	54.9	14.3	30.0	7.4	55.6	12.1
2009	5.3	0.1	45.7	8.8	28.8	5.2	16.4	3.3
2010	5.0	0.1	67.6	14.2	38.4	8.5	no sample	
2011	4.6	0.1	37.2	9.3	14.8	3.6	19.5	4.4
2012	4.4	0.1	26.0	5.3	7.2	1.7	20.8	3.9
2013	3.4	0.2	25.2	6.3	3.2	0.8	10.8	2.8
2014	3.9	0.1	36.8	8.3	10.0	4.3	17.2	3.5
2015	3.7	0.2	38.7	9.9	7.3	3.0	20.5	3.2
2016	4.9	0.1	33.5	5.1	17.0	3.5	21.3	5.8
2017	4.6	0.1	50.0	9.4	16.5	3.6		

BBRPSDEW.D03-D05
BBRDLLSF.D02
BBRWRDEW.D03-D04
BBRSCDEW.D03
EFDDLLSF.D05-D16
EFDDLLSS.D06-D10, D12-D17
EFDDLLAS.D08

Table 51. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 1.50 hours of 15-minute electrofishing samples at Fishtrap Lake (1,143 acres) on 10 May 2017; numbers in parentheses are standard errors.

		Inch class																					
Area	Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	
Lower	Smallmouth bass								1												1	1.3	(1.3)
	Spotted bass				2	2		3	1												8	10.7	(10.7)
	Largemouth bass	1	5	18	2	3	2	4	3	8	2	4	1		2					1	56	74.7	(3.5)
Upper	Smallmouth bass																				0	0.0	
	Spotted bass																				0	0.0	
	Largemouth bass		32	29	6	4	3	6	9	9	8		1	1							108	144.0	(45.5)
Total	Smallmouth bass								1												1	0.7	(0.7)
	Spotted bass				2	2		3	1												8	5.3	(5.3)
	Largemouth bass	1	37	47	8	7	5	10	12	17	10	4	2	1	2					1	164	109.3	(25.6)

EFDFLLSS.D17

Table 52. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass at Fishtrap Lake (1,143 acres).

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2000	28.7	4.2	29.0	2.3	19.0	2.6	23.0	4.3	3.4		99.7	9.9
2001	20.3	3.7	32.7	4.3	17.3	2.5	10.3	2.9	1.3		80.7	7.7
2002							no sample					
2003	43.0	4.4	25.0	7.6	16.0	4.9	11.0	3.4	2.0		95.0	4.1
2004	44.7	6.8	45.1	5.8	19.3	2.2	13.1	3.9	1.5		122.2	10.7
2005	61.8	10.2	67.6	10.0	38.9	6.5	14.9	2.0	0.0		183.3	20.8
2006	52.5	8.8	37.6	1.9	33.0	3.4	4.0	0.7	0.0		127.1	11.6
2007	28.7	4.7	53.9	8.3	33.0	3.5	7.9	1.9	1.2	0.9	123.5	13.5
2008	39.5	12.7	31.1	3.5	32.0	5.8	9.4	2.7	0.0		111.9	15.0
2009	44.2	10.7	61.4	11.8	20.4	4.8	9.9	2.4	0.6	0.6	135.9	15.1
2010	52.4	3.1	35.6	5.6	20.4	2.8	10.4	2.5	0.4	0.4	118.8	11.3
2011							no sample					
2012	54.7	9.0	20.7	1.9	12.0	2.3	12.7	4.3	3.3	2.6	100.0	9.4
2013							no sample					
2014	25.6	5.5	32.8	10.2	35.2	5.9	16.8	5.3	3.2	1.5	110.4	15.2
2015	23.6	3.5	48.4	6.8	33.6	4.6	18.0	2.6	2.4	0.9		
2016							no sample					
2017	62.0	17.7	22.7	5.5	20.7	6.5	4.0	1.5	0.7	0.7	109.3	25.6

EFDFLLSS.D00-D10, D12, D14-D15, D17

Table 53. PSD and RSD values for each species of black bass in each area of Fishtrap Lake (1,143 acres) on 10 May 2017. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Smallmouth bass			Spotted bass			Largemouth bass		
Area	No.	PSD$_7$	RSD$_{14}$	No.	PSD$_7$	RSD$_{14}$	No.	PSD$_8$	RSD$_{15}$
Lower	1	36 (10-62)	21 (0-44)	8	13 0-37)	0	30	60 (42-78)	13 (1-26)
Upper	0			0			41	46 (31-62)	5 (0-12)
Total	1	100		8	13 0-37)		71	52 (40-64)	8 (2-15)

EFDFLLSS.D17

Table 54. Population assessment for largemouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	2005	2006	2007	2008	2009	2010	2012	2014	2015	2017
Mean length age 3 at capture	4	4	4	4	4	2	2	2	2	2
	(13.6)	(13.6)	(13.6)	(13.6)	(13.6)	(11.7)	(11.7)	(11.7)	(11.7)	(11.8)
Spring CPUE age 1	4	4	3	3	4	4	4	3	2	4
	(61.50)	(52.50)	(28.29)	(38.51)	(44.17)	(51.55)	(50.75)	(24.20)	(22.05)	(61.33)
Spring CPUE 12.0-14.9 in	4	4	4	4	2	2	1	4	4	2
	(38.90)	(33.00)	(33.00)	(31.99)	(20.42)	(20.40)	(12.00)	(35.20)	(33.60)	(20.67)
Spring CPUE ≥15.0 in	3	1	2	2	2	2	2	3	3	1
	(14.90)	(4.00)	(7.91)	(9.37)	(9.85)	(10.40)	(12.67)	(16.80)	(18.00)	(4.00)
Spring CPUE ≥20.0 in	1	1	3	1	3	2	4	4	4	3
	(0.00)	(0.00)	(1.19)	(0.00)	(0.64)	(0.40)	(3.33)	(3.20)	(2.40)	(0.67)
Total score	16	14	16	14	15	12	13	16	15	12
Assessment rating	Good	Good	Good	Good	Good	Fair	Good	Good	Good	Fair
Instantaneous mortality (z)	0.65	0.83	0.72	0.59	0.67	0.66	0.50	0.43	0.52	
Annual mortality (A)	48.00	56.50	51.30	44.30	49.10	48.20	39.20	35.20	40.70	

EFDFLLSS.D03-D17
EFDFLLAS.D04, D10
EFDFLLAF.D17

Table 55. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.25 hours of 15-minute electrofishing samples at Fishtrap Lake (1,143 acres) on 23 September 2017; numbers in parentheses are standard

Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE
Lower	Smallmouth bass		1	1														2	1.6 (1.0)
	Spotted bass		3			2	3	2	2	3	4	1						20	16.0 (6.7)
	Largemouth bass	3	32	54	20	1	8	10	11	5	7	6	1	3	1		3	165	132.0 (40.9)
Upper	Smallmouth bass			1														1	1.0 (1.5)
	Spotted bass						1						1					2	2.0 (1.6)
	Largemouth bass	1	29	64	32	3	3	10	6	1	6	4	1	2			1	163	163.0 (34.7)
Total	Smallmouth bass		1	2														3	1.3 (0.9)
	Spotted bass		3			2	4	2	2	3	4	1	1					22	9.8 (3.4)
	Largemouth bass	4	61	118	52	4	11	20	17	6	13	10	2	5	1		4	328	145.8 (25.3)

EFDFLLSS.D17

Table 56. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected at Fishtrap Lake (1,143 acres).

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	5.1	0.0	106.2	32.9	59.6	15.9	35.4	6.0
2004	5.0	0.0	256.0	51.1	122.7	23.9	61.5	10.2
2005	4.5	0.1	108.0	41.3	24.0	11.1	52.5	8.8
2006	5.0	0.1	72.7	14.1	36.5	8.0	28.3	4.5
2007	5.1	0.1	114.2	23.7	63.5	11.0	38.5	12.1
2008	4.6	0.1	75.3	25.9	26.3	9.5	44.2	10.7
2009	4.8	0.1	83.3	15.1	39.3	5.4	51.6	3.2
2010	5.2	0.1	111.6	16.4	61.6	8.4	no sample	
2011	5.1	0.1	119.4	26.9	69.1	13.3	50.8	8.2
2012	5.1	0.1	72.7	24.3	38.0	12.0	no sample	
2013	4.6	0.1	63.5	16.4	19.5	5.2	24.2	6.2
2014	4.8	0.1	54.0	8.8	21.2	3.6	22.1	3.1
2015	4.9	0.1	139.0	25.2	62.0	16.7	no sample	
2016	4.7	0.0	105.2	25.1	32.0	6.3	61.33*	17.9
2017	5.4	0.1	105.8	20.5	76.9	15.9		

* Includes supplemental spring stocked fish

EFDFLLSF.D03-D16

EFDFLLSS.D04-D17

EFDFLLAS.D04, D10

Table 57. Mean back-calculated length (in) at each annulus for largemouth bass collected from Fishtrap Lake (1,143 acres) on 23 September 2017, including 95% confidence intervals.

Year		Age					
class	No.	1	2	3	4	5	6
2016	31	6.5					
2015	14	6.9	10.9				
2014	4	6.0	10.2	11.8			
2013	5	6.6	10.0	12.0	13.8		
2012	4	6.5	10.3	12.1	13.4	14.7	
2011	1	6.7	11.6	13.4	14.9	15.9	16.8
Mean	59	6.6	10.6	12.0	13.8	14.9	16.8
Smallest		4.9	9.0	10.2	11.2	11.7	16.8
Largest		8.4	12.3	13.4	14.9	16.5	16.8
STD error		0.1	0.2	0.2	0.3	0.9	
95% CI LO		6.4	10.3	11.6	13.1	13.2	
95% CI HI		6.8	10.9	12.5	14.4	16.6	

Intercept = 0

EFDFLLAF.D17

Table 58. Length frequency and CPUE (fish/net-night) for white crappie collected at Fishtrap Lake (1,143 acres) in 20 net-nights on 28-30 November 2017.

Inch class														
3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	SE
17	5		5	11	24	65	37	12	2		1	179	9.0	(2.2)

EFDFLCTF.D17

Table 59. PSD and RSD values calculated for white crappie collected in trap nets at Fishtrap Lake (1,143 acres) on 28-30 November 2017; 95% confidence intervals are in parentheses.

No. ≥stock size	PSD	RSD$_{10}$
157	90 (85-95)	33 (26-41)

EFDFLCTF.D17

Table 60. Mean back-calculated length (in) at each annulus for white crappie collected from Fishtrap Lake (1,143 acres) on 28-30 November 2017, including 95% confidence intervals.

Year class	No.	Age 1	2	3	4	5	6	7	8	9
2016	14	4.8								
2015	9	5.1	7.8							
2014	10	4.9	7.5	9.1						
2013	13	4.8	7.0	8.4	9.3					
2012	7	4.5	6.5	7.7	8.7	9.7				
2011	13	4.0	6.0	7.0	7.8	8.5	9.2			
2010	4	4.5	6.3	7.3	8.5	9.2	10	10.7		
2009	5	4.1	5.9	6.8	7.5	8.0	8.6	9.2	9.8	
2008	1	3.8	5.1	6.0	6.3	6.8	7.2	7.5	7.8	8.4
Mean	76	4.6	6.8	7.8	8.4	8.8	9.1	9.7	9.5	8.4
Smallest		3.2	4.7	5.5	6.1	6.7	7.2	7.5	7.8	8.4
Largest		5.9	8.7	11.0	11.1	11.9	12.7	13.4	10.7	8.4
STD error		0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.5	
95% CI LO		4.5	6.5	7.5	8.0	8.3	8.6	8.6	8.6	
95% CI HI		4.7	7.0	8.1	8.7	9.2	9.6	10.7	10.4	

Intercept = 0

EFDFLCAF.D17

Table 61. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 20 net-nights at Fishtrap Lake (1,143 acres) on 28-30 November 2017; numbers in parentheses are standard errors.

	Inch class															
Age	3	4	5	6	7	8	9	10	11	12	13	14	Total	Age%	CPUE	
0	17	5											22	12	1.1	(0.4)
1				5	10								15	8	0.8	(0.2)
2						3	11	10					24	14	1.2	(0.4)
3						3	11	5	2	1			22	13	1.1	(0.4)
4						3	23	5	2	1			34	19	1.7	(0.5)
5						2	4	5	3				14	8	0.7	(0.3)
6					1	7	11	10	2				31	18	1.6	(0.5)
7						2				1		1	4	2	0.2	(0.1)
8						2	4	2	2				10	6	0.5	(0.2)
9						2							2	1	0.1	(0.0)
Total	17	5		5	11	24	64	37	11	3		1	178			
%	9	3		3	6	13	36	21	7	1		1				

CPUE of >8 in (quality size) = 7.05

CPUE of >10 in (preferred size) = 2.60

EFDFLCAF.D17

EFDFLCTF.D17

Table 62. Population assessment scores for white crappie collected from Fishtrap Lake (1,143 acres). Actual assessment values are in parentheses. Scoring based on statewide assessment.

	Year								
Parameter	2003	2005	2007	2008	2010	2011	2013	2015	2017
CPUE age-1 and older	4	4	3	4	4	4	4	4	3
	(100.0)	(38.9)	(6.7)	(31.9)	(27.2)	(74.9)	(117.0)	(20.4)	(8.0)
CPUE age 1	4	2	2	4	4	4	4	2	1
	(33.2)	(2.1)	(3.2)	(10.8)	(10.6)	(15.1)	(27.8)	(1.1)	(0.8)
CPUE age 0	1	4	3	4	3	4	4	2	2
	(0.0)	(22.5)	(2.7)	(18.8)	(3.1)	(14.0)	(12.1)	(1.1)	(1.1)
CPUE $\geq$ 8.0 in	4	4	2	4	4	4	4	4	4
	(15.9)	(25.9)	(2.9)	(8.8)	(10.4)	(25.1)	(69.2)	(19.0)	(7.1)
Mean age 2 length @ capture	1	2	2	1	1	1	2	2	3
	(7.1)	(8.2)	(8.8)	(7.8)	(7.5)	(7.3)	(8.8)	(8.5)	(9.6)
Total score	14	16	12	17	16	17	18	14	13
Assessment rating	Good	Good	Fair	Excellent	Good	Excellent	Excellent	Good	Good
Instantaneous mortality (z)	1.45	0.56	0.80	0.78	1.19	0.75	0.87	0.21	0.25
Annual Mortality (A)	76.60	43.10	54.90	54.40	69.7	53.00	58.20	19.00	22.10

EFDFLCTF.D03-D17
EFDFLCAF.D03-D17

Table 63. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.75 hours of 7.5-min. nocturnal electrofishing samples in Fishpond Lake (32 acres) on 12 April 2017; numbers in parentheses are standard errors.

	Inch class																			
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
LMB	1	2	12	9	5	8	19	26	16	9	3	10	4	7	2	1	2	2	138	184.0 (14.5)

LMB = largemouth bass
EFDFPLSS.D17

Table 64. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Fishpond Lake (32 acres). S.E. = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
1990	19.2		43.6		14.1		2.6		0.0		79.5	
1991	216.3		192.3		62.8		10.7		0.7			
1992											80.0	
1993	9.0		83.0		42.0		0.0		0.0		134.0	
1994	57.0		28.0		0.0		5.0		0.0		90.0	
1995												
1996	2.3		99.6		25.5		10.4		1.2		137.8	
1997	4.0		33.3		32.7		6.0		0.7		76.0	
1998	11.7		29.6		49.4		21.5		0.0		112.2	
1999	193.6		107.2		19.2		24.8		0.8		344.8	
2000	5.9		246.4		11.1		7.4		0.7		270.7	
2001	28.0		118.0		32.0		8.7		4.0		186.7	
2002												
2003												
2004	78.9	12.2	76.0	7.9	45.2	5.9	39.4	6.7	3.9	2.9	239.5	14.9
2005												
2006	31.9	5.5	168.1	9.9	14.7	3.8	30.4	2.4	7.9	2.9	245.0	12.5
2007												
2008	5.0	2.0	109.3	13.6	61.8	6.2	16.9	3.3	11.6	2.4	192.9	15.4
2009	11.4	2.4	43.4	6.7	64.0	10.6	21.7	4.2	10.3	2.9	140.6	15.5
2010	4.6	2.4	34.3	6.7	26.3	2.9	13.7	4.2	4.6	2.4	78.9	9.1
2011	17.1	5.9	35.4	6.7	28.6	6.0	28.6	4.6	4.6	2.4	109.7	13.5
2012												
2013	17.1	8.3	50.3	11.5	76.6	10.2	36.6	11.4	11.4	4.9	180.6	22.4
2015	14.9	4.4	38.9	8.5	58.3	7.1	30.9	7.7	11.4	3.0	142.9	15.2
2017	4.0	2.7	45.3	4.9	81.3	6.0	53.3	9.6	9.3	3.8	184.0	14.5

EFDFPLSS.D90-D17

Table 65. PSD and RSD_{15} values obtained for largemouth bass taken in spring nocturnal electrofishing samples in Fishpond Lake (32 acres) on 12 April 2017; 95% confidence intervals are in parentheses.

No. ≥8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
135	75 (68-83)	30 (22-37)

EFDFPLSS.D17

Table 66. Length frequency and CPUE (fish/hr) of black bass and walleye collected at Martins Fork Lake (330 acres) during 1.0 hour of 15-minute nocturnal electrofishing samples on 20 September 2017; numbers in parentheses are standard errors.

	Inch class																	
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	21	Total	CPUE
SMB								1									1	1.0 (1.0)
SB		7		4	2	6	12	10	3								44	44.0 (9.8)
LMB	24	46	22	4	15	31	11	9	5	4	1	1	1	1	1	1	177	177.0 (23.9)
Coosa																	0	0.0
Walleye																	0	0.0

SMB = smallmouth bass

SB = spotted bass

LMB = largemouth bass

EFDMLLSF.D17

Table 67. Electrofishing indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected at Martins Fork Lake (330 acres); CPUE = fish/hr, SE = standard error.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.5	0.1	34.4	8.6	25.6	7.9	15.3	3.6
2003	no fall sample						77.5	18.5
2004	no fall sample						24.6	5.9
2005	4.4	0.2	32.0	4.3	10.0	2.6	10.0	2.3
2006	4.5	0.1	38.4	14.5	11.2	3.2	10.1	3.4
2007	4.6	0.2	28.7	8.7	10.4	3.0	10.0	5.1
2008	4.4	0.2	31.9	14.3	10.3	2.7	7.2	2.9
2009	4.3	0.2	23.2	8.3	7.2	2.3	4.8	2.0
2010	5.2	0.2	40.0	11.6	26.7	9.3	11.2	3.4
2011	4.7	0.1	20.0	6.8	7.2	1.5	8.8	2.7
2012	4.8	0.2	28.8	4.6	13.6	3.9	no sample	
2013	4.0	0.2	21.0	6.6	6.0	1.2	22.0	5.3
2014	4.9	0.1	39.2	11.8	21.6	8.2	22.4	4.1
2015	4.6	0.1	59.0	24.4	18.0	7.4	no sample	
2016	4.5	0.1	67.0	26.5	15.0	9.0	no sample	
2017	4.5	0.1	95.0	24.6	25.0	4.4		

EFDMLLSF.D02-D17
EFDMLLSS.D03-D15
EFDMLLAS.D03, D09
EFDMLLAF.D14

Table 68. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.5 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 19 April 2017; numbers in parentheses are standard errors.

	Inch class																				
Species/Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower																					
SMB																				0	0.0
SB		1		1	1	2	1	1												7	5.6 (5.6)
LMB	3	20	14	7	12	39	32	24	12	4	6		2	1	3		2		2	183	146.4 (19.0)
Upper																					
SMB																				0	0.0
SB		2	1		1				2	1	1									8	6.4 (4.5)
LMB		12	9	9	2	24	15	4	3	1	3	2	4		1		1			90	72.0 (11.6)
Total																					
SMB																				0	0.0
SB		3	1	1	2	2	1	1	2	1	1									15	6.0 (3.4)
LMB	3	32	23	16	14	63	47	28	15	5	9	2	6	1	4		3		2	273	109.2 (16.3)

SMB = smallmouth bass

SB = spotted bass

LMB = largemouth bass

EFDPLLSS.D17

Table 69. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Paintsville Lake (1,150 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1988	6.8		10.6		1.6		0.3		0.0		19.3	
1989	15.4		16.0		3.4		0.9		0.0		36.3	
1990	34.0		31.3		2.7		2.0		0.0		70.0	
1991	26.6		33.1		12.0		0.4		0.4		72.0	
1992	16.4		44.0		21.3		0.7		0.0		82.4	
1993	16.4		26.3		22.5		2.8		0.6		68.0	
1994	34.0		47.4		26.6		3.6		0.3		111.6	15.6
1995						no sample						
1996						no sample						
1997	29.0		40.0		26.3		1.0		0.3		96.3	11.5
1998	25.7		87.7		26.3		0.0		0.0		139.7	17.9
1999	36.3		65.7		36.7		2.3		0.0		141.0	12.1
2000	12.7	5.0	95.0	19.6	27.0	7.8	2.0	0.8	0.0	0.0	136.7	28.0
2001	42.3	5.5	63.0	10.8	46.7	4.8	4.3	0.9	0.7	0.5	156.3	17.5
2002	41.8	1.8	70.5	2.7	36.0	1.4	2.2	0.2	0.0	0.0	150.9	14.2
2003	106.0	21.2	71.0	10.8	19.7	5.7	3.0	1.3	0.3	0.3	199.7	35.2
2004	62.7	10.9	92.0	19.2	17.0	3.4	2.0	0.9	0.0	0.0	173.7	25.4
2005	80.4	31.9	133.3	38.9	35.1	6.0	6.2	1.2	0.4	0.4	255.1	72.7
2006	30.6	4.4	65.1	12.6	13.6	1.9	2.6	1.1	0.0	0.0	111.9	14.3
2007	39.8	9.5	81.6	23.0	11.1	3.1	6.5	0.8	0.0	0.0	139.0	20.5
2008	37.8	6.6	79.3	11.9	9.8	1.8	4.0	1.6	0.4	0.4	130.8	14.1
2009	28.1	8.0	69.2	24.6	6.2	2.6	2.3	1.0	0.0	0.0	105.9	16.4
2010	51.2	16.4	86.4	11.6	13.3	1.7	5.6	1.1	1.9	0.5	156.5	26.3
2011	40.6	7.2	56.9	5.1	9.4	1.9	3.7	0.9	1.1	0.5	110.6	11.6
2012	63.2	10.5	61.6	7.0	9.9	1.6	2.1	0.7	1.3	0.5	136.8	14.8
2013	58.6	4.9	60.0	5.6	4.6	1.1	4.0	1.0	0.3	0.3	127.1	7.0
2014	62.4	8.1	64.5	6.0	24.8	3.8	4.3	1.3	0.8	0.4	156.0	8.6
2015	83.6	7.4	68.4	11.5	17.8	3.6	10.7	3.0	2.7	1.5	180.4	15.4
2016	67.6	6.2	80.0	7.8	9.2	2.0	10.4	2.1	1.2	0.6	167.2	9.1
2017	35.2	5.3	61.2	11.3	6.4	1.4	6.4	1.5	0.8	0.5	109.2	16.3

EFDPLLSS.D88-D17

Table 70. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Paintsville Lake (1,150 acres) on 19 April 2017; 95% confidence intervals are in parentheses.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Lower	127	16 (9-22)	8 (3-13)	5	0	0
Upper	58	21 (10-31)	10 (2-18)	5	80 (41-119)	0
Total	185	17 (12-23)	9 (5-13)	10	40 (8-72)	0

EFDPLLSS.D17

Table 71. Spring nocturnal electrofishing population assessments for largemouth bass collected in Paintsville Lake (1,150 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Mean length age-3 at capture	2	2	2	2	2	1	2	2	2	2	2	2
	(11.7)	(11.7)	(11.7)	(11.7)	(11.7)	(10.6)	(11.2)	(11.2)	(11.2)	(11.2)	(11.2)	(11.2)
Spring CPUE age-1	4	4	4	3	4	3	4	4	4	4	4	3
	(43.5)	(44.0)	(51.5)	(35.6)	(58.1)	(35.6)	(68.8)	(64.9)	(63.7)	(90.7)	(71.2)	(39.2)
Spring CPUE 12.0-14.9 in	1	1	1	1	1	1	1	1	3	2	1	1
	(13.6)	(11.1)	(9.8)	(6.2)	(13.3)	(9.4)	(9.9)	(4.6)	(24.8)	(17.8)	(9.2)	(6.4)
Spring CPUE >15.0 in	1	2	1	1	1	1	1	1	1	2	2	2
	(2.6)	(6.5)	(4.0)	(2.3)	(5.6)	(3.7)	(2.1)	(4.0)	(4.3)	(10.7)	(10.4)	(6.4)
Spring CPUE >20.0 in	1	1	2	1	4	3	4	2	3	4	3	3
	(0.0)	(0.0)	(0.4)	(0.0)	(1.9)	(1.1)	(1.3)	(0.3)	(0.8)	(2.7)	(1.2)	(0.8)
Total score	9	10	10	8	12	9	10	10	13	14	12	11
Assessment rating	Fair	Fair	Fair	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair
Instantaneous mortality (z)	1.02	1.16	1.17	1.12	1.18	0.57						
Annual mortality (A)	63.80	68.60	69.10	67.40	69.40	83.70						

EFDPLLSS.D03-D17
EFDPLLAS.D03, D06, D11
EFDPLLAF.D12

Table 72. Length frequency and CPUE (fish/hr) of black bass collected in 2.25 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 18 October 2017; numbers in parentheses are standard errors.

Area/	Inch class																						
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Lower																							
SMB																						0	0.0
SB		2			1			1				1										5	3.3 (1.9)
LMB	2	32	63	49	45	8	5	25	17	17	12	1	3			1		4			1	285	190.0 (35.7)
Upper																							
SMB																						0	0.0
SB		1	3		1	3	1						1									10	10.0 (4.8)
LMB		27	33	34	15	2	17	15	14	11	10	2							2	1		183	183.0 (31.7)
Total																							
SMB																							0.0
SB		3	3		2	3	1	1				1	1									15	6.0 (2.3)
LMB	2	59	96	83	60	10	22	40	31	28	22	3	3			1		4	2	1	1	468	187.2 (23.7)

SMB = smallmouth bass

SB= spotted bass

LMB = largemouth bass

EFDPLLSF.D17

Table 73. Nocturnal electrofishing indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected at Paintsville Lake (1,150 acres); CPUE = fish/hr.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002							95.2	20.1
2003	4.8	0.1	31.3	6.1	14.0	2.2	61.4	10.7
2004	5.1	0.1	65.7	10.8	37.3	8.6	75.6	29.2
2005	4.5	0.1	46.0	9.6	10.7	2.7	43.5	5.9
2006	4.9	0.1	72.4	12.0	33.6	5.1	44.0	8.4
2007	5.1	0.1	52.4	24.0	30.2	15.6	51.5	7.3
2008	4.6	0.1	24.8	8.8	8.1	5.2	35.6	9.7
2009	4.6	0.1	64.6	13.3	23.1	10.7	58.1	17.6
2010	4.6	0.1	86.4	19.5	31.5	6.9	35.6	6.7
2011	5.1	0.1	36.3	7.2	19.7	4.3	68.8	11.1
2012	5.0	0.1	58.1	10.6	32.3	7.3	64.9	5.0
2013	4.9	0.0	111.7	13.8	53.1	5.0	63.7	8.3
2014	4.8	0.1	60.0	11.0	27.0	7.3	90.7	7.4
2015	4.9	0.1	95.1	17.7	42.2	6.7	71.2	5.6
2016	5.0	0.1	70.0	6.3	34.0	8.6	39.2	6.1
2017	5.0	0.1	125.2	20.2	62.4	12.9		

EFDPLLSF.D03-D17
EFDPLLSS.D02-D17
EFDPLLAS.D03, D06, D11
EFDPLLAF.D12

Table 74. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected in approximately 0.75 hours of 7.5-min. electrofishing runs in Pikeville City Lake (20 acres) on 4 April 2017; numbers in parentheses are standard errors.

Inch class																			
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
3	1	3	1	8	2		4		3	3	1	2	3	6	8	3	1	52	69.3 (11.6)

Table 75. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Pikeville City Lake (20 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2004	5.1	2.6	12.8	12.8	15.4	7.7	30.8	8.9	2.6		64.1	2.6
2005	12.8	4.3	11.5	3.3	1.3	1.3	51.3	9.5	8.9		76.9	8.1
2006	5.1	2.5	34.8	4.1	4.0	2.7	49.0	6.2	1.3		92.9	9.1
2007	43.2	15.1	11.2	3.2	8.0	4.4	46.4	6.9	6.4	3.0	108.8	24.3
2008	10.7	3.4	48.0	7.5	10.7	2.7	50.7	7.4	10.7	4.9	120.0	16.7
2009	22.7	4.8	18.7	4.9	9.3	3.2	25.3	4.8	8.0	2.1	76.0	6.1
2010	22.9	3.2	21.7	5.4	21.7	7.6	52.6	4.9	8.0	1.8	118.9	10.1
2011						no sample						
2012	8.0	2.9	6.7	2.5	4.0	2.7	36.0	6.8	1.3	1.3	54.7	9.1
2013						no sample						
2014	11.4	3.4	22.9	2.1	13.7	3.4	57.1	9.1	11.4	3.0	105.1	8.8
2015	10.7	2.7	20.0	3.4	17.3	4.8	37.3	9.6	6.7	3.8	85.3	7.4
2016						no sample						
2017	10.7	5.3	18.7	4.0	8.0	2.1	32.0	7.5	5.3	4.0	69.3	11.6

EFDHALSS.D04-D17

Table 76. PSD and RSD values obtained for largemouth bass species from spring electrofishing samples in Pikeville City Lake (20 acres) on 4 April 2017; 95% confidence intervals are in parentheses.

No.	PSD	RSD_{15}
44	68	55
	(54-82)	(40-69)

EFDHALSS.D17

Table 77. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 3.0 hours of 15-minute electrofishing samples at Yatesville Lake (2,280 acres) on 26 April 2017; numbers in parentheses are standard errors.

		Inch class																				
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower	SB	1	2	1	2	1	3	2	1	2											15	10.0 (6.5)
	LMB		23	67	36	11	42	25	4	7	12	12	13	9	12	2			1	1	277	184.7 (27.0)
Upper	SB																				0	0.0
	LMB		16	24	35	18	20	37	17	14	22	31	22	23	9	3	2	1			294	196.0 (23.1)
Total	SB	1	2	1	2	1	3	2	1	2											15	5.0 (3.5)
	LMB		39	91	71	29	62	62	21	21	34	43	35	32	21	5	2	1	1	1	571	190.3 (17.0)

SB = spotted bass

LMB =largemouth bass

EFDYLLSS.D17

Table 78. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass at Yatesville Lake (2,280 acres). SE = standard error.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1993	153.7		82.9		20.1		7.4		0.0		264.0	
1994						no sample						
1995						no sample						
1996	21.5		65.5		7.8		1.5		0.0		96.3	11.5
1997	50.7		23.7		16.7		2.0		0.0		93.0	10.5
1998	10.7		25.7		16.3		5.7		0.0		58.3	7.2
1999	42.7		29.0		16.3		13.7		0.3		101.7	12.2
2000	63.3	8.0	55.7	7.9	9.3	1.1	7.0	1.6	0.0		135.5	13.7
2001	35.0	7.0	58.3	7.5	19.3	3.2	9.7	2.1	0.3		122.3	7.8
2002	54.3	7.8	50.0	4.4	19.3	2.9	16.7	3.2	0.0		140.3	7.4
2003						no sample						
2004	12.7	2.8	40.3	10.5	23.7	5.1	9.0	2.2	0.0		85.7	19.4
2005	43.7	7.8	61.3	6.6	42.0	4.7	21.7	2.1	0.3		168.7	15.4
2006	47.3	7.4	68.0	10.3	20.3	2.2	16.0	4.0	0.7		151.7	17.5
2007	47.7	5.9	62.3	5.7	31.3	4.2	15.8	2.7	0.0		157.1	10.7
2008	47.0	8.4	38.3	3.8	20.4	3.7	16.6	4.9	0.0		122.3	10.3
2009	28.6	5.4	68.3	7.5	30.6	2.8	16.6	3.2	0.0		144.1	9.7
2010	44.0	6.3	57.0	8.7	19.3	3.8	11.0	2.8	0.7	0.5	131.3	11.7
2011						no sample						
2012	23.2	2.8	49.2	7.4	21.6	2.6	8.4	2.1	0.8	0.5	102.4	10.3
2013						no sample						
2014	46.0	2.7	67.7	6.7	23.3	2.7	16.7	2.6	0.3	0.3	153.7	10.3
2015	57.3	7.3	67.3	5.4	23.0	3.1	23.3	3.8	0.7	0.5	171.0	8.6
2016	57.3	9.9	50.7	8.8	16.0	4.8	16.7	4.6	0.7	0.7	140.7	16.5
2017	76.7	11.1	55.3	8.7	37.3	4.8	21.0	4.1	0.7	0.7	190.3	17.0

EFDYLLSS.D93, D96-D02, D04-D10, D12, D14-D17

Table 79. PSD and RSD values for black bass species taken in spring electrofishing samples in each area of Yatesville Lake (2,280 acres) on 26 April 2017; 95% confidence intervals are in parentheses.

	Largemouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD_{14}
Lower	140	44 (24-42)	18 (12-24)	9	22 (0-51)	
Upper	201	56 (49-63)	19 (14-24)	0		
Total	341	51 (46-57)	19 (14-23)	9	22 (0-51)	

EFDYLLSS.D17

Table 80. Spring nocturnal electrofishing population assessment for largemouth bass collected at Yatesville Lake (2,280 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	2006	2007	2008	2009	2010	2012	2014	2015	2016	2017
Mean length age-3 at capture	4	4	4	4	4	2	2	1	1	1
	(13.5)	(13.5)	(13.5)	(13.5)	(13.5)	(12.4)	(12.4)	(11.1)	(11.1)	(11.1)
Spring CPUE age-1	4	4	4	3	4	2	3	4	4	4
	(45.9)	(47.0)	(45.0)	(28.2)	(42.6)	(19.4)	(37.0)	(54.3)	(56.7)	(73.3)
Spring CPUE 12.0-14.9 in	2	4	2	3	2	2	3	3	1	4
	(20.3)	(31.3)	(20.4)	(30.6)	(19.3)	(21.6)	(23.3)	(23.0)	(16.0)	(37.3)
Spring CPUE ≥15.0 in	3	3	3	3	2	2	3	4	3	4
	(16.0)	(15.8)	(16.6)	(16.6)	(11.0)	(8.4)	(16.7)	(23.3)	(16.7)	(21.0)
Spring CPUE ≥20.0 in	3	1	1	1	3	3	2	3	3	3
	(0.7)	(0.0)	(0.0)	(0.0)	(0.7)	(0.8)	(0.3)	(0.7)	(0.7)	(0.7)
Total score	16	16	14	14	15	11	13	15	12	16
Assessment rating	Good	Good	Good	Good	Good	Fair	Good	Good	Fair	Good
Instantaneous mortality (z)	1.23	0.80	0.70	0.91	1.22	0.79	0.77			
Annual mortality (A)	70.70	55.20	50.20	59.80	70.40	54.60	53.70			

EFDYLLSS.D02-D10, D12, D14-D17
EFDYLLAS.D05, D06, D12
EFDYLLAF.D15

Table 81. Length frequency and nocturnal electrofishing CPUE (fish/hr) of black bass collected at Yatesville Lake (2,280 acres) during 2.5 hours of 15-minute samples on 26 September 2017; numbers in parentheses are standard errors.

Area/	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Lower																				
SB		26	16	2		3	4	3		1									55	44.0 (27.0)
LMB		3	51	54	15	9	37	23	23	14	3	2	5	2	3	1			245	196.0 (22.5)
Upper																				
SB			1	1						1									3	2.4 (2.4)
LMB	1	7	33	25	7	18	44	15	12	10	8	6	9	5	2	1		1	204	163.2 (12.1)
Total																				
SB	0	26	17	3	0	3	4	3	0	2	0	0	0	0	0	0	0	0	58	23.2 (14.6)
LMB	1	10	84	79	22	27	81	38	35	24	11	8	14	7	5	2	0	1	449	179.6 (13.2)

LMB = largemouth bass

SB= spotted bass

EFDYLLSF.17

Table 82. Fall electrofishing indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected during 2003-2017 at Yatesville Lake (2,280 acres); CPUE = fish/hr, SE = standard error.

	Age-0		Age-0		Age-0 ≥5.0 in		Age-1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	5.3	0.1	46.0	6.3	29.3	4.4	12.7	2.8
2004	4.8	0.1	69.5	13.5	32.5	10.8	42.3	7.1
2005	4.7	0.1	47.0	12.3	20.0	7.1	45.9	7.2
2006	4.9	0.1	29.5	7.8	13.8	3.8	47.0	6.0
2007	5.3	0.1	37.4	10.6	23.2	6.1	45.0	8.1
2008	5.1	0.1	45.9	7.8	28.4	6.0	28.2	5.3
2009	4.9	0.1	32.7	6.5	16.3	4.0	42.6	6.4
2010	5.1	0.1	78.6	11.5	45.1	8.7	no sample	
2011	4.9	0.1	55.3	9.6	28.7	4.9	19.4	2.5
2012	5.0	0.1	82.9	20.0	45.1	10.1	no sample	
2013	5.2	0.1	39.6	5.8	25.6	5.0	37.0	2.9
2014	4.7	0.1	79.3	14.8	29.3	7.8	54.3	7.7
2015	5.0	0.1	92.0	11.3	48.7	9.9	56.7	9.9
2016	5.8	0.1	67.3	7.1	61.3	7.2	73.3	10.9
2017	5.1	0.1	84.4	8.7	46.4	7.1		

EFDYLLSS.D03-D17
EFDYLLSF.D03-D17
EFDYLLAS.D05, D06, D12
EFDYLLAF.D15

Appendix A. Carr Creek Lake Angler Attitude Survey 2017
Frequency Table (N=43)

Q3. On average how many times do you fish Carr Creek Lake in a year?

	Frequency	Percent
First Time	1	2.4%
1 to 4	11	26.8%
5 to 10	9	22.0%
More than 10	20	48.8%
Total	41	
No Response	2	

Q4. Which species of fish do you fish for at Carr Creek Lake? (Bass)

	Frequency	Percent
Bass	32	74.4%
Crappie	21	48.8%
Bluegill/Redear	23	53.5%
Catfish	16	37.2%
Walleye	13	30.2%
Carp	1	2.3%

Q5. Which one species do you fish for most at Carr Creek Lake (check only one)?

	Frequency	Percent
Bass	22	61.1%
Crappie	3	8.3%
Bluegill/Redear	4	11.1%
Catfish	6	16.7%
Walleye	1	2.8%
Total	36	
No Response	7	

Q6. In general, what level of satisfaction or dissatisfaction do you have with bass fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	1	3.1%
Somewhat Satisfied	11	34.4%
Neutral	7	21.9%
Somewhat Dissatisfied	10	31.3%
Very Dissatisfied	3	9.4%
No Opinion	0	0.0%
Total	32	
No Response	11	

Appendix A (cont).

Q6a. If you responded with very or somewhat satisfied in question (6) - What is the single most important reason for your satisfaction?

	Frequency	Percent
Number of fish	5	38.5%
Size of fish	7	53.8%
Size limit	0	0.0%
Creel limit	1	7.7%
Low angler pressure	0	0.0%
Total	13	
No Response	30	

Q6b. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of fish	10	76.9%
Size of fish	1	7.7%
Size limit	0	0.0%
Creel limit	0	0.0%
Too many anglers	0	0.0%
limited habitat/good areas to fish	1	7.7%
slot limit on bass like Paintsville or raise the size limit	1	7.7%
Total	13	
No Response	30	

Q7. In general, what level of satisfaction or dissatisfaction do you have with crappie fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	3	13.6%
Somewhat Satisfied	4	18.2%
Neutral	3	13.6%
Somewhat Dissatisfied	9	40.9%
Very Dissatisfied	3	13.6%
No Opinion	0	0.0%
Total	22	
No Response	21	

Q7a. If you responded with very or somewhat satisfied in question (7) - What is the single most important reason for your satisfaction?

	Frequency	Percent
Number of fish	3	37.5%
Size of fish	5	62.5%
Size limit	0	0.0%
Creel limit	0	0.0%
Low angler pressure	0	0.0%
Total	8	
No Response	35	

Appendix A (cont).

Q7b. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction?		
	Frequency	Percent
Number of fish	11	100.0%
Size of fish	0	0.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Too many anglers	0	0.0%
Total	11	
No Response	32	

Q8. In general, what level of satisfaction or dissatisfaction do you have with bluegill/redear fishing at Carr Creek Lake?		
	Frequency	Percent
Very Satisfied	2	8.7%
Somewhat Satisfied	8	34.8%
Neutral	4	17.4%
Somewhat Dissatisfied	7	30.4%
Very Dissatisfied	2	8.7%
No Opinion	0	0.0%
Total	23	
No Response	20	

Q8a. If you responded with very or somewhat satisfied in question (8) - What is the single most important reason for your satisfaction?		
	Frequency	Percent
Number of fish	6	46.2%
Size of fish	4	30.8%
Size limit	0	0.0%
Creel limit	2	15.4%
Low angler pressure	1	7.7%
Total	13	
No Response	30	

Q8b. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?		
	Frequency	Percent
Number of fish	2	40.0%
Size of fish	3	60.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Too many anglers	0	0.0%
Total	5	
No Response	38	

Appendix A (cont).

Q9. In general, what level of satisfaction or dissatisfaction do you have with catfish fishing at Carr Creek Lake?		
	Frequency	Percent
Very Satisfied	2	14.3%
Somewhat Satisfied	7	50.0%
Neutral	4	28.6%
Somewhat Dissatisfied	1	7.1%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	14	
No Response	29	

Q9a. If you responded with very or somewhat satisfied in question (9) - What is the single most important reason for your satisfaction?		
	Frequency	Percent
Number of fish	7	70.0%
Size of fish	3	30.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Low angler pressure	0	0.0%
Total	10	
No Response	33	

Q9b. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction?		
	Frequency	Percent
Number of fish	0	0.0%
Size of fish	1	100.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Too many anglers	0	0.0%
Total	1	
No Response	42	

Q10. In general, what level of satisfaction or dissatisfaction do you have with walleye fishing at Carr Creek Lake?		
	Frequency	Percent
Very Satisfied	0	0.0%
Somewhat Satisfied	4	33.3%
Neutral	2	16.7%
Somewhat Dissatisfied	5	41.7%
Very Dissatisfied	1	8.3%
No Opinion	0	0.0%
Total	12	
No Response	31	

Appendix A (cont).

Q10a. If you responded with very or somewhat satisfied in question (10) - What is the single most important reason for your satisfaction?		
	Frequency	Percent
Number of fish	3	75.0%
Size of fish	1	25.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Low angler pressure	0	0.0%
Total	4	
No Response	39	

Q10b. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction?		
	Frequency	Percent
Number of fish	3	50.0%
Size of fish	0	0.0%
Size limit	0	0.0%
Creel limit	0	0.0%
Too many anglers	0	0.0%
can't catch them	2	33.3%
just plain hard to catch	1	16.7%
Total	6	
No Response	37	

Q11. Do you fish any tournaments?		
	Frequency	Percent
Yes	18	42.9%
No	24	57.1%
Total	42	
No Response	1	

Q12. Do you use the KDFWR tournament registration website to register tournaments?		
	Frequency	Percent
Yes	0	0.0%
No	42	100.0%
Total	42	
No Response	1	

Q13. Do you use the KDFWR tournament registration website to plan your activity at a particular boat ramp access?		
	Frequency	Percent
Yes	1	2.4%
No	40	97.6%
Total	41	
No Response	2	

Appendix A (cont).

Q14. How would you rate the existing fish habitat at Carr Creek Lake (both natural and man-made)?

	Frequency	Percent
Very Good	2	4.8%
Good	12	28.6%
Fair	21	50.0%
Poor	4	9.5%
Very Poor	3	7.1%
Total	42	
No Response	1	

Q15. Were you aware KDFWR places fish habitat (e.g. fish attractors/structures) within the lake?

	Frequency	Percent
Yes	32	76.2%
No	10	23.8%
Total	42	
No Response	1	

Q16. Do you regularly fish Dept. placed attractors/structures at Carr Creek Lake?

	Frequency	Percent
Yes	25	75.8%
No	8	24.2%
Total	33	
No Response	10	

Q17. How did you find these attractors/structures?

	Frequency	Percent
On my own	23	69.7%
Friend/word of mouth	9	27.3%
KDFWR Website	2	6.1%
buoys	1	3.0%

Q18. Do you feel the addition of Dept. placed attractors/structures has improved your fishing results?

	Frequency	Percent
Yes	24	72.7%
No	1	3.0%
No Opinion	8	24.2%
Total	33	
No Response	10	

Appendix A (cont).

Q19. Were you aware that the locations of KDFWR placed attractors/structure are available on KDFWR website?		
	Frequency	Percent
Yes	14	42.4%
No	19	57.6%
Total	33	
No Response	10	

WESTERN FISHERIES DISTRICT

Project B: Stream Fishery Surveys – Warmwater Streams

FINDINGS

Lower Tennessee River

Diurnal electrofishing (120 PPS DC current) was conducted on September 07 and 11 2017 in the lower Tennessee River (TRM 22.4) below Kentucky Lake Dam downstream to river mile 17. A total of 3.25 hours of sampling yielded 5039 fish, comprised of 39 species (Table 1). The sample at river mile 22.4 was conducted by the Critical Species Investigation (CSI) branch and included the collection of shad and herrings. Of the sportfish collected in the most recent study, bluegill had the highest catch rate at 28.6 fish/hr. The catch rate (26.2 fish/hr) for largemouth bass was down from the 40.3 fish/hr collected in 2015. The catch rate for all catfish was 13.5 fish/hr in the most recent study, as compared to approximately 54.3 fish/hr collected in 2015. Low pulse (15 PPS) DC current was used to help collect catfish in some of the sampling locations. The catch rates of catfish in all of these surveys should always be used with caution because the amount of time dedicated to low pulse (15pps DC current) shocking was at the discretion of the driver and was typically based on an anticipation of higher catch rates due to habitat differences such as greater depth and the presence of woody debris. The catch rate of silver carp was 36.9 fish/hr.

Lower Cumberland River

The lower Cumberland River was sampled using diurnal electrofishing on 11 and 20 September 2017 below Lake Barkley Dam (CRM 30.6 sampled by CSI branch) and near Dycusburg, KY (CRM 20.0). A total of 2.0 hours of electrofishing yielded 4118 fish, comprised of 33 species (Table 2). As seen in previous years, largemouth bass and bluegill accounted for the highest catch rates of all sportfish species (29.6 fish/hr and 18.0 fish/hr, respectively). The catch rate of silver carp was 10.0 fish/hr, as compared to 18.0 fish/hr collected during the 2015 study. The highest catch rates (excluding shad) were those of longnose gar (45.2 fish/hr).

Ohio River

The Ohio River was sampled using diurnal electrofishing on 26 August and 6 September 2017. Sampling areas included Smithland Tailwater (ORM 918.5-920.1) and the area between Dam #52 and Shawnee Steam Plant (ORM 938.9-946.4). A total of 497 (141.7 fish/hr) fish, comprised of 27 species were collected (Table 3). The catch rate for largemouth bass (4.0 fish/hr) was lower than 2015 (5.0 fish/hr), but was higher than 2013 (2.0 fish/hr). Channel catfish had the highest catch rate (22.9 fish/hr). Low pulse (15 PPS) DC current was used to help collect catfish in some of the sampling locations. A total of 3.5 hours (14- 900-second runs) were directed at all fish except for shad and herrings. Silver carp catch rates were 12.0 fish/hr, with most fish collected when corralled near a wing dyke.

Mississippi River

The Mississippi River was sampled at two locations on September 8 and 25 2017 by diurnal electrofishing. The first site was near Wickliffe, KY. The second site was near Columbus Belmont, KY. The 3.5 hours of sampling effort yielded 520 (173.3 fish/hr) sportfish comprised of 18 different species (Table 4). White bass were collected at a rate of 3.0 fish/hr, down from 8.3 fish/hr collected in 2015. Catfish species made up the majority of fish collected. The catch rate for all catfish was 91.7 fish/hr, which was up from the 56.0 fish/hr collected in 2015. Low pulse (15 PPS) DC current was selectively used to collect catfish species in both studies. Silver carp catch rates were lower in the Mississippi river (4.0 fish/hr) than in other rivers we sampled this year, but this may have more to do with sampling conditions rather than actual relative abundance.

Table 1 . Relative species abundance and size distribution of species collected during diurnal electrofishing (PPS 120) on the Lower Tennessee River on 11 and 07 September 2017. Sample sites were in the area of river mile 22 and 17. Total effort was 3.25 hours. Low pulse (15 PPS) was used for short periods of time in some areas.

	Inch class																																							
Species	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	32	33	34	35	36	37	43	Total	CPUE	Std err
Channel Catfish						2	2	1	1		2	2	3			1	1	1		1	1	2																	20	6.2	2.2
Blue Catfish																	1						1																2	0.6	0.3
Flathead Catfish					1		1	2	3	4	1		2			1	1		3			1					1	1											22	6.8	1.9
White Bass			3		5		3	1			1			1																									14	4.3	2.5
Striped Bass			3		5	1																																	9	2.8	1.3
Hybrid Striped Bass				1	2	4	1		1	4	1																												14	4.3	2.1
Yellow Bass		2	2	3	10	14	15	5	2																														53	16.3	3.9
Bluegill	1	5	27	29	15	13	3																																93	28.6	7.9
Redear Sunfish				4	2	4	4	1				1																											16	4.9	1.4
Spotted Bass				1	4	1																																	6	1.8	1.3
Largemouth Bass			2	4	12	10	2	1	10	9	8	5	1	3	1	8	2	1	3	1	1	1																	85	26.2	5.7
Smallmouth Bass		1	1	2	2	1																																	7	2.2	0.6
White Crappie					2	1			3	2	2		1	1																									12	3.7	1.8
Black Crappie					1	1		3	1	2					1																								9	2.8	1.5
Sauger					1	3	3							1		1																							9	2.8	2.1
Longear Sunfish		4	26	28	8																																		66	20.3	6.9
Green Sunfish				3																																			3	0.9	0.5
Orangespotted Sunfish		2																																							
River Carpsucker											1			2			1		1			1																	6	1.8	0.9
Smallmouth Buffalo										2	1	4	2	4	1	7	1		1	3	3	1	1		2	1													34	10.5	3.0
Bigmouth Buffalo												1		1		1																							3	0.9	0.5
Black Buffalo														1						2																			3	0.9	0.7
Freshwater Drum		3	16	61	37	64	18	2			1		1		4	1	2	4	2	3	2		2		1	1											2		227	69.8	54.7
Common Carp																		3		4																			7	2.2	1.5
Silver Carp										7	29	17	5	5	5	2	2	4	1	1	3	4	1	2		3	3	8	5	2	7	1	1	1	1				120	36.9	20.6
Grass Carp																	1		1	1																			3	0.9	3.8
Longnose Gar											1							4	7	10	20	10	9		3	2		5	1	2	2	3	4		1	2	1		87	26.8	9.1
Shortnose Gar															1		1		1	1	1	3	2	3	4	2	1				1								21	6.5	2.6
Spotted Gar																		1					1																2	0.6	0.4
Quillback								1																															1	0.3	0.3
Greater Redhorse								1																															1	0.3	0.3
American Eel																1	1	1																					3	0.9	0.9
Bowfin														1			1	1		1	1	5	4	1	2	1													18	5.5	2.9
*Logperch			2	1	3																																		6	3.4	3.9
*Gizzard Shad							3	9	12	19	19	5	3																										70	40.0	4.9
*Threadfin Shad		3281	692	1	4																																		3978	2273.1	5.9
*Skipjack herring						1	5						1																										7	4.0	6.9
*Golden Shiner				1																																			1	0.6	7.9
*Bluntnose Minnow		1																																					1	0.6	8.9

wfdtr.d17

* only collected at Kentucky Dam tailwaters (RVM 22)

Table 2 . Relative species abundance and size distribution of species collected during diurnal electrofishing (120 PPS) on the Lower Cumberland River on 11 and 20 September 2017. Sample sites were in the area of river mile 30 and 20. Total effort was 2.0 hours. The sampling runs at mile 20 were directed at all fish species excluding shad, small cyprinids, and atherinids. The sampling runs at mile 30 (Barkley Dam tailwaters) were directed at all fish species. Low pulse (15 PPS) was used for approximately 0.25 hours of the total sample time.

	Inch class																																								
Species	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	32	33	34	35	36	40	47	48	Total	CPUE	Std err
Blue Catfish													1		1																								2	0.8	1.0
Channel Catfish							1						2		1	2	1																						7	2.8	1.2
Flathead Catfish		2		5		2	1	2	2	4	1	1	1						1																				22	8.8	3.8
White Bass							1	3		1																													5	2.0	0.9
Hybrid Striped Bass												1		1																									2	0.8	0.5
Yellow Bass				3	2	2	1																																8	3.2	1.8
Bluegill	4	1	9	17	11	2							1																										45	18.0	6.1
Redear Sunfish					2			2	1	2																													7	2.8	1.3
Spotted Bass			5	6				2			1																												14	5.6	2.0
Largemouth Bass				1	4	3	5	21	11	3	2	4	4	2	6	4		3	1																				74	29.6	10.7
Smallmouth Bass			1	4	1						1																												7	2.8	1.0
Black Crappie						1			1																														2	0.8	0.5
Spotted Gar																		1	1						1														3	1.2	0.9
Longnose Gar													2	2			6	8	4	8	4	4	6	8	6	11	11	3	7	7	4	3	3	1	1	2	1	1	113	45.2	15.0
Shortnose Gar														1	3	3	1	1	10	1	1	3	6	1															31	12.4	8.1
Grass Carp														1		1		1																					3	1.2	0.9
Common Carp																1	2	1	1	1		1	1																8	3.2	1.3
Silver Carp													1	3	7	2	1		1		1	1	1		3	1		1		2			1						26	10.4	3.9
River Carpsucker													1	4		2				5							2			2	2								18	7.2	5.1
Smallmouth Buffalo												1			4	4	1			1					1														12	4.8	2.1
Bigmouth Buffalo										1						1	1																						3	1.2	0.9
River Redhorse									1																														1	0.4	0.4
Green Sunfish			1	1																																			2	0.8	0.5
Longear Sunfish		10	17	13	1																																		41	16.4	7.7
American Eel																									1														1	0.4	0.4
Blue Sucker																										1													1	0.4	1.4
Freshw ater Drum							3	2	1		1	1	1		4		2	1																					16	6.4	9.7
Bow fin																					1																		1	0.4	0.4
*Gizzard Shad				1		11	20	5	4	2	1				1																								45	45.0	11.7
*Threadfin Shad	1000	2561																																					3561	3561.0	716.4
*Brook Silverside	1	1																																					2	2.0	0.8
Skipjack Herring			1	6	3	6	2																																18	18.0	3.7
*Emerald Shiner	7	10																																					17	17.0	4.1

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* only collected in barkley dam tailwaters (RVM 30).

Table 3 . Relative species abundance and size distribution of species collected during diurnal electrofishing (120 PPS) on the Ohio River on 26 August and 6 September 2017. Sample sites were in the area of river mile 944 and 920. Total effort was 3.5 hours consisting of fourteen, 900-second runs directed at all fish species excluding shad and small cyprinids. Low pulse (15 PPS) was used for approximately 0.75 hours of the total sample time.

	Inch class																																				
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	Total	CPUE	Std err
Blue Catfish			9	4	1	3	6	7	2	4	2	1			1																				40	11.4	8.3
Channel Catfish		6	8	2		5	3	1	6	2	7	7	9	3	1	7	5	2	4		1				1										80	22.9	4.7
Flathead Catfish		1	5	2		6	3	3	1	3	2	2	5	2			2			1															38	10.9	6.1
White Bass				2	2	1			1							2	1																		9	2.6	1.0
Hybrid Striped Bass						1		2	2	1	2		1	2	1	2		1	2	1	2	3	1				1								25	7.1	3.4
Yellow Bass			2		1	1			1																										5	1.4	0.7
Bluegill		2	3		1		1																												7	2.0	1.2
Redear Sunfish		1	2		2	2	3	9	6	7	2																								34	9.7	3.5
Spotted Bass			2	3	1		1	1	1	2		1	1																						13	3.7	1.9
Largemouth Bass				1			1	2	4	4		2																							14	4.0	1.6
Black Crappie								1																											1	0.3	0.3
White Crappie			1																																1		
Sauger														1																					1	0.3	0.3
Spotted Gar														1						1		1		1	1										5	1.4	0.7
Longnose Gar											1						1	1	1	1	1		1	2	2	3	3	3	5	8	2	4	1	1	41	11.7	3.3
Shortnosed Gar																	1	2	2	3		3	5	2	2	3					1				24	6.9	
Grass Carp																			2													1			3	0.9	0.5
Common Carp																2	1		3	2	2	1					1								12	3.4	1.2
Silver Carp														1		3	3	1			1	1	6	5	4	4	6	3	1	1		1		1	42	12.0	5.3
River Carpsucker	1										2		1	1											1										6	1.7	0.7
Smallmouth Buffalo			1				1			1		1	1	1	2	3	5	5	2	1			1												25	7.1	3.7
Bigmouth Buffalo																1		1							1										3	0.9	0.6
Black Buffalo																						1													1	0.3	0.3
Spotted Sucker													1																						1	0.3	0.3
Longear Sunfish			1	4	1																														6	1.7	0.9
American Eel																	1																		1	0.3	1.9
Freshw ater Drum		2	3	12	1	2	5	3	1			1	1			2	5	1	3	6	2	2	3		3		1								59	16.9	5.2

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Table 4 . Relative species abundance and size distribution of species collected during diurnal electrofishing (120 PPS) on the Mississippi River on 8 and 25 September 2017. Sample sites were in the area of river mile 950 (just downstream of Wickliffe, KY) and 936 (just downstream of Columbus Belmont, KY). Total effort, 3.0 hours, of electrofishing was exerted; 12 - 900-second runs at each site where all species (excluding shad and small cyprinids) were dipped. Low pulse (15 PPS) was used for a short periods during the total sample time.

	Inch class																																							
Species	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	32	34	37	38	39	41	Total	CPUE	Std err
Blue Catfish		8	8	3		1	3	2	1		3			2	5	6	3	6	2	3		2	2	3	3	3	3	1	4	1								78	26.0	8.0
Channel Catfish	6	11	7	5	1	2	4				1			1		1	1	4	2		1																	47	15.7	5.1
Flathead Catfish			7	9	4	18	39	20	9	7	4	4	4	3			1	2	1	1	2	1	2		2	1	1	3				1	1	1		1	1	150	50.0	17.6
White Bass					1							2		3	1		1				1																	9	3.0	1.4
Hybrid Striped Bass												1					1																					2	0.7	0.5
Largemouth Bass								1																														1	0.3	0.3
Spotted Bass												1																										1	0.3	0.3
Bluegill					1																																	1	0.3	0.3
River Carpsucker																	2																					2	0.7	0.5
Blue Sucker																			1	1	1	2	3	1	4	5	4	1										23	7.7	2.7
Smallmouth Buffalo														3	2	1	2	3	1	6	5	1		3		2												29	9.7	3.4
Bigmouth Buffalo																						1				1												2	0.7	0.5
Black Buffalo																			1		1	1	1															4	1.3	0.6
Freshw ater Drum		1	1				1	1	2	1	7	8	10	10	7	8	8	6	3	3	4	2	4															87	29.0	8.8
Common Carp																	1			2	1	4	3	4														15	5.0	1.9
Silver Carp																					2		2	1	1	2	1	1		1					1			12	4.0	1.6
Longnose Gar																		1			4		6	1	7	4			5			1	2	1			1	33	11.0	5.8
Shortnose Gar																			1	1	3	2	4	8	2	2				1								24	8.0	4.1

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WESTERN FISHERY DISTRICT

Project B: Technical Guidance

FINDINGS

Table 1. Technical guidance given to pond owners in the Western Fishery District during the 2017 project year (April 1, 2017 - March 31, 2018). Approximately 84 telephone calls to the office regarding technical guidance and stocking were also handled. Additionally, numerous emails were replied to requesting farm pond technical guidance information.

County Pond Owner	Date of Inspection	Findings	Management Recommendations
Calloway			
Anthony Sheppard	16-May	filamentous algae, low alkalinity, crappie, stunted bass	lime, fertilize, remove crappie, harvest bass
Greg McNutt	13-Apr	stunted catfish, stunted bluegill	removal of some catfish, stock bass
Bill Elkins	7-Jun	low alkalinity, no bluegill observed	lime, fertilize, stock minnows and bluegill in fall.
Kevin Cherry	23-Jun	stunted fish, low alkalinity	lime, fertilize, control willows on levee, aerate. Harvest bass >12 inches for trophy bluegill
Jeff Jones	24-Jul	small bass	harvest small bass and large male bluegill
Jerry Penner	22-Sep	low DO, skinny catfish	use fountain more frequently, feed catfish pellet feed
Jerry Penner	22-Sep	muddy water	lime, and potentially gypsum if lime does not clear water.
Graves			
Robert or Becca Foy	30-May	primrose, small bass	lime, 2-4-D, fertilize, stock minnows, aerate
Chris	30-May	muskrats, primrose, weeds, crappie	glyphosate, trap muskrats, clean levees, fix leak with clay, remove crappie
Randy Adams	15-Jun	lack of large catfish	lime, aerate, fertlize, clean levee, stock minnows, bass. Remove crappie
Jon Lilequist	15-Jun	stunted bass	lime, aerate, harvest small bass, harvest large bluegill
Monte Davidson	18-Jun	Algae and stunted fish	lime, aerate, fertlize, clean levee, stock minnows

Table 1 (cont).

County Pond Owner	Date of Inspection	Findings	Management Recommendations
Livingston			
Ronnie James	31-Mar	crappie, low alkalinity, filamentous algae	harvest all crappie, add lime, treat with copper sulfate after liming
Hickman			
Rick Stutts	26-May	duckweed, coontail	treat with diquat, stock grass carp
McCracken			
Russ Litsinger	14-Jun	muddy water, weeds, low alkalinity	lime, fertilize, stock bass
Eva Kelley	22-Apr	low alkalinity, fish kill, low DO	Aerator, lime, fertilize

NORTHWESTERN FISHERY DISTRICT

Project B: Technical Guidance

FINDINGS

Requests for technical guidance information were received via e-mails, phone calls, and office visits. Problems included unbalanced populations, new pond construction, stocking, fish disease and fish kills, water quality issues, aquatic vegetation control, and general pond management. No on-site visits were conducted. The requested information was relayed via phone, e-mail, office visit, and referencing the Pond Management section of the web site.

SOUTHWESTERN FISHERY DISTRICT

Project B: Technical Guidance

FINDINGS

Onsite technical guidance given during 2017: Numerous emails and phone calls taken, but were not enumerated.

Table 1: Onsite technical guidance visits during 2017

County	Date	Landowner	Problem/Situation	Recommendations
Barren	9/20	Nate Crimmins	Old pond/siltation/No fish Crowded bass & crappie	Contact NRCS & clean out/resize accordingly
Taylor	11/21	Taylor Co. Sportsman's Club	Bluegill thin/Gizzard shad	Restock catfish if desired, shad reduction/kill options
Logan	12/1	David Fields	Increase size& depth	Contact NRCS & resize accordingly
Warren	9/20	Barry Lemily	No fish/Pond depth/siltation	Clean out, lime & restock

CENTRAL FISHERIES DISTRICT

Project B: Stream Fishery Surveys – Warmwater Streams

FINDINGS

Stream sampling conditions for 2017 are summarized in Table 1.

Diurnal electrofishing for black bass and rock bass was conducted during April 2017 at three locations on Floyds Fork. Length distribution and CPUE data of black bass and rock bass from Floyds Fork are presented in Table 2. Smallmouth bass (69%) comprised the majority of the black bass sampled in Floyds Fork, whereas, largemouth bass and spotted bass comprised 16% and 15% of the sample, respectively. The catch rate of smallmouth bass on Floyds Fork in 2017 (21.4 fish/hr) was higher than the historical average (15.4 fish/hr) (Table 3). However, the catch rate of rock bass (7.4 fish/hr) was lower than the historical average (10.8 fish/hr) (Table 4). The smallmouth bass population assessment rating for Floyds Fork was “Good”, the average rating observed since 2012 (Table 5). The largemouth bass and rock bass population assessment ratings were “Fair”, which is the average rating for both species in the Floyds Fork (Tables 6 and 7).

Rainbow trout were stocked during March, April and October 2017 in the North Beckley section of Floyds Fork. A total of 3,600 rainbow were stocked (1,200 fish/stocking) that averaged 9.0-10.0 in.

Table 1. Yearly summary of sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments [c]
Floyd's Fork (Miles Park)	Black Bass/ Rock Bass	4/10	1000	shock	mostly sunny	58	1.67 ft. at Fisherville Gauge	36	good	Big Rivers Crew Sampled
Floyd's Fork (Fisherville Ramp)	Black Bass/ Rock Bass	4/10	1300	shock	mostly sunny	61	1.67 ft. at Fisherville Gauge	36	good	Big Rivers Crew Sampled
Floyd's Fork (Cane Run Access)	Black Bass/ Rock Bass	4/10	1000	shock	mostly sunny	60	1.67 ft. at Fisherville Gauge	36	good	CFD Sampled

Table 2. Length distribution and CPUE (fish/hr) of black bass and rock bass collected in 2.25 hours of 15-minute electrofishing runs for black bass in April 2017 in the Floyd's Fork; numbers in parentheses are standard errors.

	Inch class																
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	CPUE
Miles Park Canoe Access																	
Smallmouth bass					2				1							3	3.0 (1.9)
Spotted bass			1	3	1	1	2	1	1	1						11	11.0 (1.0)
Largemouth bass		1	1				1	1			1					5	5.0 (1.0)
Fisherville Canoe Access																	
Rock bass		1			2	1										4	8.0 (4.0)
Smallmouth bass	1	1			2	2			4	1		2		1	2	16	32.0 (4.0)
Cane Run Canoe Access																	
Rock bass		2	3		1	5	2									13	16.8 (6.2)
Smallmouth bass			1	6	8	3	1	3		1	2	3	1	2		31	38.8 (13.1)
Largemouth bass					3	1		1	1	1						7	8.0 (4.7)
Total																	
Rock bass		3	3		3	6	2									17	7.4 (3.2)
Smallmouth bass	1	1	1	6	12	5	1	3	5	2	2	5	1	3	2	50	21.4 (7.1)
Spotted bass			1	3	1	1	2	1	1	1						11	4.9 (2.0)
Largemouth bass		1	1		3	1	1	2	1	1	1					12	4.9 (1.8)

Dataset = cfdpsflf.d17

Table 3. Electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected from Floyd's Fork from 2007-2017; numbers in parentheses are standard errors. Number of samples and locations varies between years.

	Length group					
Year	<4.0 in	4.0-8.9 in	>9.0 in	>12.0 in	>14.0 in	Total
2007	0.0 (0.0)	7.0 (4.7)	2.0 (1.2)	1.0 (1.0)	0.0 (0.0)	9.0 (5.3)
2008			NS			
2009			NS			
2010			NS			
2011			NS			
2012	1.0 (0.5)	7.0 (2.7)	7.5 (2.0)	2.8 (1.1)	1.8 (0.7)	15.5 (4.4)
2013	0.3 (0.4)	7.8 (3.8)	8.0 (2.3)	2.7 (1.1)	0.5 (0.3)	16.0 (4.6)
2014	0.0	2.3 (1.5)	5.5 (1.9)	2.3 (0.8)	1.7 (0.6)	7.8 (2.7)
2015	1.1 (0.8)	2.9 (1.0)	8.7 (2.5)	4.7 (1.9)	1.8 (0.8)	12.7 (3.3)
2016	4.0 (1.1)	10.0 (4.3)	11.7 (3.4)	4.7 (1.7)	3.7 (1.6)	25.7 (7.5)
2017	0.9 (0.9)	10.4 (3.8)	10.0 (4.3)	5.6 (2.6)	2.7 (1.5)	21.4 (7.1)

Dataset = cfdpsflf.d17–.d07

Table 4. Electrofishing CPUE (fish/hr) for each length group of rock bass collected from Floyd's Fork from 2007-2017; numbers in parentheses are standard errors. Number of samples and location varies between years.

	Length group				
Year	<4.0 in	4.0-5.9 in	>6.0 in	>8.0 in	Total
2007	2.0 (1.2)	10.0 (10.0)	5.0 (3.8)	1.0 (1.0)	17.0 (14.4)
2008			NS		
2009			NS		
2010			NS		
2011			NS		
2012	0.6 (0.3)	1.2 (0.53)	11.0 (3.3)	1.7 (0.7)	12.8 (3.6)
2013	0.0	1.3 (0.75)	10.7 (3.5)	2.2 (1.5)	11.9 (3.7)
2014	0.0	1.7 (0.93)	10.1 (3.4)	3.0 (1.3)	11.8 (4.0)
2015	0.0	0.0	5.5 (1.1)	3.3 (0.7)	5.5 (1.1)
2016	0.3 (0.3)	2.0 (0.6)	7.0 (2.4)	4.0 (1.3)	9.3 (2.7)
2017	1.3 (0.9)	1.3 (0.6)	4.8 (2.0)	0.9 (0.6)	7.4 (3.2)

Dataset = cfdpsflf.d17–.d07

Table 5. Population assessment for smallmouth bass collected by boat electrofishing gear in Floyd's Fork from 2012-2017 (scoring based on statewide assessment).

Year		CPUE ≤4.0 in	CPUE 4.0 -8.9 in	CPUE ≥9.0 in	CPUE ≥12.0 in	CPUE ≥14.0 in	Total score	Assessment rating
2017	Value	0.9	10.4	10.0	5.6	2.7		
	Score	2	3	3	3	3	14	Good
2016	Value	4.0	10.0	11.7	4.7	3.7		
	Score	3	3	3	3	3	15	Good
2015	Value	1.1	2.9	8.7	4.7	1.8		
	Score	2	2	3	3	2	12	Good
2014	Value	0.0	2.3	5.5	2.3	1.7		
	Score	0	1	2	2	2	7	Fair
2013	Value	0.3	7.8	8.0	2.7	0.5		
	Score	1	3	2	2	1	9	Fair
2012	Value	1.0	7.0	7.5	2.8	1.8		
	Score	2	3	2	2	2	11	Good

Table 6. Population assessment for rock bass collected by boat electrofishing gear in Floyd's Fork from 2012-2017 (scoring based on statewide assessment).

Year		CPUE ≤4.0 in	CPUE 4.0 -5.9 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating
2017	Value	1.3	1.3	4.8	0.9		
	Score	3	1	2	1	7	Fair
2016	Value	0.3	2.0	7.0	4.0		
	Score	1	1	2	2	6	Fair
2015	Value	0.0	0.0	5.5	3.3		
	Score	0	0	2	2	4	Poor
2014	Value	0.0	1.7	10.1	3.0		
	Score	0	1	2	2	5	Fair
2013	Value	0.0	1.3	10.7	2.2		
	Score	0	1	2	2	5	Fair
2012	Value	0.6	1.2	11.0	1.7		
	Score	1	1	2	2	6	Fair

Table 7. Population assessment for largemouth bass collected by boat electrofishing gear in Floyd's Fork 2012-2017 (scoring based on statewide assessment).

Year		CPUE ≤4.0 in	CPUE 4.0 -8.9 in	CPUE ≥9.0 in	CPUE ≥12.0 in	CPUE ≥15.0 in	Total score	Assessment rating
2017	Value	0.4	2.4	2.1	0.4	0.0		
	Score	1	2	2	1	0	6	Fair
2016	Value	1.3	2.7	1.7	0.3	0.0		
	Score	3	2	1	1	0	7	Fair
2015	Value	0.4	2.9	3.3	1.1	0.0		
	Score	1	3	2	1	0	7	Fair
2014	Value	0.0	4.6	2.7	0.8	0.0		
	Score	0	3	2	1	0	6	Fair
2013	Value	0.3	4.5	1.5	0.0	0.0		
	Score	1	3	1	0	0	5	Poor
2012	Value	1.8	2.0	2.2	1.4	0.2		
	Score	3	2	2	2	1	10	Fair

CENTRAL FISHERIES DISTRICT

Project B: Technical Guidance

FINDINGS

A total of 44 pond owners and 56 ponds were visited in 2017. Most common problems were unbalanced fish populations, excessive aquatic plant growth, lack of fish cover, and the presence of undesirable fish species (Table 1). During our 2017 technical guidance sampling, six landowners requested a Fisheries Special Management Permit (FMP) for their ponds. Finally, a total of 343 phone calls, 220 e-mails, and 3 walk-in office visits concerning farm pond problems were handled this year.

Table 1. Technical guidance in the Central Fishery District in 2017.

County	Name of lake / pond owner	Date sampled	Findings	Recommendations
Anderson (1)	Floyd Johnson Jr.	7/10/17	Unbalanced fish populations	Stock bluegill
Boone (1)	Barry Suedkamp	7/27/17	Good bass population	Stock CCF; add cover
Boyle (2)	Perryville Battlefield KY State Park	6/14/17	Inaccessible due to aquatic vegetation	Fluridone for vegetation control
	Kelly Griffith	6/21/17	2 ponds; Fair fish population	Stock CCF
Bullitt (2)	Stephen Coffey	6/27/17	Inaccessible	None – small pond
	Connie Freeman	6/27/17	Fair fish population; very shallow	Renovation and restock
Fayette (2)	Mark Corvin	7/18/17	Good fish populations	Harvest CCF and crappie; add cover
	Juddmonte Farms	7/18/17	Good fish populations	Harvest common carp and crappie; add cover
Franklin (2)	Joe Hutcherson	6/6/17	Good fish populations	Stock CCF; harvest crappie
	Dayne Sanders	8/18/17	2 ponds; very small and leak issue	Pond 1; too small to sustain fish population; Pond 2, renovation due to significant leak issue.
Grant (1)	Michael Dickey	7/21/17	Good fish populations	Remove trees from dam
Jefferson (3)	Woodbridge Apartments	8/1/17	Shallow pond; highly enriched; significant blue-green algae; no sportfish	Stock LMB and/or CCF
	Stephen Leonard	8/9/17	Inaccessible due to vegetation and size	Stock LMB and BG
	Jason Ollis	8/11/17	Good fish populations	Harvest LMB and BG; control aquatic vegetation
Jessamine (1)	Peggy Baker	8/15/17	Small and shallow	Renovate and restock
Kenton (2)	Elizabeth Fisk	7/19/17	No fish were sampled	Stock LMB and BG
	Tom Bolger	7/19/17	Good fish populations	Harvest crappie and add cover
Mercer (1)	Kentucky Utilities	6/21/17	Good fish populations	Add cover
Nelson (4)	Michelle Thompson	8/2/17	Good fish populations	Address leak issue
	David McIntire	8/2/17	Undesirable fish present	Remove Koi and address leak issue with NRCS
	Justin Douglas	8/3/17	Unbalance fish population	Stock LMB
	Shawn Veech	8/3/17	2 ponds Unbalanced fish populations	Pond 1; Stock LMB; Pond 2, stock LMB and BG
Oldham (2)	Lake Pointe Subdivision	8/1/17	Good fish populations	FMP to harvest crowded LMB population
	William Mers Kelly	8/7/17	Good fish populations	None
Owen (3)	Perry Park Resort	6/19/17	3 lakes sampled: Good fish populations	Holiday Lake –Stock CCF; Inverness Lake – Lime and Fertilize, Stock CCF; Big Bass Lake – Stock CCF
	Bobby Kemper	6/20/17	Inaccessible due to aquatic vegetation	Fluridone for vegetation control
	Jimmy Bevins	7/25/17	2 ponds; Good fish populations	Pond 1 – None; Pond 2 – Lime and Fertilize

County	Name of lake / pond owner	Date sampled	Findings	Recommendations
Pendleton (1)	Melanie Goble	7/27/17	Good fish populations	Add cover
Scott (3)	Bradford Bentz	6/20/17	Inaccessible due to shallow water – leak	Renovate pond
	Betty Ward	7/17/17	2 ponds; good fish populations in both ponds	Stock CCF
	Robert Conley	7/17/17	Unbalanced fish populations	Stock BG
Shelby (5)	Nick Coleman	6/22/17	Good fish populations	Add cover, address leak issue
	Charles Davis	6/22/17	2 ponds; Crowded LMB populations in both ponds	FMP to remove crowded LMB
	David Pearce	8/7/17	Fair fish populations; small pond	Remove flathead catfish
	Rick Ellis	8/8/17	Unbalanced fish populations	Stock LMB, harvest crappie
	Paul Hamilton	8/8/17	2 ponds; good fish populations in both ponds	No recommendations
Spencer (2)	Louis Miller	8/9/17	Fair fish populations	Recovering from fish kill; install aeration system
	Alex Featherstone	8/17/17	Good fish populations	Harvest crappie
Trimble (1)	Dallas Stucker	8/17/17	Unbalanced fish population	Stock LMB
Washington (5)	William Mudd	6/13/17	Fair fish populations	Stock CCF; add cover
	Travis Mattingly	6/23/17	Pond recovering from fish kill	Stock BG
	Jackie Robinson	7/10/17	Good fish populations	Stock LMB; add cover
	Michael Jones	8/14/17	2 ponds; Fair fish populations; large pond recovering from fish kill	Pond 1 – Stock LMB, add cover; Pond 2 – stock LMB; add cover
	Andy Matherly	8/25/17	5 ponds; 3 smaller ponds had unbalanced fish populations; 2 larger ponds had good fish populations	3 smaller pond – stock LMB and CCF; 2 larger ponds – stock CCF

NORTHEASTERN FISHERIES DISTRICT

Project B: Stream Fishery Surveys – Warmwater Streams

FINDINGS

Sampling conditions for excursions on the South Fork Licking River and Stoner Creek can be found on Table 1 of Project 1.

South Fork Licking River Sampling

On the May 31 and June 7, 4 pools of the South Fork of the Licking River were sampled for an assessment of the game fish, sunfish and catfish populations. On May 31, the Lair, Airport and Cynthiana Pools were all sampled (3- 15-minute runs at each) and on June 7, above the Robinson dam was sampled (2- 15-minute runs). In total, 10 different species were collected with the dominant species being smallmouth bass (25%) followed by largemouth bass (22%; Table 1). Catch rates of rock bass were very similar to the average of previous years' sampling (2015, 2012, 2010 and 2006; Table 2). The overall assessment of the rock bass population on these 4 pools of the South Fork Licking River was "Good" (Table 3). Similarly, catch rates of smallmouth bass were near or above average for previous years' sampling efforts (Table 4). The overall assessment of the smallmouth bass population on these four pools of the South Fork Licking River was "Excellent" (Table 5). Finally, catch rates of largemouth bass were all well above the average of previous years' sampling (Table 6) as was the overall assessment of this population, which was rated as "Excellent" (Table 7).

Stoner Creek Sampling

On June 7, Stoner Creek was sampled for one hour (4- 15-minute runs) at Fryman's ramp for an assessment of the game fish, sunfish, and catfish. In total, 4 different fish species were collected with the dominant species being bluegill (65%) and largemouth bass (29%; Table 8). Catch rates of largemouth bass were very similar to the average of previous years' sampling (2015, 2012, and 2010; Table 9). The overall assessment of the largemouth bass population on this pool of Stoner Creek was "Excellent" (Table 10).

Table 1. Length frequency and CPUE (fish/hr) of selected sport fish collected during 3.0 hours of electrofishing (15-minute sampling runs) at 4 sites in the South Fork Licking River during the spring of 2017.

Location	Species	Inch class																									Total	CPUE	Std Error
		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			
Lair Pool	Channel catfish																									1	1	1.3	1.3
	Rock bass	1		6	6	3	4	2																			22	29.3	10.7
	Bluegill		2	10	9	3	1																				25	33.3	3.5
	Redear sunfish																										0	0.0	0.0
	Smallmouth bass			2	1	2	1	2	3	1	4	2	1	3	3	1	1										27	36.0	4.6
	Largemouth bass					2	3		2				1	1			2										11	14.7	8.1
	White crappie								1																		1	1.3	1.3
	Black crappie						2	1																			3	4.0	2.3
Airport Pool	Channel catfish																						2				2	2.7	2.7
	Rock bass		1	3	4	4	3																				15	20.0	10.6
	Bluegill			7	6	2																					15	20.0	6.1
	Redear sunfish				2			1																			3	4.0	2.3
	Smallmouth bass		2	8	2	7	2	5	6	2	1				1	1		1									40	52.0	16.2
	Largemouth bass			1		5		2																			8	10.7	2.7
Cynthania Pool	Channel catfish					11	3	4	2											2	1				1		24	32.0	22.3
	Rock bass	1	2	5	5	10	15	15	4																		57	76.0	16.7
	Bluegill		5	11	13	10	3																				42	56.0	16.0
	Redear sunfish					1	1	3			1																6	8.0	6.1
	Smallmouth bass		1	2	4		1	1	2	6	3	1	3	4	1	4	2	1									36	48.0	14.1
	Largemouth bass		1	3		3	9	12	12	5	8	7	4	2	2	1	1				1						71	94.7	15.4
	White crappie								1																		1	1.3	1.3
	Black crappie						4																				4	5.3	1.3
Above Robinson Dam	Flathead catfish									1	1																2	2.7	1.3
	Bluegill	1	2	8	3																						14	18.7	2.7
	Smallmouth bass				4	2					1	1			1												9	12.0	4.6
	Spotted bass				1	2		1	1																		5	6.7	1.3
	Largemouth bass					1			1	3	2	1	1	2													11	14.7	12.7
Total	Channel catfish					11	3	4	2											2	1		2		1	1	27	9.0	6.3
	Flathead catfish									1	1																2	0.7	0.5
	Rock bass	2	3	14	15	17	22	17	4																		94	31.3	9.7
	Bluegill	1	9	36	31	15	4																				96	32.0	5.9
	Redear sunfish				2	1	1	4			1																9	3.0	1.7
	Smallmouth bass		3	12	11	11	4	8	11	9	9	4	4	7	6	6	3	2									112	37.0	6.7
	Spotted bass				1	2		1	1																		5	1.7	0.9
	Largemouth bass		1	4		11	12	14	15	8	10	8	6	5	2	1	3				1						101	33.7	11.6
	White crappie								2																		2	0.7	0.5
	Black crappie						6	1																			7	2.3	0.9

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Table 2. Rock bass electrofishing CPUE (fish/hr) from each length group collected during spring sampling on South Fork Licking River. Number of sites and effort have varied across years.

	Length group					Std.
	< 4.0 in	4.0-5.9 in	6.0-7.9 in	≥ 8.0 in	Total	error
2017	1.7	9.7	13.0	7.0	31.3	9.7
2015	4.1	8.3	20.0	4.2	36.7	4.8
2012	1.0	4.0	11.3	1.2	17.5	4.2
2010	2.7	12.7	9.7	0.7	24.5	
2006	1.1	10.6	17.1	2.2	30.9	11.6

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Table 3. Population assessment of rock bass collected from South Fork Licking River during spring 2015 and 2017.

Year		CPUE < 4.0 in	CPUE 4.0 - 5.9 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Total score	Assessment rating
2017	Value	1.7	9.7	20.0	7.0	12	Good
	Score	3	3	3	3		
2015	Value	4.1	8.3	24.2	4.2	11	Good
	Score	3	3	3	2		

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Table 4. Smallmouth bass electrofishing CPUE (fish/hr) from each length group collected during spring sampling on South Fork Licking River. Number of sites and effort have varied across years.

	Length group						Std.
	< 4.0 in	4.0-8.9 in	9.0-11.9 in	12.0-13.9 in	≥ 14.0 in	Total	error
2017	1.0	15.3	9.7	2.7	8.0	37.0	6.7
2015	6.4	4.4	5.8	2.7	2.2	28.4	3.2
2012	1.5	12.4	4.3	2.8	1.7	16.8	2.7
2010	1.1	6.5	11.9	2.1	0.6	28.0	
2006	0.0	11.3	8.7	8.4	2.2	23.6	6.5

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Table 5. Population assessment of smallmouth bass collected from South Fork Licking River during spring 2015 and 2017.

Year		CPUE < 4.0 in	CPUE 4.0 - 8.9 in	CPUE ≥ 9.0 in	CPUE ≥ 12.0 in	CPUE ≥ 14.0 in	Total score	Assessment rating
2017	Value	1.0	15.3	20.3	10.7	8.0	18	Excellent
	Score	2	4	4	4	4		
2015	Value	6.4	11.3	10.7	4.9	2.2	18	Excellent
	Score	4	3	3	4	4		

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Table 6. Largemouth bass electrofishing CPUE (fish/hr) from each length group collected during spring sampling on South Fork Licking River. Number of sites and effort have varied across years.

	Length group					Total	Std. error
	< 4.0 in	4.0-8.9 in	9.0-11.9 in	12.0-14.9 in	≥ 15.0 in		
2017	0.3	13.7	11.0	6.3	2.3	33.7	11.6
2015	0.1	4.1	4.1	0.8	0.1	9.2	4.4
2012	0.0	1.0	1.2	0.6	0.7	3.5	1.0
2010	0.0	1.5	1.3	0.5	0.2	3.5	
2006	0.0	0.0	0.4	0.0	0.0	0.4	0.4

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Table 7. Population assessment of largemouth bass collected from South Fork Licking River during spring 2015 and 2017.

Year		CPUE < 4.0 in	CPUE 4.0 - 8.9 in	CPUE ≥ 9.0 in	CPUE ≥ 12.0 in	CPUE ≥ 15.0 in	Total score	Assessment rating
2017	Value	0.3	13.7	19.7	8.7	2.3	17	Excellent
	Score	1	4	4	4	4		
2015	Value	0.1	4.1	5.0	0.9	1.0	9	Fair
	Score	2	2	2	2	1		

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Table 8. Length frequency and CPUE (fish/hour) of selected sport fish collected during 1.0 hours of electrofishing (4-15 minute sampling runs) at Stoner Creek during the spring of 2017.

Location		Inch class																			Std
	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	error
Stoner Creek	Bluegill	1	29	60	28	12		1											131	131.0	8.9
	Redear sunfish	1	5		1		2												9	9.0	4.4
	Largemouth bass		1	5	3	2	3	7	5	2	6	8	3	2	1	4	5	2	59	59.0	7.4
	White crappie							1	1										2	2.0	1.2

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Table 9. Largemouth bass electrofishing CPUE (fish/hr) from each length group collected during spring sampling on Stoner Creek. Number of sites and effort have varied across years.

	Length group						Std.
	< 4.0 in	4.0-8.9 in	9.0-11.9 in	12.0-14.9 in	≥ 15.0 in	Total	error
2017	1.0	20.0	13.0	11.0	14.0	59.0	7.4
2015	4.7	16.7	12.3	15.3	6.7	55.7	17.1
2012	2.7	31.3	24.0	5.3	2.0	65.3	9.3
2010	0.0	18.0	6.0	24.0	14.0	62.0	18.0

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Table 10. Population assessment of largemouth bass collected from South Fork Licking River during spring 2015 and 2017.

Year		CPUE < 4.0 in	CPUE 4.0 - 8.9 in	CPUE ≥ 9.0 in	CPUE ≥ 12.0 in	CPUE ≥ 15.0 in	Total score	Assessment rating
2017	Value	1.0	20.0	38.0	25.0	12.0	18	Excellent
	Score	2	4	4	4	4		
2015	Value	3.5	14.1	28.8	17.9	5.4	20	Excellent
	Score	4	4	4	4	4		

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NORTHEASTERN FISHERIES DISTRICT

Project B: Technical Guidance

FINDINGS

Table 1 provides a list of ponds visited (20) in 2017 and our findings and recommendations. In addition to on-site inspections, consultations were rendered via telephone (75-100) and/or written correspondence (4). Most vegetation problems and a few population problems were resolved using email pictures, pond harvest log data or the use of the "Managing Your Farm Ponds" web page. Technical guidance was provided to individuals from all counties in the NEFD. Typical problems responded to include: pond stocking, aquatic vegetation problems, undesirable species, fishing information, fish kills, farm pond management, fish pathogens, water quality, pond construction, structural problems with dams, and pond nuisances.

Table 1. On-site technical guidance provided by the Northeastern Fishery District during 2017.

County	Name	Date	Findings	Recommendations
Bourbon	T. Poe	24-Aug	Fish kill, no LMB observed, veg issues	Stock 1150 LMB and 5 grass carp
	C. Smart	24-Aug	Unbalanced and many underirables	Remove undesirables, stock 75 LMB and 50 CCF
Clark	E. Fink	13-Jun	Fish kill in 2015, veg issues	Lake is rebounding, apply Reward with surfactant for veg control
	J. Kuperstein	13-Jun	vegetation problem (duckweed)	Apply Sonar or Clipper
Fleming	K. Arnett	17-Oct	Fish kill, unbalanced with veg.	remove larger LMB, stock 200 RE, $CuSO_4$ on algae
	C. Brown	5-May	Veg problem	Apply Sonar or Clipper
Harrison	J. Guthier	27-Jun	Unbalanced	Remove 50 CCF and stock 50 4-6" BG
Lewis	S. Ship	28-Aug	P-1: Unbalanced, veg issues	P-1: Stock 250 LMB, and 20 grass carp
			P-2: Veg. issues	P-2: Apply Clipper
			P-3: Veg. issues	P-3: Renovate, or apply Rodeo
Madison	K. Contre	13-Jun	Unbalanced	Stock 50 LMB
	E. Igo	12-Jun	Unable to sample pond	
Mason	G. Beckner	14-Jun	Fish kill, veg issues	stock 25 LMB and 75 BG, continue current veg treatment program
Rowan	S. James	10-May	Spatterdock issues	Aooky Rodeo with surfactant
	S. Napier	19-Sep	Unbalanced	Stock 250 BG and remove 20 LMB
	D. Wells	12-Jun	Unbalanced, veg issues	Stock 225 BG and 10 grass carp
	S. Williams	18-Sep	Veg issues	Apply Rodeo with surfactant to shoreline, stock 5 grass carp
Wolfe	R. Howard	25-Jul	Unbalanced, veg issues	Stock 125 BG, remove 25 LMB, soil sample

SOUTHEASTERN FISHERIES DISTRICT

Project B: Stream Fishery Surveys – Warmwater Streams

FINDINGS

Upper Cumberland River Basin

The Southeastern Fishery district sampled one location in the Upper Cumberland River Basin in Knox County in 2017. Sampling was conducted to assess the black bass, sunfish, catfish, and walleye populations. During 1.5 hours of shocking, 66 fish were collected, which was comprised of 10 species (Table 1). Due to the low number of fish collected, no further assessments were completed.

Table 1. Length-frequency and CPUE (fish/hr) of selected fish species* collected during 1.5 hours of electrofishing (15-minute runs) in the Barbourville ramp area of the Upper Cumberland River (Knox county) in 2017; standard error is in parantheses.

	Inch class																				
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	23	Total	CPUE
Smallmouth bass						1	1				1									3	2.0 (1.4)
Spotted bass			2		5				2	1			1							11	7.3 (2.8)
Bluegill	1																			1	0.7 (0.7)
Longear sunfish		1		3																4	2.7 (2.7)
Redbreast sunfish			1																	1	0.7 (0.7)
Green sunfish	1																			1	0.7 (0.7)
Black crappie									1											1	0.7 (0.7)
Walleye									1	1	1	1	1		1					6	4.0 (2.1)
Channel catfish									1	1	1	5	5	4	2	3	3	1	1	27	18.0 (6.7)
Flathead catfish						1		1	3	3			1		1			1		11	7.3 (4.3)

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* Did not net shad, suckers, and minnow s.

SOUTHEASTERN FISHERIES DISTRICT

Project B: Technical Guidance

FINDINGS

Details of the technical guidance provided during 2017 are shown in Table 1. Technical guidance was provided through five on-site visits. Additional technical guidance requests were handled over the telephone, or by written correspondence. Topics encountered and responded to included: fish population balance, water quality problems, fish disease, fish stocking, and aquatic vegetation problems.

Several other requests for information (approximately 200) about area fisheries and miscellaneous information about fish management in lakes and ponds were handled over the telephone.

Table 1. Technical guidance provided in the Southeastern Fishery District during 2017.

County	Name of pond or pond owner	Date	Findings	Recommendations
Jackson	Eddie Judd	6/28	Balanced fish population; some pondweed present	Continue current management but consider removing crappie from pond; add lime; add cover
	Ryan Judd	6/28	Balanced fish population; no bluegill present but redear sunfish observed	Stock bluegill; add cover; add lime; add pea gravel for sunfish spawning areas in shallow water; possibly fertilize
Knox	Mark Frazier	8/24	Water quality fine	Recommended stocking largemouth bass, bluegill, and channel catfish
Pulaski	Melissa Bastin	8/17	Pond 1: Good water quality Pond 2: Low alkalinity	Pond 1: No changes recommended Pond 2: Add lime; add cover
Whitley	Mr. Sharpe	6/27	Pond 1: Bass slightly overcrowded	Pond 1: Remove skinny bass; add cover; consider adding fertilizer in the spring
			Pond 2: Mostly balanced fish population	Pond 2: Continue current management but harvest any skinny bass if caught; add cover; consider fertilizing

EASTERN FISHERY DISTRICT

Project B: Stream Surveys – Warmwater Streams

FINDINGS

Sportfish Assessment

Two streams, Levisa Fork and Russell Fork, were sampled with electrofishing boats in spring of 2017. Levisa Fork was sampled at various sites from Pikeville, KY to Prestonsburg, Ky. Future sampling will include further upstream and downstream sites for Levisa Fork as weather permits. Russell Fork was sampled at various sites from just upstream of the Ratliff Hole area in Breaks Interstate Park near KY/VA state line and then downstream to the confluence area of Marrow Bone Creek. The Levisa Fork population assessments included smallmouth bass “Good”, rock bass “Poor”, spotted bass “Fair”, and largemouth bass “Poor”. The Russell Fork population assessments included smallmouth bass “Excellent” and rock bass “Good”. Sportfish species sampled totaled 14 and 10 from the Levisa Fork and Russell Fork, respectively. Actual sample data for each stream can be reviewed in the Streams Investigation Branch annual performance report.

STREAM SURVEY
CUMBERLANRIVER BASIN

SITE INFORMATION

Date: 8/05/2013 *County:* Harlan *Drainage Area:* 5.5 mi^2

Stream: **Fugitt Creek** Station Number: DOW02044001

Crew: K. Frey, M. Harless

Location: At RT179 bridge in middle reach *Latitude:* 36.92071

Sampling Method: Backpack Electrofisher *Longitude:* -83.07666

Sampling Time (sec): 1,138 sec *Quadrangle:* Louellen

CHEMICAL AND PHYSICAL CHARACTERISTICS

Surface Temperature: 64.0 °F *pH:* N/A
Dissolved Oxygen: N/A mg/l *Specific Conductance:* 380 µS

Fish Shelter: Abundant
Type: Undercut banks, boulders, ledges, logs, brush
Riparian Zone: 10 - 20 meters
Shade: 75-100%

Stream Substrate (%):
1) Pool Area: 15% boulders (>12 in),15% large rubble (6-12 in), 25% small rubble (3-6 in), 20% coarse gravel (1-3”), 10% fine gravel (0.1-1 in) 10% sand, 5% clay

2) Riffle Area: 20% boulder (>12 in), 20% large rubble (6-12 in), 35% small rubble (3-6 in), 10% coarse gravel (1-3 in), 5% fine gravel (0.1-1 in), 5% sand, 5% muck

Pool-Riffle Ratio in Section: 40% pool; 60% riffle

Other Observations
Aquatic Vegetation:
Type:
Macroinvertebrates: Crayfish, mayflies

HABITAT ASSESSMENT *Mountain Bioregion*

Habitat Parameter		Condition Category	Score
1. Epifaunal Substrate / Available Cover		Suboptimal	15
2. Embeddedness		Marginal	10
3. Velocity / Depth Regime		Optimal	18
4. Sediment Deposition		Marginal	10
5. Channel Flow Status		Optimal	17
6. Channel Alteration		Suboptimal	15
7. Frequency of Riffles (or bends)		Optimal	17
8. Bank Stability	Right	Suboptimal	6
	Left	Suboptimal	8
9. Vegetation Protection	Right	Suboptimal	8
	Left	Optimal	9
10. Riparian Vegetation	Right	Suboptimal	8
Zone Width	Left	Optimal	9
Total		***Fair***	**150**

Species Composition

Common Name	Species	Number	Notes
Blacknose Dace	*Rhinichthys obtusus*	58	
Creek Chub	*Semotilus atromaculatus*	40	
White Sucker	*Catostomus commersoni*	3	
Northern Hogsucker	*Hypentelium nigricans*	2	
Central Stoneroller	*Campostoma anomalum*	20	
Rainbow Darter	*Etheostoma caeruleum*	3	
Total Number of Individuals	6 Native Species	126	

Index of Biotic Integrity (IBI)

Metric	Actual	Expected Value	IBI Score
	Mountains (MT) Ichthyoregion		
Benthic Spp. Richness	1.0	3.7	37.7
Intolerant Spp. Richness	0	1.8	29.3
SL Spawning Spp. Richness	4.0	4.2	61.9
% Insectivores (Indv.)	3.9	45.2	20.0
% Tolerants (Indv.)	19.9	61.8	35.1
% Facultative Headwater Individuals	38.1	59.6	9.1
		Final IBI Score	**32.2**
		IBI Rating	**Poor**

EASTERN FISHERY DISTRICT

Project B: Technical Guidance

FINDINGS

Details of the technical guidance provided during 2017 are shown in Table 1. Technical guidance (29) was provided by on-site visits (4), over the telephone, or by written correspondence. Topics encountered and responded to included: fish population balance, water quality problems, fish disease, fish stocking, and aquatic vegetation problems.

Several other requests for information about area fisheries and miscellaneous information about fish management in lakes and ponds were handled over the telephone.

Table 1. Pond technical guidance in the Eastern Fishery District during 2017.

Date	County	Owner	Problem	Recommendations
1/25	Magoffin	Royalton	duckweed	multi-application of Reward
2/1	Floyd	Pat Griffith	fish balance	stock fish
2/9	Lawrence	Steve Long	trout stocking, vegetation	max water temp for trout, email vegetation pictures
3/24	Knott	Jamie Thomas	vegetation	grass carp stocking & herbicide
3/27	Knott	Wendel McClain	brazilian elodea control	grass carp
3/28	Johnson	Scott Stewart	new pond stocking	private dealers list
4/3	Magoffin	Farley Joseph	pond balance & stocking	private dealer list and stocking #'s based on fishing
4/7	Floyd	Dean Harless	algae	copper sulfate
4/10	Johnson	Bob Hutchinson	stocking, algae	private dealer list, herbicide
4/24	Leslie	Dylan Couch	stocking	farm pond book & private dealer list
4/25	Wolfe	Kenneth Combs	pond balance	remove small bass & catfish
5/4	Perry	Haskel Ritchie	fish dying	transport issue of stocked fish
5/16	Lawrence	Darrel Holbrook	fish stocking	private dealers list
5/18	Perry	Ishmael Stacy	algae	CutrinePlus
5/22	Letcher	M. Mullins	pond balance	private dealer list
6/19	Perry	Bradley J. VanZandt	stocking	private dealer list & possibly stocking himself
6/27	Lawrence	Curt Fitzpatrick	stocking	private dealers list
6/27	Martin*	Jamie Cline	water clarity, pond construction	riprap shoreline, install larger spillway
6/28	Floyd	R. Reynolds	filamentous algae	CutrinePlus
7/3	Knott*	Nicholas Slone	pond balance	lime, fertilize, harvest small bass
7/21	Lawrence	Tammy Barker	brittle naiad, algae	Reward & Cutrine-Plus
8/1	Floyd	Andrew Shepherd	fish stocking	private dealers list & stocking numbers
8/2	Floyd	Andrew Shepherd	vegetation	farm pond book, fertilize
8/2	Perry	Doug Baker	fish dying	aerate, salt
8/2	Perry	Haskel Ritchie	fish dying	reduce stocking rates, transport issue
9/1	Lawrence	Steve Long	plant ID	naiad treat with Reward
10/17	Magoffin	Kevin Howard	stocking	stock catfish, private dealer list
10/23	Floyd	Dean Harless	habitat	farm pond book
11/1	Harlan*	Valdean Jones	muddy water, algae	lime, CutrinePlus, refer to KY Div of Water

*on-site visit

Project B: Fish Habitat Improvement - Public Lakes Fertilization

Lake		County	Size (acres)
Northwestern Fishery District	Subtotal		33
Honeycone Lake		Ohio	5
Lil' Gil Lake		Ohio	10
Washburn Lake		Ohio	18
Southwestern Fishery District	Subtotal		204
Marion County Lake		Marion	25
Spurlington Lake		Taylor	25
Briggs Lake		Logan	18
Shanty Hollow Lake		Warren	136
Central Fishery District	Subtotal		84
Corinth Lake		Grant	84
Eastern Fishery District	Subtotal		39.7
Fishpond Lake		Knott	30.3
High Splint Lake		Harlan	6.9
Kingdom Come Lake		Harlan	2.5

Project B: Fish Habitat Improvement - Fish Attractors

District / Lake	Fish Attractor Sites
Western Fishery District	
Barkley Lake	71 hardwood units (1 tree=1 unit) were used to create new deep water fish attractor sites; 137 hardwood units were used to refurbish existing deep water sites; 900 hardwood units were used to create new shallow water habitat sites; 86 plastic units were used to refurbish old deep water sites; 35 plastic units were used to create new deep water fish attractor sites; 138 Christmast tree units (2 trees=1 unit) were used to create new shallow water habitat sites; Refurbished 153 hardwood stake beds and made 41 new sites (new site=100 stakes, refurbished site=50 stakes)
Energy Lake	Refurbished 2 attractor sites with plastic attractors
Kentucky Lake	88 Christmas tree units (2 trees=1 unit) were used to create new shall water fish habitat sites; 30 plastic units were used to refurbish existing deepwater fish attractors; Refurbished 17 hardwood stake beds and made 4 new sites; planted 30 cypress trees along shoreline; planted 5 acres of rye grass in the drawdown zone
Northwestern Fishery District	
Carpenter Lake	57 scrap vinyl attractors and 3 "large fountain" gas pipe attractors around fishing jetty
Nolin River Lake	
Wax Marina area	52 gas line "spider square" attractors in 1 site
Upper Dog Creek	39 gas line attractor units in 2 sites
Rough River Lake	
Little Clifty Creek area	19 gas line attractors in 1 site (various designs)
Cave Creek area	174 gas line attractors in 3 sites (“cattails” and “snags”)
Peter Cave Creek area	40 “snag” gas line attractors in 1 site
Kingfisher lakes	
New Kingfisher	61 scrap vinyl attractors and 17 "large fountain" gas pipe attractors
Southwestern Fishery District	
Barren River Lake	5 new brush sites, 13 refurbished brush sites, 1 new stake bed, 1 new plastics site
Green River Lake	5 new brush sites, 4 refurbished brush site, 1 new pallet trees site, 2 refurbished pallet trees sites
Shanty Hollow Lake	2 new brush piles, 2 refurbished brush piles
Three Springs Lake	4 refurbished brush sites, 1 new brush site

Project B: Fish Habitat Improvement - Fish Attractors cont.

District / Lake	Fish Attractor Sites
<u>Central Fishery District</u>	
Beaver Lake	127 PVC structures (spider ball); 32 brush piles (602 trees); 4 shallow shoreline transects (30 trees per transect (120 trees); 107 pallet structures (3 pallets per unit + 2 trees per pallet (200 trees); 3 PVC trees; 14 stake beds; 1 hinge cut – fallen trees
McNeely Lake	1 brush pile (15 trees)
<u>Northeastern Fishery District</u>	
Cave Run Lake	
Annual habitat work	2 refurbished brush sites (Christmas tree sites – 100+ trees)
Large-scale habitat project work	In the final year of the Cave Run Lake Fish Habitat Project, areas worked on included: the impounded side of Ramey's Creek, Cassidy Point and between and around the Poppin Rock and Bangor Boat ramps. Twenty-one new sites and 1 large reef were created in these areas. Thousands of structures were added to the lake including: Christmas tree bundles, larger cedar trees, pallet structures, stake buckets, plastic pallet structures, concrete culverts, hardwood tree stumps and wooden spool structures. In addition, 6 new sites were created by district staff. Structures were made out of tree bundles, large stumps and wooden crates.
Grayson Lake	4 refurbished brush sites (Christmas tree sites – 150+ trees)
<u>Southeastern Fishery District</u>	
Laurel River Lake	10 brush sites refurbished (30 Christmas trees per site)
<u>Eastern Fishery District</u>	
Buckhorn Lake	6 refurbished shallow water brushpiles (60 Christmas trees), 1 new Christmas tree reef (40 trees), 10 pallet structures with 15 Christmas trees, 3 plastic tree structures, 4 hinge-cut hardwood trees, 425lbs of winter wheat sowed
Carr Creek Lake	2 refurbished shallow water brushpiles (11 Christmas trees)
Dewey Lake	9 new shallow water brushpiles (84 Christmas trees and hardwood), 6 refurbished shallow water brushpiles (70 Christmas trees), 5 new deep water brushpile (57 Christmas trees and hardwood), 1 refurbished deep water brushpile (15 Christmas trees), 1 new stake bed, 2 refurbished stake beds, 1 hinge-cut tree, 200 lbs wheat seed sowed
Fishtrap Lake	3 refurbished brushpiles deep water (18 Christmas trees)
Martins Fork Lake	1 new Christmas tree brushpile deep water (10 trees)
Paintsville Lake	1 new Christmas tree brushpile (15 trees), 10 plastic tree structures, 3 new deep water brushpiles (35 Christmas trees & 20 cedar trees)
Yatesville Lake	2 plastic tree structures, 3 new shallow water brushpiles (25 Christmas trees)

Minor Clark Fish Hatchery 2017 Sport Fish Production

	Planned			Actual				
Species	**Number**	**Size (in)**	**Location/Use**	**Number**	**Size (in)**	**Pounds**	**No./lb.**	**Notes**
Muskellunge	100,000		Ohio DNR	133,500				Eggs
			West Virginia	36,300				Fry
			Tug Fork	108,100				Fry
	0		Licking River	222,985				Fry
Total Fry/Eggs				500,885				
	705	9	Barren River	705	8.1	57.3	12.3	
	180	9	Green River Pool 5	180	8.1	14.6	12.3	
	350	9	South Fork Kentucky River	350	8.1	28.5	12.3	
	375	9	North Fork Kentucky River	375	8.1	30.5	12.3	
	400	9	Licking River	400	8.1	32.5	12.3	
	200	9	Little Sandy River	200	8.1	16.3	12.3	
	110	9	Tygarts Creek	110	8.1	8.9	12.3	
	145	9	Drakes Creek	145	8.1	11.8	12.3	
	720	9	Green River Pool 6	240	12.7	82.8	2.9	
	250	9	Green River Pool 4	85	12.7	29.3	2.9	
	390	9	Tug Fork	390	12.7	134.5	2.9	
	500	9	Levisa Fork	168	12.7	57.9	2.9	
	50	9	Kinniconick Creek	50	8.1	4.1	12.3	
	85	9	Red River	88	8.1	7.2	12.3	
	30	9	West Fork Drakes Creek	30	8.1	2.4	12.3	
	15	9	Sexton Creek	15	8.1	1.2	12.3	
	30	9	Goose Creek Lake	30	8.1	2.4	12.3	
	40	9	Redbird River	40	8.1	3.3	12.3	
	15	9	Station Camp Creek	15	8.1	1.2	12.3	
	10	9	Sturgeon Creek	10	8.1	0.8	12.3	
	30	9	Triplett Creek	30	8.1	2.4	12.3	
	20	9	North Fork Triplett Creek	20	8.1	1.6	12.3	
	100	9	Kentucky River Pool 2*	100	8.1	8.1	12.3	
	200	9	Kentucky River Pool 3*	200	8.1	16.3	12.3	
Total	4,950	9		3,976	8.2	555.9	7.2	
			*Right Pectoral Fin Clip					
Muskellunge	2,700	13	Cave Run Lake*	2,800	12.0	800.0	3.5	
	2,700	13	Green River Lake*	2,800	12.5	920.3	3.0	
	400	13	Buckhorn Lake*	420	11.8	116.7	3.6	
	375	13	Dewey Lake*	376	12.7	129.7	2.9	
	100	13	Kentucky River Pool 2**	100	11.8	27.8	3.6	
	200	13	Kentucky River Pool 3**	200	11.8	55.5	3.6	
	200	13	Hatchery Oxbow	16	12.7	5.5	2.9	
	0	0	Tennessee DNR	603	12.7	207.9	2.9	
Total	6,475	13		7,315	12.3	2,263.4	3.2	
Grand Total	11,425			512,176		2,819.3		
			*Right Caudal Wire Tag					
			**Right caudal Wire Tag and Left Pelvic Fin Clip					

	Planned			Actual				
Species	Number	Size (in)	Location/Use	Number	Size (in)	Pounds	No./lb.	Notes
Hybrid Striped	200,000	1.5	Barren River Lake**	200,046	1.4	132.6	1,509	
Bass	2,600	1.5	Sympson Lake*	2,624	2.1	8.3	316	
	15,000	1.5	Grayson Lake	15,053	2.0	53.5	281	
	51,000	1.5	Rough River Lake*	51,030	1.5	54.0	945	
	51,000	1.5	Rough River Lake	51,561	1.5	53.1	971	
	30,000	1.5	Taylorsville Lake*	30,618	1.5	32.4	945	
	30,000	1.5	Taylorsville Lake	30,588	1.5	31.5	971	
	25,000	1.5	Herrington Lake*	25,515	1.5	27.0	945	
	25,000	1.5	Herrington Lake	25,635	1.5	26.4	971	
	23,000	1.5	Fishtrap Lake	23,028	1.4	44.7	515	
	7,200	1.5	Lake Linville	7,251	2.0	21.2	342	
	19,000	1.5	Guist Creek Lake	19,098	1.6	24.9	767	
	3,333	1.5	KY River Pool 4	3,339	1.6	4.3	774	
	3,333	1.5	KY River Pool 5	3,339	1.6	4.3	774	
	3,333	1.5	KY River Pool 6	3,340	1.6	4.3	774	
	3,333	1.5	KY River Pool 7	3,340	1.6	4.3	774	
	3,334	1.5	KY River Pool 8	3,340	1.6	4.3	774	
	3,334	1.5	KY River Pool 9	3,340	1.6	4.3	774	
			Ohio River					
	54,500	1.5	Markland Pool	54,663	1.3	39.9	1,370	
	41,500	1.5	McAlpine Pool	41,630	1.3	31.0	1,343	
	50,000	1.5	Cannelton Pool	50,074	1.6	79.7	628	
	36,000	1.5	Newburg Pool	36,050	1.6	46.6	774	
	43,700	1.5	Uniontown Pool	47,126	1.4	47.0	1,003	
	60,500	1.5	Smithland Pool	64,023	1.3	42.7	1,499	
	0		Meldahl Pool	54,756	1.3	32.4	1,690	
Total Recips	679,000			628,956	1.5	659.3		
Total Originals	106,000	*OTC Marked Originals		221,451		195.4		
Grand Total	785,000	** Mixed Originals/Recips		850,407		854.7		

	Planned			Actual				
Species	**Number**	**Size (in)**	**Location/Use**	**Number**	**Size (in)**	**Pounds**	**No./lb.**	**Notes**
Walleye (Erie)	0	0	Licking River	1,242,505				Fry
	0	0	West Virginia	1,003,000				Fry
Total				2,245,505				
	350,000	1.5	Lake Cumberland	601,044	1.5	519.1	1,158	
	40,000	1.5	Dale Hollow Lake (KY)	112,570	1.6	97.3	1,157	
	260,000	1.5	Laurel River Lake	300,353	1.5	182.0	1,650	
	35,000	1.5	Carr Creek Lake	35,022	1.5	26.0	1,347	
	57,000	1.5	Paintsville Lake	57,040	1.5	46.0	1,240	
	200,000	1.5	Nolin River Lake	201,385	1.5	126.7	1,590	
	200,000	1.5	Green River Lake	400,319	1.5	250.9	1,596	
	15,000	1.5	Russell Fork	15,128	1.5	12.2	1,240	
Total				1,722,861	1.5	1260.2	1,367	
Grand Total				3,968,366				
Walleye (Native)	0		Tennessee	55,260				Fry
				55,260				
	20,000	2.5	Upper KY River	20,020	2.3	60	332	
	3,000	2.5	Upper Levisa Fork	3,021	2.3	9	332	
	6,400	2.5	Rockcastle River	6,408	2.3	19.3	332	
	19,800	2.5	Wood Creek Lake	1,428	2.3	4.3	332	
	16,000	2.5	Lower Barren	15,994	2.3	47.6	336	
	10,000	2.5	Martins Fork Lake	10,027	2.3	30.2	332	
	27,200	2.5	Upper Cumberland River	27,182	2.3	80.9	336	
Total	102,400			84,080	2.3	251.3	335	
Grand Total				139,340				
Striped Bass	350,000	1.5	Lake Cumberland	356,385	1.5	568.3	574	
	50,000	1.5	Kentucky Lake tailwater	50,066	1.3	41.9	1,195	
	50,000	1.5	Barkley Lake tailwater	50,059	1.4	42.3	1,183	
			Ohio River					
	49,000	1.5	Markland Pool	49,000	1.3	47.9	1,022	
	38,000	1.5	McAlpine Pool	38,005	1.3	32.5	1,169	
	46,000	1.5	Cannelton Pool	46,045	1.7	47.9	961	
	33,000	1.5	Newburg Pool	33,020	1.3	25.4	1,300	
	40,000	1.5	Uniontown Pool	40,105	1.4	40.9	981	
	55,000	1.5	Smithland Pool	50,051	1.4	49.3	1,015	
	0		Kentucky Lake	179,322	1.4	157	1,142	
	0		Barkley Lake	196,382	1.5	233.0	842	
	711,000	1.5		1,088,440	1.5	1286.3	810	

	Planned			Actual				
Species	**Number**	**Size (in)**	**Location/Use**	**Number**	**Size (in)**	**Pounds**	**No./lb.**	**Notes**
Largemouth	0.0	0.0	Hatchery Oxbow	417,060				Fry
Bass	Total			417,060				
	Ohio	River						
			Cannelton Pool					
	270	2.0	Yellowbank Creek	245	2.0	0.7	350	
	660	2.0	Town Creek	315	2.0	0.9	350	
	17,000	2.0	Tar Fork/Clover Creek	8,513	2.0	19.8	430	
			McAlpine Pool					
	7,050	2.0	Harrod's Creek	3,741	2.9	9.6	390	
			Markland Pool					
	38,200	2.0	Craig's Creek	17,743	1.8	34.6	513	
	2,474	2.0	Big Sugar Creek	1,249	1.6	2.3	543	
	2,535	2.0	Little Sugar Creek	1,292	1.6	2.5	517	
	16,064	2.0	Big Bone Creek	7,444	2.0	21.7	343	
	10,309	2.0	Gunpowder Creek	5,140	2.0	16.9	304	
	3,580	2.0	Woolper Creek	1,102	2.3	5.3	208	
			Meldahl Pool					
	3,853	2.0	Big Snag Creek	1,733	2.2	7.7	225	
	8,416	2.0	Big Locust Creek	4,193	1.8	10.8	388	
	2,705	2.0	Big Turtle Creek	1,342	2.5	6.3	213	
	7,943	2.0	Bracken Creek	3,978	2.0	15.1	262	
	2,265	2.0	Lawrence Creek	1,153	2.2	5.0	231	
			Greenup Pool					
	15,100	2.0	Little Sandy (Greenup Rp)	7,452	1.6	13.5	552	
	15,100	2.0	Little Sandy (Raccoon Rp)	7,452	1.6	13.5	552	
Total	153,524			74,087	2.0	186.2	398	
	15,000	5.0	Fishtrap	10,874	5.6	697.1	15.6	
	100,000	5.0	Priority 1 lakes at 15/acre					
			Herrington Lake	40,112	4.4	1,328.8	30.2	
			Dewey Lake	16,509	4.3	526.0	31.4	
			Lake Carnico	1,702	4.7	70.6	24.1	
			Eagle Creek Lake	501	4.7	20.3	24.7	
			Stoner Creek	1,000	4.7	40.5	24.7	
			Wood Creek Lake	10,103	4.3	306.9	32.9	
			Spring Stocking	16,363	4.4	526.6	31.0	
			Lake Cumberland	22,290	4.0	472.8	47.1	
Total	115,000			106,746		3,989.6		
Grand Total	268,524			597,893		4,175.8		
	0	0	Hatchery Oxbow	3	18.2	10.0	0.3	
Grass Carp	0	0	Greenbo Lake	57	18.2	190.0	0.3	
Total				60		200.0		
Saugeye	0	0	Pfeiffer to grow out	711,000				Eggs
Total				711,000				

Nonsport Forage Species

Forage Species

Fathead Minnows	**Pounds**	**Location/use**
	2,435	Muskellunge Ponds
	3,903	LMB Pond
Total Pounds FHM	6,338	

Goldfish		
	5,529	Muskellunge Ponds
	5,201	Walleye Broodstock
	4,174	Overwinter Display Pool
	1,450	LMB Pond
	525	Display Pool
	615	Furture Broodstock
Total Pounds GOF	17,494	

Peter W. Pfeiffer Fish Hatchery 2017 Sport Fish Production

	Planned			Actual			
Species	**Number**	**Size (in)**	**Location/Use**	**Number**	**Size (in)**	**Pounds**	**No./lb.**
Channel Catfish							
	0		Elkhorn Creek	66,800	Fry		
	0		KY River Pool 3	168,085	Fry		
	0		KY River Pool 4	266,000	Fry		
				500,885			
	675	15	Minor Clark Fish Hatchery	810	10-15	675	1.2
	0		N. Fork KY River	20,520	4-8	1,800	11.4
	0		KY River Pool 1	17,090	4-8	2,100	8.1
	0		KY River Pool 3	49,620	4-8	4,230	11.7
	0		KY River Pool 4	43,635	4-8	4,250	10.3
	0		Multiple Districts as Reque	147,264	4-8	13,652	10.8
	72,475	8-10	Public Fishing Lakes(Stock	72,219	7-10	15,337	4.7
	121,000	15	FINS Program	47,990	12-24	66,339	0.7
	193,475			399,148		108,383	
Blue Catfish							
	0		OH DNR	59,714	Fry		
				59,714			
	40,000	5-7	Barren River Lake	174,740	4-8	15,290	11.4
	4,800	5-7	Dewey Lake	22,000	4-8	2,131	10.3
	5,200	5-7	Fishtrap Lake	22,460	4-8	2,479	9.1
	23,500	5-7	Taylorsville Lake	47,040	4-8	5,151	9.1
	73,500			266,240		25,051	
	121,000	15	FINS Program	33,170	7-15	42,945	0.8
	121,000			33,170		42,945	
Hybrid Catfish							
	0		Jacobson Park Lake	6,090	4-8	700	8.7
	121,000		FINS Program	41,140	10-24	40,635	1.0
				47,230		41,335	
Hybrid Sunfish							
	30,000	6-8	FINS Program	35,815	5-10	10,369	3.5
	30,000			35,815		10,369	

Sauger							
	10,000	1.5	Kentucky River Pool 3	10,076	1.75	11.7	861.2
	10,000	1.5	Kentucky River Pool 4	10,000	1.66	12.8	781.3
	10,000	1.5	Kentucky River Pool 5	10,000	1.66	12.8	781.3
	10,000	1.5	Kentucky River Pool 6	10,026	1.73	15.5	646.8
	15,000	1.5	Kentucky River Pool 8	9,735	1.75	15.1	646.8
	10,000	1.5	Kentucky River Pool 9	10,069	1.75	14.1	714.1
	10,000	1.5	Kentucky River Pool 10	10,034	1.71	14.1	714.2
	10,000	1.5	Kentucky River Pool 11	9,391	1.75	13.2	711.4
	10,000	1.5	Kentucky River Pool 12				
	95,000			79,331		109.2	
Saugeye							
	15,850	1.5	Guist Creek Lake	15,850	1.82	28.2	563.0
	4,600	1.5	Boltz Lake	4,600	1.8	8.2	563.0
	5,600	1.5	Lake Carnico	5,650	1.8	10.0	563.0
	8,750	1.5	A.J. Jolly Lake	8,750	1.8	15.5	563.0
	61,000	1.5	Taylorsville Lake	115,261	1.7	172.7	667.4
	95,800			150,111		234.6	
Redear Sunfish							
	0		Elmer Davis Lake	36,300	1-2	53	680
	31,600	1.5	Beaver Lake	31,800	1-2	54.9	579
	18,400	1.5	Boltz Lake	23,840	1-2	39.8	599
	50,000			91,940		148.1	
Alligator Gar							
	8,000	10	Western KY	2,170		467	4.6
	8,000			2,170		467	
Lake Sturgeon							
	6,000	8	Upper Cumberland River	4,930	6.4	164	30.0
	6,000			4,930		164	
Largemouth Bass							
	0		Trophy LMB Program	4,650	4-5	243	19.1
				4,650		243	
Bluegill							
	0		Rockastle River WMA	885	1-3	2.4	372.6
				885		2.4	

Species	Planned Number	Location		Actual Number
Brook Trout	40000	Lake Cumberland Tailwater		42,930
	300	Parched Corn Creek		375
			Total:	43,305
Brown Trout	500	Bark Camp Creek		500
	250	Big Caney Creek		250
	450	Chimney Top Creek		475
	3250	Fort Campbell		3,250
	1000	Herrington Lake Tailwater		1,000
	400	Indian Creek - East Fork		400
	500	Jennings Creek		500
	25000	Lake Cumberland Tailwater		30,843
	250	Laurel Creek		250
	700	Looney Creek		700
	1000	Nolin River Lake Tailwater		1,000
	500	Otter Creek		500
		Paint Creek		300
	200	Roundstone Creek		200
	200	Sulphur Springs Creek		200
	600	Trammel Creek		600
	250	Laurel Tailwater		
	300	Paintsville Tailwater		
			Total	40,968

Species	Number	Location	Number
Rainbow Trout	4500	Alexandria Community Park Lake	4,500
	1500	Anderson County Community Park Lake	1,500
	3750	Bark Camp Creek	3,750
	1500	Beaver Creek	1,500
	1200	Beaver Creek - Left Fork	1,200
	1200	Beaver Creek - Right Fork	1,200
	4000	Beulah Lake	4,000
	1200	Big Bone Lick State Park	1,200
	2500	Big Caney Creek	2,500
	1500	Bloomfield Park Lake	1,500
	4500	Bob Noble Park Lake	2,300
	2000	Boone Tract 6 Acre Lake	2,000
	800	Boulder Lake	800
	2700	Brickyard Pond	2,700
	5000	Buckhorn Lake Tailwater	5,000
	500	Buffalo Creek	500
	4500	Camp Ernst Lake	3,600
	3750	Cane Creek	3,750
	6000	Cannon Creek Lake	6,000
	5000	Carr Creek Lake Tailwater	5,000
	8000	Casey Creek	8,000
	6800	Cave Run Lake Tailwater	7,800
	2500	Cherokee Park Lake	2,500
	1200	Clear Creek	1,200
		Clinton Rotary Park Lake	1,700
	1000	Craney Creek	1,000
	5000	Cranks Creek Lake	5,000
	4000	Dewey Lake Tailwater	4,000
	1000	Eagle Lake (Morehead State)	1,000
	1500	Easy Walker Park Pond	1,500
	1600	Elk Spring Creek	1,600
	2000	Fagan Branch Lake	2,000
	3000	Fisherman's Park Lakes	3,000
	5000	Fishpond Lake	5,000
	10000	Fishtrap Lake Tailwater	10,000
	2700	Flemingsburg City Reservoir (Old)	2,700
	3600	Floyds Fork Creek	3,600
	2400	Fort Campbell	2,400
	1000	Goose Creek	1,000
	2000	Grants Branch Lake	4,000

Rainbow Trout	5000	Grayson Lake Tailwater	4,000
	400	Greasy Creek	400
	11000	Greenbo Lake	11,000
	33500	Hatchery Creek	26,875
	4500	Herrington Lake Tailwater	4,500
		Higginson & Henry WMA	500
	2750	Highsplint Lake	2,750
	4500	Indian Creek - East Fork	4,500
	9000	Jacobson Park Lake	9,000
	1500	James Beville Park Lake	1,500
	7000	Jennings Creek	7,500
	2700	Kentucky Horse Park Lake	3,600
	1500	Kess Creek Park Lake	1,700
	2500	Kingdom Come State Park Lake	3,000
	161000	Lake Cumberland Tailwater	172,805
	1500	Lake Mingo	1,500
	2500	Lake Pollywog	2,500
	2750	Laurel Creek	2,850
	45000	Laurel River Lake	45,000
	500	Laurel River Lake Tailwater	100
	4500	Leary Lake	5,400
	400	Little Sandy River - East Fork	400
	4500	Logan Hubble Park	4,500
	1500	Looney Creek	1,500
	1500	Lower Sportsman's Lake	1,500
		Lusby Lake	1,500
	2500	Lynn Camp Creek	2,500
	4500	Madisonville Park	3,600
		Martin County Lake	4,250
	3750	Martins Fork Lake Tailwater	3,750
	2700	Mason County Recreational Lake	2,700
	500	Metcalfe County Park Lake	500
		Middlesboro Canal	420
	3000	Middleton Mills Park Lake	3,000
	2500	Mike Miller Park Lake	2,500
	4000	Miles Park Lakes	4,000
	6000	Mill Creek Lake (Wolfe & Powell Co.)	6,000
	1500	Millenium Park Pond	1,500
	9000	Nolin River Lake Tailwater	8,000
	7500	Otter Creek	10,800
		Paint Creek	500

Rainbow Trout	4500	Paintsville Lake		4,500
	20000	Paintsville Lake Tailwater		19,500
	6000	Panbowl Lake		6,000
	2500	Panther Creek Park Lake		2,500
	5250	Peabody WMA		5,250
	2500	Pikeville City Lake		2,500
	2500	Prisoners Lake		2,000
	400	Raven Creek		400
	3000	Red River - Middle Fork		3,000
	15600	Rock Creek		15,600
	2800	Roundstone Creek		3,075
	1200	Royal Springs		1,200
	2250	Russell Fork Creek		2,250
	1000	Sandy Watkins Park Lake		1,000
	1500	Scott County Park Lake		1,500
	1200	Sinking Creek		1,200
	1500	Southgate Lake		1,500
	750	Station Camp Creek		750
	400	Sturgeon Creek		400
	3000	Sulphur Springs Creek		3,250
	1000	Swift Camp Creek		1,000
	3000	Taylorsville Lake Tailwater		3,025
	4500	Three Springs Lake		4,500
	4500	Tom Wallace Park Lake		4,500
	8750	Trammel Creek		8,750
	1200	Triplett Creek		1,200
	1050	Triplett Creek - North Fork		1,050
	4500	Upper Sportsman's Lake		4,900
	2500	War Fork Creek		2,000
	4500	Waverly Park Lake		4,500
	4500	Waymond Morris Park		4,500
	1000	West Hickman Creek		1,000
	4500	Whitehall Park Lake		4,500
	8000	Wood Creek Lake		8,025
	2250	Yatesville Lake Tailwater		2,250
	1500	Yellow Creek Park Lake		1,500
			Total:	632,475