Commonwealth of Kentucky

Date: June 30, 2009

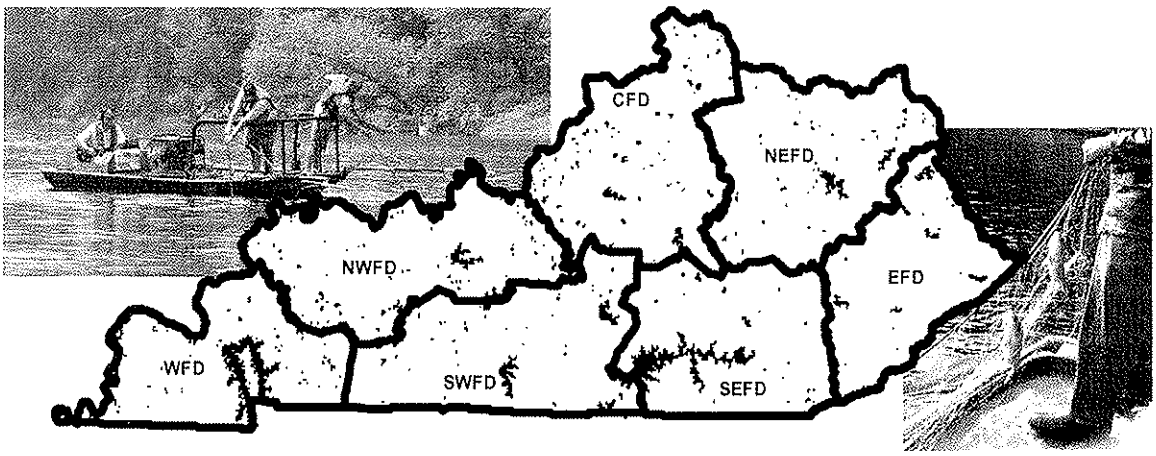
Sport Fish Restoration Grant F-50, Segment 31

Period: 01 April 2008
through
31 March 2009

ANNUAL PERFORMANCE REPORT

District Fisheries Management
Part I

Project 1: Lake and Tailwater Fishery Surveys



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STATE: Kentucky

GRANT NO.: F-50-31

GRANT TITLE: District Fisheries Management

PERIOD COVERED: 1 April 2008 - 31 March 2009

GRANT OBJECTIVES: To conduct research and surveys and to manage the fishery resources statewide within each of the following seven fishery districts: Western (WFD), Northwestern (NWFD), Southwestern (SWFD), Central (CFD), Northeastern (NEFD), Southeastern (SEFD), and Eastern (EFD).

RESEARCH AND SURVEY SECTION

Project 1: Lake and Tailwater Fishery Survey

Project Objective: To develop and implement fish management plans for lake and tailwater sport fisheries based on survey data from this project.

A. ACTIVITY

Electrofishing, gill netting, trap netting, fish scale and otolith reading for age and growth determinations, temperature and oxygen profiles, additional water quality and physical data, creel data, and preparation of an annual performance report and lake management plans.

B. TARGET DATES FOR ACHIEVEMENT AND ACCOMPLISHMENT

Planned achievement date: 31 March 2009
Work accomplishment: 31 March 2009

C. SIGNIFICANT DEVIATIONS

None

D. REMARKS

See accompanying report.

E. COST

$ 1,478,978.34

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WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Sampling conditions for each sampling event are listed in table 1.

Kentucky Lake

During May, 1,500 black bass were collected by diurnal electrofishing (120 PPS) from standardized sampling locations on Kentucky Lake. Largemouth bass comprised almost 94% (134.76 f/h) of this catch (Table 2). The catch for largemouth bass was up from 93.33 f/h reported from the 2007 sample (Table 3). An objective in the Kentucky Lake Fish Management Plan (KLFMP) for the largemouth bass population is to maintain a catch rate of at least 24.00 f/h that are <8.0 in. Using a regression model with a correlation of 0.64, it is estimated that this is the minimum value needed in order to produce an adequate number of harvestable-size (≥15.0 in) largemouth bass in five years. The catch rate of largemouth bass <8.0 in was 51.71 f/h (Table 3). The KLFMP objective for largemouth bass ≥15.0 in is to maintain a catch rate of at least 18.00 f/h. The catch rate of harvestable-size largemouth bass was 24.19 f/h during this year's sample.

The surface acres of aquatic vegetation in the lake continued to increase due to low flows and increased water clarity. The increased number of small bass can be attributed to the aquatic vegetation. Table 4 lists the PSD and RSD values for bass collected during the spring of 2008. The PSD value calculated for all largemouth bass was 52, which falls below the targeted range (PSD, 55-75) suggested in the KLFMP. However, this decline can be attributed to the increase in numbers of bass < 8.0 inches. The calculated RSD_{15} was 29, which falls into the range reported in the KLFMP (RSD_{15}, 20-40).

Otoliths were taken from largemouth bass, for age and growth determinations, during fall sampling and dead bass collected following a FLW Bass Tournament. Table 5 lists the back calculated lengths at age using the otoliths collected. All largemouth bass are reaching harvestable size by age 8, but the norm would be by age 5. The catch rate of age-1 largemouth bass was 73.05 f/h (Table 6). The KLFMP objective for age-1 largemouth bass is to maintain a catch rate of at least 36.00 f/h. Table 7 lists the catch rates for all age groups of largemouth bass collected during the past eleven years.

A lake specific assessment for largemouth bass was used to evaluate the bass population in Kentucky Lake (Table 8). The increased catch of age-1 largemouth bass boosted the rating this year. However, the catch rate of largemouth bass greater than 15.0 in dropped slightly to a rating of "good". Overall, the population rates "good" with excellent ratings for growth and recruitment, while annual mortality was almost 44%.
During October, 827 black bass were collected by diurnal electrofishing at two locations that had been previously sampled during the spring. Largemouth bass comprised 91% (150.80 f/h) of this catch (Table 9). Length and weight data were recorded from all bass collected to calculate relative weight values. The relative weight value for harvestable size largemouth bass was 92 (Table 10). Length-weight equations for black bass species at Kentucky Lake are:

Largemouth bass	Log_{10} (weight) = -3.45149 + 3.11703 x Log_{10} (length)
Smallmouth bass	Log_{10} (weight) = -3.39674 + 3.05448 x Log_{10} (length)
Spotted bass	Log_{10} (weight) = -3.52362 + 3.16311 x Log_{10} (length)

The CPUE of age-0 largemouth bass during the fall sample was 33.80 f/h (Table 11). The catch rate for age-0 largemouth bass is down from the 2007 estimate (122.30 f/h). Though the high catch rate in 2007 of age 0 largemouth bass would account for the high catch rate of age 1 in this year's sample.

Trap nets were fished for crappie in Blood River and Jonathan Creek embayments for 80 net-nights (nn) during October. This sampling effort yielded 1,365 crappie (17.06 f/nn), of which 0.71 f/nn (4%) were white crappie and 16.35 f/nn (96%) were black crappie (Table 12). Black crappie have dominated the trap net catch for the past 12 years (Figure 1). Black crappie densities most likely have increased, but not by the magnitude suggested from fall trap netting. This change in catch may also be related to the water quality of Kentucky Lake. It is possible that due to the clearer water conditions, the white crappie are staying deeper, while black crappie are running the shoreline in shallower water. Under this scenario, the black crappie would be more susceptible to capture in the trap nets.

The crappie population at Kentucky Lake continues to produce a quality fishery. The number of crappie ≥ 8.0 in collected in trap nets stayed about the same as the 2007 sample, 13.31 and 13.23 f/nn respectively (Table 13). The number of crappie ≥ 10.0 in was up from the previous year's study, 8.46 and 6.24 f/nn respectively. The KLFMP objective for crappie is to maintain a catch rate of at least 10.00 f/nn for crappie ≥8.0 in, and 3.00 f/nn for crappie ≥10.0 in. Both of these objectives were met. However, declining numbers of age-0 crappie over the last three years warranted a regulatory reduction in the angler creel from 30 to 20 fish. This regulation took affect 01 March, 2008. PSD and RSD_{10} values are reported in Table 14. Length-weight equations for white and black crappie are listed below.

White crappie	Log_{10} (weight) = -3.49639 + 3.20698 x Log_{10} (length)
Black crappie	Log_{10} (weight) = -3.41442 + 3.18053 x Log_{10} (length)

Growth determinations were made by extrapolating this years catch data with age data calculated from the 2007 sample of otoliths collected. The growth of crappie continues to be excellent with fish exceeding 10.0 in (minimum length limit size) at age 2 when collected during the fall (Table 13). Tables 15 and 16 list age frequencies for white and black crappie collected. Although age-0 white crappie comprised 49% (0.35 f/nn) of the white crappie sample, white crappie made up a very small part of the overall sample. Age 0 black crappie comprise only 9% (1.43 f/nn) of the black crappie collected. Combined, the catch of age-0 crappie was still considered "poor" in the crappie population assessment (Table 17). A third management objective is to maintain a catch of age-1 crappie of at least 11.00 f/nn. However, this value has been below the management objective for the past few years. The low recruitment will likely lead to a poorer crappie fishery in the next few years. Overall, the crappie population at Kentucky Lake rated "fair". This is mainly due to the adult black crappie population that has rated "good" to "excellent" over the past five years. The white crappie population has consistently rated "fair" over this same period. At Kentucky Lake, it is hypothesized that spring water level fluctuations and timing of critical water temperature greatly affect spawning, leading to variable recruitment. Environmental effects such as clear water and increased density of aquatic vegetation may also help to explain the reduced number of age-0 crappie collected. Figure 2 illustrates a comparison of retention time of water in Kentucky Lake to the CPUE of age-1 crappie. As retention time increased, so did water clarity and aquatic vegetation density, while the catch rate declined. Similar conditions occurred in the late 1980's, when low numbers of smaller crappie were recorded.

Catfish were collected using low pulse (15 PPS) DC electrofishing during June. Areas targeted were main lake and secondary creek channel ledges. A total of 118 catfish were collected at a rate of 33.71 f/h. The individual species catch rate is listed in Table 18. Using this data in contrast with the 2007 trotline sample, the catch was lower using electrofishing, 308 and 118 respectively. The distribution of sizes for blue catfish was about the same, but smaller size channel catfish were caught with electrofishing than trotlines. The trotline sample did not collect any flathead catfish, while 13 were collected using electrofishing.

Relative weight values of both blue and channel catfish indicate excellent condition and are listed in Table 19. The length-weight equations for blue and channel catfish are:

Blue catfish	Log_{10} (weight) = -4.02434 + 3.37581 x Log_{10} (length)
Channel catfish	Log_{10} (weight) = -4.04300 + 3.40108 x Log_{10} (length)

The redear sunfish population was sampled during May using electrofishing for determining length frequency distribution, and age and growth determinations. Table 20 illustrates the length frequency of redear sunfish collected. The majority (86%) of the redear sunfish collected were larger than 8.0 inches (Table 21). An 8.0 inch redear is estimated to be 3 years old (Table 22). The majority of this sample were age 3, with no fish being older than 6 (Table 23). A lake specific assessment of the redear sunfish population suggests an "excellent" fishery (Table 24).

Lake Barkley Creel Survey

A random, non-uniform probability, roving creel survey was conducted at Lake Barkley (45,600a) from 1 March 2008 to 31 October 2008. The lake was divided into 8 creel areas (Appendix A). The survey was conducted 5 days per week, six hours per day. One hour was randomly picked to do an angler count; angler interviews were conducted during the remaining 5 hours. The overall temporal sampling scheme was twenty days per month, consisting of six weekend days and 14 weekdays. Varying time period probabilities were assigned to each month's six-hour time period. Higher geographic probabilities, resulting in more frequent interviews, were assigned to Eddy Creek and Little River during March, April, May, September and October, than were assigned to the other 6 areas. During June, July and August, the first and last daily creel periods received higher probabilities than the other periods of the day. An angler attitude survey concerning fishing in Lake Barkley was conducted by the creel clerk during April, May and June.

During the 2008 creel the typical angler (Table 25) was a male (85%) resident (72%) who was casting (53%) from a boat (81%). The average fishing trip was 4.29 hours. Anglers fished for an estimated total of 625,656 hours during the survey period. It was estimated that 145,774 fishing trips (3.2 trips per acre) were taken. This was midway between the number of trips taken in 2005 and 1999. The fishing pressure was 13.7 hours/acre (h/a), down 23% from 16.8 h/a in 2005, but a slight increase from 12.8 h/a in 1999. Some of the decrease in fishing pressure in 2008 was the result of the high cost of transportation when gasoline rose to $4 per gallon, and turbid water in spring when crappie fishing pressure is normally highest. In addition, access point surveys were necessary in March, due to creel boat repairs, and may have resulted in missed interviews.

The estimate of 1,032,144 fish caught in 2008 (Table 25) compared well with the number of fish caught during the 2005 creel (1,197,613) and was more than double that of 1999 (505,213). The estimates of fish harvested were 345,581, 426,356, and 239,427 during the 2008, 2005 and 1999 surveys, respectively. Harvest rates for these three creels were 0.5 f/h, 0.6 f/h and 0.4 f/h, respectively.

The length frequency for numbers of each species caught is found in Table 26. Table 27 includes fish harvest statistics for each species. Black bass anglers made an estimated 68,088 trips to Lake Barkley in 2008 and accounted for about 47% of all fishing trips to Lake Barkley in 2008 (43% in 2005 and 45% in 1999). Although the number of trips was an 18% decrease from the number of 2005 trips, more bass, were caught in 2008 (392,647) than in either of the previous creel years. More black bass were harvested per acre (0.80) in 2008 than in either 2005 (0.60) or 1999 (0.48) (Table 28). More bass were caught and harvested in June 2008 than in any other month. The harvest rate among bass anglers increased to 0.09 f/h in 2008 versus 0.7 f/h in both 2005 and 1999. Largemouth bass were 96% of all black bass harvested in 2008 (Table 29) and 94% in 2005. Bass anglers harvested 1.94 pounds per acre in 2008, compared to 1.37 lb/a in 2005.

Panfish were the second most sought after group in 2008. Panfish anglers made 22,209 trips. There were almost 407,000 caught, which was a 40% increase from the 2005 catch, and 186,000 harvested (4.08 f/a) which represented nearly 54% of all fish harvested. Bluegill and redear comprised 88% and 4% of all sunfish caught (Table 30). Some bass and crappie anglers resorted to panfishing when confronted with poor water quality and weather conditions early in the spring. More than 50% of all panfish trips occurred in May (Table 31). About 5 panfish were caught per hour by panfish anglers, which gave panfish anglers a better than 50% success rate.

Catfish anglers made 21,856 trips and harvested 67,189 pounds, or 2.10 pounds per acre, which was more than any other anglers who were trying to catch another species in 2008 (Table 27). However catfish harvest was still down about 10,000 fish, and 11,000 pounds from that of 2005 creel survey. Channel and blue catfish comprised 81% and 28% of all catfish harvested, respectively (Table 32). May and June were the best months to catch catfish in 2008 (Table 33). Catfish anglers' harvest rate was 0.68 f/h in 2008 which was a little higher than the 0.58 f/h in 2005.

The numbers of trips for crappie fishing were surprisingly few in 2008, from a high of 41,404 in 2005 to 20,975 in 2008 (Table 27). The daily crappie creel limit was reduced from 30 to 20 crappie in 2008 due to a couple of years of suspected unsuccessful spawns. High, muddy water in Eddy Creek and Little River of Lake Barkley during early spring thwarted the efforts of crappie anglers. The hours fished per acre for crappie dropped to 1.97 from 3.60 h/a in 2005 and 3.97 h/a in 1999. Anglers harvested 33,452 crappie (0.73 f/a) in 2008 compared to 112,450 (2.47 f/a) in 2005 and 89,158 (1.96 f/a) in 1999. The tripling of crappie fishing trips which had occurred from March to April in both 1999 and 2005, failed to occur in 2008. In spite of an additional 4,000 hours of effort for crappie in March 2008, the crappie catch rate was 0.44 f/h that month (Table 34), down from 2.07 f/h in March 2005. By April 2008 the number of crappie fishing trips and hours increased only slightly from those in March, but were much lower than the trips and hours of effort from April 2005 (8,897 trips vs. 21,941 trips in 2005, and 38,184 hours vs. 87,095 hours in 2005). In 2008 the catch and harvest rates for crappie anglers were 0.50 f/h and 0.39 f/h, compared to 1.50 f/h and 0.68 f/h in 2005. White crappie comprised 74% of the crappie harvest in 2008, 86% in 2005 and 96% in 1999. This apparent trend may be the result of increasing water clarity in Lake Barkley. Clear water is believed to favor the growth of black crappie. Twenty percent of the crappie caught in 2008 were of sub-legal (<10.0 inches) length, compared to the 2005 crappie catch of more than 50% sub-legal (Table 35).

Morone anglers took 2,601 trips and fished for 11,162 hours to harvest 8,713 Morones (0.89 f/h) (Table 27). Anglers fishing specifically for Morone species accounted for about half of the Morone harvest. Only panfish and catfish anglers enjoyed a higher success than the 41% of Morone anglers who caught a Morone. Anglers caught 87,000 Morones in 2008, compared to a catch in 2005 of 142,000, and in 1999 of 31,000. In each of the three creels, white and yellow bass were caught in almost equal numbers. The current creel was the first during which anglers harvested more yellow bass than white bass. The best catch rate for Morones occurred in May and June (Table 36). Table 37 breaks down the specific catch of Morone species. White and yellow bass almost equally make up 97% of the Morone catch.

Anglers fishing for "anything" made 10,009 trips or 6.9% of all fishing trips in 2008. They spent almost 43,000 hours fishing.

Lake Barkley Angler Attitude Survey

Angler attitude surveys were distributed during the 2008 Lake Barkley creel survey. See appendix 2 for a summary of the questions and responses from anglers. Some questions were left off the summary due to small sample sizes. Overall, angers were satisfied with the specific fisheries for the common species of fish. One question of interest sought to identify the ability of anglers to identify yellow bass and white bass. To answer this question, anglers were shown a picture of either a yellow bass or a white bass and asked to identify the fish. When anglers were shown a white bass 41.5% answered correctly (N=272) while 15.4% didn't know, and 43.1% answered incorrectly, guessing striped bass the majority of the time (28.7%). When a picture of a yellow bass was shown, 33.8% of anglers answered correctly, 14.3% didn't know, and 51.9 % were incorrect, guessing hybrid striped bass 40.8% of the time. These results suggest that anglers have trouble identifying these species of fish. Semantics explains some of the confusion. Many anglers call any Morone species a "stripe". Regardless of which picture was shown first, the response was "stripe". When shown the second picture, many anglers were confused having already used the one name that they knew for these species of fish. Most people recognize that there is a difference between white bass and yellow bass, but do not know their names. The real confusion is between white bass, hybrid striped bass, and striped bass.

Lake Barkley

Black bass were collected by diurnal electrofishing (120 PPS) from 21 April–5 May 2008 at standardized sampling sites on Lake Barkley. A total of 1,296 black bass were collected at a rate of 129.60 f/h (Table 38). Spotted and smallmouth bass accounted for less than 5% of the total black bass sampled, and too few individuals were collected to look at the true population characteristics. Largemouth bass had a catch rate of 123.70 f/h. This catch rate lies below the historical average catch of largemouth bass (132.58 f/h) at Lake Barkley (Table 39). The CPUE of harvestable largemouth bass remains at or above average values while the catch rate of stock size fish remains within acceptable limits. The increased catch rate of small fish should maintain fishing success in the near future.

The catch rate of largemouth bass ≥20.0 in was 3.0 f/h, and is the highest recorded value since 1999 verifying the reports of fishing success from many bass anglers.

The PSD value (74) for largemouth bass is lower than in previous years (Table 40). However, this value is well above the twenty year average (61) for Lake Barkley, suggesting a better size distribution than in years past. The RSD_{15} (41) is well above the twenty year average. The PSD value met its objective goals (PSD of 55-75) established in the BLFMP. The RSD_{15} value met the objective goal of 20-40.

Age and growth data collected in 2007 was used with 2008 catch data to construct an age frequency table (Table 41). The catch in 2008 of age-1 fish, made up one fourth of the sample, but the combined catch of age 5-7 fish accounted for nearly 40% of the catch. Catch rates for each age-class of largemouth bass from the last 10 years can be found in Table 42. The annual mortality of largemouth bass older than a year was 29% in 2008 as determined using catch-curve regression (Table 43).

Lake-specific assessment scores from 2004-2008 are presented in Table 43. The score for Lake Barkley has varied between "fair" and "good" over the past five years. The score dropped from "good" to "fair" but only changed by one point. The decline was the result of a marked decrease in the catch rate of 12.0-14.9 in bass coupled with an improvement in the catch rate of bass greater than 20.0 inches. Table 44 lists the assessment parameters and their respective values determined from the past 10 years of sampling on Lake Barkley.

Largemouth bass were sampled in October 2008 to collect length-weight data and determine the strength of the 2008 year-class. Eight hundred fifteen largemouth bass were collected at a catch rate of 163.0 f/h (Table 45). The length-weight equation for largemouth bass at Lake Barkley is:

$$\text{Log}_{10}\,(\text{weight}) = -3.40917 + 3.08743 \times \text{Log}_{10}\,(\text{length})$$

Very few smallmouth bass (16) and spotted bass (2) were collected during the fall sample and therefore length-weight equations were not calculated for these samples.

Relative weights for the 2008 data are listed in Table 46 for all size-classes of largemouth bass. These values have decreased slightly for the past three years. This may be an indicator of density dependence in the population. As catch rates of harvestable largemouth bass increase, the overall condition of individual fish may decline slightly. Mean length of the age-0 cohort was higher than most years (6.2 in; Table 47). Since year-class-strength tends to be related to the relative size of age-0 fish during the fall of their first year, the 2008 year-class should contribute to the population in coming years. After a near-record year in 2007, year class strength (55.60 f/h) remains high. CPUE of age-0 largemouth bass ≥5.0 in (50.20 f/h) was also very high. Two very strong year-classes have followed two very poor year classes ensuring that a drop in the fishery should not be noticeable in coming years.

Redear sunfish were collected by targeted diurnal electrofishing (120 PPS) in May 2008. Unlike 2007 an effort was made to sample more varied habitats for redear sunfish. As a result, CPUE's are lower in 2008 and probably are a more realistic estimate of the true number of fish in the lake. We collected 287 redear sunfish ranging from 3.0-12.0 inches in 3.5 hours of sampling (Table 48). The sample is still dominated by adult fish, but a larger number of young and intermediate size fish were captured in 2008 (Table 49). Otoliths were removed from 118 redear sunfish ranging from 1-9 years in age (Table 50). Redear sunfish in Lake Barkley exhibit very good growth reaching 8.0 inches in their third year and 10.0 inches in their sixth year. Three-year-olds dominated the catch (Table 51), but larger fish were well represented as nearly 28% of the catch was greater than 10.0 inches. Unlike in 2007 when the population was dominated by older fish, this analysis suggests a relatively small number of trophy size fish which could be the result of increased harvest as angler interest increases for this species. A statewide population assessment indicates how the 2008 redear sunfish sample ranks in relation to criteria established from reservoirs throughout the state. The 2008 sample earned a perfect score and a ranking of "excellent" (Table 52).

Catfish sampling was conducted during 3.5 hours of low pulse electrofishing (15 PPS) in June. This method is becoming well known as a method for capturing blue catfish and flathead catfish in deeper water. However, it is not effective for channel catfish other than a small number of little fish (Table 53). Blue catfish from 4.0-36.0 inches were captured while flatheads were captured as large as 45.0 inches.

Because this is the first year of sampling, little comparison can be made with CPUE's. Age and growth data from 2004 was used with catch data from 2008 to construct an age frequency table (Table 54). Relative weight values of both blue and channel catfish indicate excellent condition and are listed in Table 55. The length-weight equations of blue and flathead catfish are:

Blue catfish	$Log_{10}(weight) = -3.70830 + 3.17948 \times Log_{10}(length)$
Flathead catfish	$Log_{10}(weight) = -3.56962 + 3.17540 \times Log_{10}(length)$

Trap nets were fished for crappie in Little River and Donaldson Creek embayments for a total of 87 net-nights (nn) from 21-31 October 2008. Six hundred fifty eight crappie were collected at a rate of 7.67 f/nn (Table 56). White crappie accounted for 66% of the total catch, and were collected at a rate of 5.08 f/nn. Black crappie were collected at a rate of 2.59 f/nn. The number of black crappie has increased in the catch of trap nets, but not to the magnitude seen at Kentucky Lake (Figure 3). The CPUE of harvestable-size (≥10.0 in) crappie was down slightly from 2007 at 1.60 f/nn (Table 57). In twenty-three years of sampling, this value has ranged from 0.55-3.37 f/nn. The CPUE of quality-size (≥8.0 in) crappie was 2.73 f/nn, which is below the management objective (4.0 f/nn) set in the BLFMP. In 2008, the PSD (32) and RSD_{10} (19) of white crappie are dramatically lower than 2007 values (Table 58). The 20-year average PSD and RSD_{10} values of white crappie are 59 and 27, respectively. The PSD (85) and RSD_{10} (18) values of black crappie also decreased from 2007, but PSD exceeded the 20-year average of 55. The length-weight equations of white and black crappie from Lake Barkley are:

White crappie	$Log_{10}(weight) = -3.56445 + 3.30192 \times Log_{10}(length)$
Black crappie	$Log_{10}(weight) = -3.54029 + 3.34350 \times Log_{10}(length)$

Otoliths were removed from 123 crappie to make age and growth determinations. White crappie were captured up to seven years old (Table 59), while black crappie were found to four years of age (Table 60). Age frequencies were estimated using age and growth data and catch data from 2008. The catch of black crappie was dominated by age-0 and age-1 fish (Table 61) while older black crappie were rarer in our catch. The catch of age-0 white crappie (3.99 f/nn) comprised 79% of the total catch (Table 62).

Assessment of the white and black crappie populations yielded a rating of "fair" at Lake Barkley in 2008 (Table 63). The assessment parameters that are lacking continue to be related to catch rates and overall catch of crappie is down in recent years. However, the parameter related to crappie growth remains high.

Lake Pennyrile

Lake Pennyrile was sampled by diurnal electrofishing on 18 April 2008. Largemouth bass were collected at a rate of 117.11 f/h. while bluegill and redear sunfish were collected at a rate of 278.82 f/h and 77.40 f/h, respectively (Table 64). The largemouth bass catch rate was slightly lower than that recorded in 2007 (123.4 f/h), but similar to the catch rates in previous years (Table 65). The CPUE of largemouth bass in all length groups is in line with catch rates from 2007 which are a bit lower than the historical average. This is the fourth year that a 12.0-15.0 in protective slot limit has been in place on Lake Pennyrile. The lower catch rates of largemouth bass <12.0 in suggest an improvement in the overall population size distribution. PSD and RSD_{15} values are listed in Table 66. These values are below the management objectives set in the LPFMP for PSD (40-50) and RSD_{15} (10), and are reflective of the high density of small fish and low numbers of larger fish in the population. Catch rates for each age class of largemouth bass were calculated using age and growth data from 2003 and catch data from 2008 (Table 67).

The new lake-specific assessment for largemouth bass at Lake Pennyrile is indicative of the management challenges that we've had in recent years. Since 2003 the assessment has ranged from "poor" to "good", but the 2008 assessment is "poor" (Table 68). The growth parameter used in the assessment was estimated in 2003, so we will collect an age and growth sample next year to see if there has been any improvement.
With the slot limit in place, we hope to see a decrease in the density of smaller fish in the population and an increase in the catch rates of fish over 15.0 in. While the catch rates were lower this year, they were lower for all sizes of fish, which could be caused by sampling conditions and timing of sampling.

We intend to examine the population over the next couple years to see if the slot limit is working. If the population does not show improvement, we'll consider other management options at that time.

The spring catch rates of bluegill and redear sunfish have been variable over the past seventeen years. CPUE for fish over 8.0 in. has ranged from 1.00-12.30 f/h for bluegill and 9.00-134.70 f/h for redear sunfish (Table 69). The 2008 sample was a drastic improvement over recent years. The lake specific assessment for bluegill has ranged from "poor" to "fair" since 2002 but ranked as "good" in 2008 (Table 70) while redear sunfish have fallen in the same range of scores as in past years (Table 71).

Lake Beshear

Largemouth bass were collected by diurnal electrofishing during May at Lake Beshear. A total of 129 largemouth bass were collected at a rate of 51.60 f/h (Table 72), which is down from 83.00 f/h reported from the 2007 sample. CPUE's of harvestable-size (≥12.0 in) and ≥15.0 in largemouth bass were 32.00 and 20.80 f/h, respectively (Table 73). One objective in the Lake Beshear Fish Management Plan (LBFMP) is to maintain a catch rate of 40.00 f/h for harvestable-size largemouth bass. This year the catch of harvestable size bass dropped below the objective, however this was probably attributed to an overall poor sample of the fishery. The poor sample was attributed to high muddy water conditions. Other objectives are to maintain a high catch rate of bass ≥15.0 and ≥20.0 inches. Ideally, these catch rates should be greater than 30.00 and 4.00 f/hr, respectively. The catch rate for the number of largemouth bass ≥18.0 in was well below the objective, while the catch rate for the larger (≥20.0 in) bass was very close (3.60 f/h).

Age frequency distributions were made using age data collected during the 2006 spring sample and this year's catch data. The age frequency data is presented in Table 74. A lake specific assessment rated the overall bass population as "fair" (Table 75). This is down from several years of "good" ratings. All the parameters dropped this year except growth, which was actually determined from 2006 data. The poor sample likely accounted for these assessment drops.

Largemouth bass were collected by diurnal electrofishing in October. Again a poor sample was collected, though this time the lake level was extremely low. The catch rate (40.40 f/h) was below that of the spring sample (Table 72). Relative weight data suggests that the larger bass (≥15.0 in) are healthy with regard to their length-weight ratio. Relative weight values were above 97 for these larger bass and averaged 93 for all bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$\text{Log}_{10}\,(\text{weight}) = -3.75128 + 3.39220 \times \text{Log}_{10}\,(\text{length})$$

Otoliths were removed from a sub sample of largemouth bass ≤ 8.0 in to determine the mean fall length of the age-0 cohort. The catch rate for this year class was 12.40 f/h (Table 76). The average length of the age-0 bass was 4.3 in.

Hematite Lake

Hematite Lake is a 90-acre sub-impoundment of Lake Barkley located within the Land Between the Lakes Recreational Area. The fisheries management objective for this lake is to establish a quality redear fishery, observed in the late 1980s before the lake was drained due to a levee failure. The harvest of redear sunfish is regulated by a creel limit of 10 redear ≥10.0 in. In spring 2002, the lake was sampled by electrofishing. During that study quality size (≥ 8.0 in) redear sunfish were collected at a catch rate of 16.00 f/h (Table 77). Since 2005, there has not been any quality size redear sunfish collected. The catch of redear sunfish 3.0 to 6.0 inches dominate the samples, with catch rates ranging from 88.67 to 348.00 f/h. Table 78 shows the length frequency for the 3 species of fish collected. The dense aquatic vegetation in this lake may provide too much cover for small sunfish, limiting the needed predation by bass to keep the sunfish population in balance.

The dense vegetation may also be limiting the ability to collect a good representative sample of the fish population. Suggested management for this fishery would be to reduce the amount of aquatic vegetation in the lake. This object could be accomplished by stocking grass carp at a rate of 6 per acre. Aquatic herbicides could be used annually to treat areas of the lake. A more practical management practice might be to lower the lake's water level during the winter months.

Lowering the water level 3 to 4 feet from November through February exposes weeds to air drying and freezing temperatures. This can be an effective weed control technique, especially if done in successive years, and it has other advantages related to fish population management. By lowering the water level, the fish are pooled together allowing predators to control the smaller fish that have eluded them in the vegetation. This reduces their numbers and prevents overpopulation, while providing more food for the fish that remain. The result is a better balanced and larger individual size fish population.

Lake Blythe

Lake Blythe is an 89 acre watershed lake located just north of Hopkinsville off Highway 41 in Christian County, Kentucky. The fishery in this lake is primarily largemouth bass, bluegill, redear, crappie and catfish. In recent years sampling has revealed a stunted bass population. Table 79 includes spring electrofishing data from 2008, which suggest that 86% of the bass population is less than 12.0 inches in length. The PSD value was 31 and RSD_{15} value was 9. These values also suggest the bass population is dominated by small bass. As a result, in 2008 a 12.0-15.0 in protective slot limit was added to this lake. The age frequency for bass collected in the spring is listed in Table 80. During the late summer the lake was partially drained to make repairs to the level, therefore no fall sample was collected. During the fall channel catfish were stocked at a rate of 50 fish per acre (4,450 total fish). This will be an every other year stocking, which began in 2008.

Kentucky Dam Tailwater and Lower Tennessee River

The lower Tennessee River was sampled using electrofishing (120 PPS) to collect all species of fish possible. Low pulse (15 PPS) electrofishing was used occasionally to collect catfish species from deeper pools of water. Sampling was conducted during September. Three entry points to the river were used to sample different sections of the river; tailwater, Haddock Ferry to sample the middle section and Paducah River Front to sample from the mouth up stream.

A total of 1,507 fish were collected that represented 38 species, excluding gizzard and threadfin shad which were extremely numerous. Table 81 shows the size distribution for all species collected. This table is divided into a sportfish and non-sportfish sections. Of the sportfish collected, largemouth bass had the highest catch rate (82.33 f/h). This high catch rate was boosted by one sampling run near a new bridge pier close to eastern shoreline, which yielded a catch rate for largemouth bass of 260.00 f/h. Of the non sportfish, longear sunfish had the highest catch rate at 63.50 f/h.

Mississippi River

Kentucky borders approximately 58 miles of the Mississippi River. Two areas of this portion of the Mississippi River were sampled using electrofishing (120 PPS) to collect all species of fish possible. Low pulse (15 PPS) electrofishing was used occasionally to collect catfish species from deeper pools of water. Sampling was conducted during October.

A total of 272 fish were collected that represented 18 species, excluding gizzard and threadfin shad which were extremely numerous. Table 82 shows the size distribution for all species collected. This table is divided into a sportfish and non-sportfish sections. Catfish species had the highest catch rate, with the majority of these being flathead catfish. Sampling around rock wing dikes yielded most of these fish. This was also true for the Morone species collected. When sampling around the down stream side of the wing dikes, having a second boat to chase fish floating in the swift current would be advised. The catch rate for silver carp is a low estimate due to their ability to elude the sampling field by jumping out of it.

Lower Cumberland River

The Cumberland River below Barkley dam was sampled from 22-25 September with six hours of electrofishing at three different locations. The majority of sampling was high pulse (120 PPS) DC electrofishing while some effort focused on catfish used low pulse (15 PPS) DC. Note that a chase boat was not used, so numbers of blue catfish are underestimated. Sampling areas focused on stretches of river with variable habitat types including changes in substrate, depths, and incoming tributaries, and were limited to areas with access to the river.

We captured 13 species of sportfish and 19 species of non-game fish excluding shad. Largemouth bass and catfish dominated the catch of sportfish while the majority of non-game fish were longear sunfish and freshwater drum (Table 83). Notable sportfish catches included four large striped bass that were captured just inside the mouth of a small tributary, and a number of distinct deep holes that provided habitat for good numbers and sizes of blue catfish. This section of river provides a generally overlooked opportunity for anglers.

Ohio River

The Ohio River was sampled above Smithland Dam at Birdsville and immediately below the dam south to the town of Smithland on 18 and 23 September. Nine sportfish species were collected and 8 non-game species were captured. The majority of the sportfish were collected in the tailwater area of Smithland Dam where catfish and white bass dominated the catch (Table 84). Low pulse electrofishing was a worthwhile method of sampling in the Smithland tailwater. Many of the blue catfish captured came from an area behind the first gate of the dam in fifty feet of water. Other areas that typically hold catfish were not sampled due to the number of fishermen in the area.

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

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Water Conditions	Pertinent sampling comments
Beshear		black bass	4/7/2008	900	shock	sun / calm	57.5	high	18	Falling / calm	The lake was above normal pool level, but had been higher and was falling, muddy water (poor sample).
Beshear		black bass	9/30/2008	900	shock	clear / cold front	73.5	low	68	choppy	Poor fish sample due to low water, and passing cold front.
Blythe		black bass	4/14/2008	900	shock	cold front	54.7	high	15	muddy	High water level, muddy water color and cold
Hematite		sportfish	4/14/2008	900	shock	cloudy, cool	57.2	normal	54	good	Dense vegetation.
Kentucky	Blood River	crappie	10/21-24/2008	900	trapnet	overcast, rainy	65.0	355.1	clear	stable	Good sample
Kentucky	Jonathan	crappie	10/28-31/2008	900	trapnet	cold	55.7	355.4	clear	rough	Good sample
Kentucky	Blood River	black bass	4/29/2008	900	shock	cold front	58.0	358.6	36	Falling / calm	Cold front moved fish out of shallow water, along with falling water level.
Kentucky	Jonathan	black bass	5/6/2008	900	shock	cloudy	65.0	358.5	42	choppy	Stable water, TVA sampled embayment the previous day.
Kentucky	Big Bear	black bass	5/7/2008	900	shock	cloudy	66.4	359.8	42	choppy	Good sample
Kentucky	Sugar Bay	black bass	5/1/2008	900	shock	cloudy	65.0	358.5	42	choppy	Windy condition effected sample.
Kentucky	Blood River	black bass	10/14/2008	900	shock	cloudy	73.0	355.0	33	calm	Good sample
Kentucky	Jonathan	black bass	10/16-17/2008	900	shock	cool / windy	72.0	355.5	33	choppy	First day we got rained out, second day was windy.
Kentucky	Patterson	catfish	6/11/2008	900	shock	clear	83.0	359.0	47	calm	Low pulse (15 pps) to collect catfish along creek channels.
Kentucky	Ledbetter	catfish	6/12/2008	900	shock	windy / clear	82.0	359.0	47	calm	Low pulse (15 pps) to collect catfish along creek channels.
Kentucky	Patterson	redear	5/13/2008	900	shock	calm cloudy	66.9	359.4	46	calm	Good sample
Kentucky	Fenton	redear	5/21/2008	900	shock	sunny	70.6	359.7	62	calm	Good sample
Tennessee River	Paducah	everything	9/16/2008	900	shock	sunny	76.7	302.7	clear	calm	Limited areas to sample
Tennessee River	Haddox Ferry	everything	9/17/2008	900	shock	sunny	77.1	302.1	clear	calm	Limited areas to sample
Tennessee River	KY Dam Tailwater	everything	9/15/2008	900	shock	overcast	78.6	302.1	clear	calm	Limited areas to sample
Mississippi River	Wickliffe	everything	10/2/2008	900	shock	sunny	71.9	18.0	muddy	swift	best samples around wing dikes, elevation was 18 at Cairo Gauge
Mississippi River	Columbus Belmont	everything	10/3/2008	900	shock	sunny	73.5	18.0	muddy	swift	best samples around wing dikes, elevation was 18 at Cairo Gauge
Barkley	Demumbers	black bass	4/21/2008	900	shock	sunny	62.0	358.3		calm	water dropped from 365.0 to 358 just prior to sampling
Barkley	Donaldson	black bass	4/28/2008	900	shock	sunny	63.9	358.4		calm	Good sample
Barkley	Little River	black bass	4/30/2008	900	shock	sunny	63.0	358.0	28	calm	Good sample
Barkley	Eddy Creek	black bass	5/5/2008	900	shock	sunny	67.3	360.0	6	muddy	2 runs done farther out in bay due to muddy water farther back
Barkley	Eddy Creek	black bass	10/13/2008	900	shock		71.1	355.0		calm	good sample
Barkley	Little River	black bass	10/15/2008	900	shock	sunny	72.5	355.0		calm	good sample
Barkley	Little River	crappie	10/20-24/2008	900	trapnet	cold/rainy	63.0	355.0		choppy	conditions fairly constant thru week
Barkley	Donaldson	crappie	10/27-31/2008	900	trapnet	clear/sunny	57.0	355.0		calm	conditions fairly constant thru week
Barkley	Donaldson	catfish	6/18-19/2008	900	shock	sunny	82.5	359.3		calm	good samples
Barkley	Cravens	redear	5/12/2008	900	shock	sunny	64.9	359.8	20	calm	mostly males in bushes
Barkley	Devil's Elbow	redear	5/19/2008	900	shock	sunny	67.8	359.6	32	slight chop	females with eggs and flowing in bushes...4" fish with eggs
Barkley	Donaldson	redear	5/29/2008	900	shock	sunny	74.3	360+	36	calm	most fish have moved out, only in select areas/ elevation over summer pool
Pennyrile		sportfish	4/18/2008	900	shock	cloudy	74.0		24	calm	1 first time dipper/otherwise good sample
Ohio River	Birdsville/Smithland	everything	9/18,23/2008	900	shock	sunny	76.8	14.2	18	calm	big mayfly hatch/good sample
Cumberland River	Barkley Tailwater	everything	9/22/2008	900	shock	sunny	74.9	304.0	24	calm	good sample
Cumberland River	Quarry	everything	9/24/2008	900	shock	sunny	75.0	304.0		calm	good sample
Cumberland River	Dycusburg	everything	9/25/2008	900	shock	sunny	76.0	304.0		calm	good sample

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 10.0 hours (20 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during May 2008.

	Inch Class																					
Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Std Err
Blood River																							
Smallmouth bass		1	1	1						2	1			1							7	2.80	2.33
Spotted bass				2	3	2	1	1	1	5	5	2		1							23	9.20	4.50
Largemouth bass	2	2	26	30	43	39	38	16	7	8	22	22	14	12	8	4	4	6	1		304	121.60	31.83
Big Bear																							
Smallmouth bass			1		1			1													3	1.20	0.80
Spotted bass				1					1	3	5	7	6	1							24	9.60	9.11
Largemouth bass	5	7	19	34	52	38	37	25	8	9	19	21	32	22	20	9	4	4	3		368	147.20	24.19
Sugar Bay																							
Smallmouth bass		2	1		1					1			1	1							7	2.80	2.80
Spotted bass		2	1	1			1		2	3	2	1									13	5.20	3.07
Largemouth bass	2	18	44	96	74	59	28	8	6	5	14	19	15	7	12	4	1				412	164.80	12.53
Jonathan																							
Smallmouth bass								1													1	0.33	0.33
Spotted bass	1							2	1	1	1	1									7	2.33	1.96
Largemouth bass	1	1	14	34	39	34	42	21	12	13	15	33	21	19	9	8	9	3	2	1	331	110.33	15.21
TOTAL																							
Smallmouth bass		3	3	1	2			2		3	1		1	2							18	1.71	0.85
Spotted bass	1	2	1	4	3	2	2	3	5	12	13	11	6	2							67	6.38	2.47
Largemouth bass	10	28	103	194	208	170	145	70	33	35	70	95	82	60	49	25	18	13	6	1	1,415	134.76	11.10

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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Kentucky Lake during May 1998 - 2008.

	Mean length age-3 at	Age-1		Length Group										Total	
				<8.0 in		12.0 - 14.9 in		≥15.0 in		≥18.0 in		≥20.0 in			
Year	capture	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
1998	12.7	51.95	3.62	18.00	1.99	9.83	1.80	10.43	1.76	3.91	0.79	1.39	0.29	46.78	4.67
1999	13.9	41.89	3.44	18.70	3.33	11.40	1.53	11.90	1.68	3.10	0.66	0.80	0.30	52.00	4.90
2000	13.9	21.80	2.17	19.43	3.84	19.05	1.83	22.48	3.55	5.14	0.86	1.52	0.41	74.38	6.21
2001	14.4	73.90	4.28	63.70	6.99	12.80	1.55	12.60	1.49	2.80	0.60	0.40	0.18	116.70	9.63
2002	13.7	35.50	2.83	32.40	5.36	21.80	2.26	13.10	1.14	4.00	0.73	0.90	0.34	94.00	5.90
2003	13.7	30.90	2.70	21.81	3.75	43.62	5.20	15.62	1.92	4.38	0.90	0.95	0.26	105.43	11.40
2004	13.7	11.99	1.56	17.70	2.60	22.70	2.14	18.10	1.84	3.70	0.87	1.30	0.41	83.60	5.77
2005	13.8	28.70	3.01	24.50	2.49	46.50	4.36	23.60	2.21	3.70	0.70	0.80	0.37	107.40	7.59
2006	13.8	31.79	7.05	28.30	6.30	23.60	2.44	20.90	2.32	3.30	0.64	0.60	0.21	85.40	5.51
2007	13.8	22.16	3.95	18.00	3.29	28.75	2.80	26.08	1.74	5.42	0.74	1.25	0.40	93.33	7.06
2008	13.8	73.05	8.57	51.71	7.22	19.05	2.26	24.19	3.08	6.00	0.96	1.90	0.42	134.76	11.10
Average	13.7	38.51		28.57		23.55		18.09		4.13		1.07		90.34	

(Kentucky Bass Database.xls)
Data for 1985 - 1997 is listed in previous years report.

Table 4. PSD and RSD values calculated for black bass species collected during diurnal electrofishing at Kentucky Lake during May 2008; 95% confidence limits are in parentheses.

Area	Species	No. Fish ≥ 8.0 in	PSD	(+/- 95%)	RSD[a]	(+/- 95%)
Blood River	Largemouth bass	201	50	(+/- 7)	24	(+/- 6)
Big Bear Creek	Largemouth bass	251	57	(+/- 6)	37	(+/- 6)
Jonathan Creek	Largemouth bass	242	43	(+/- 7)	22	(+/- 6)
Sugar Bay	Largemouth bass	178	55	(+/- 6)	30	(+/- 6)
TOTAL	Smallmouth bass	11	64	(+/- 30)	27	(+/- 28)
	Spotted bass	59	83	(+/- 10)	32	(+/- 12)
	Largemouth bass	872	52	(+/- 3)	29	(+/- 3)

[a]Largemouth bass = RSD_{15}, Spotted and Smallmouth bass = RSD_{14}
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Table 5. Mean back-calculated length (in) at each annulus of largemouth bass including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from largemouth bass collected following a FLW bass tournament in July, and during fall sampling in October 2008.

		Age												
Year-Class	N	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	49	7.8												
2006	11	7.3	11.9											
2005	36	7.8	11.9	14.1										
2004	19	7.6	11.5	13.7	15.1									
2003	24	7.4	10.6	12.8	14.3	15.8								
2002	28	7.2	10.7	12.8	14.4	15.6	16.7							
2001	24	7.3	11.0	13.3	14.9	16.0	16.9	17.9						
2000	22	6.6	9.5	11.9	13.6	15.0	16.3	17.4	18.4					
1999	2	5.2	8.0	10.3	12.1	13.7	15.1	16.3	17.3	18.5				
1998	2	7.1	8.3	10.4	11.8	13.2	14.6	16.2	17.2	18.4	19.0			
1996	1	5.0	8.1	10.2	11.6	12.5	13.3	14.5	15.4	16.4	17.2	18.1	19.1	
1995	1	5.1	7.4	9.0	10.5	12.5	13.8	15.1	16.4	17.7	18.7	19.7	20.7	21.2
Mean		7.4	10.9	13.1	14.3	15.5	16.5	17.4	18.1	18.0	18.5	18.9	19.9	21.2
Smallest		4.4	7.1	9.0	10.5	11.2	13.3	14.4	15.4	16.4	17.2	18.1	19.1	21.2
Largest		11.9	15.1	16.2	17.1	18.4	19.5	20.5	20.1	19.0	19.9	19.7	20.7	21.2
Std. Error		0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.6	0.8	0.8	
Low 95% CI		7.2	10.6	12.8	14.0	15.2	16.2	17.1	17.6	17.2	17.3	17.4	18.3	
High 95% CI		7.6	11.1	13.3	14.6	15.8	16.8	17.8	18.5	18.7	19.6	20.5	21.5	

* Intercept = 0.
wfdwragk.d08

Table 6. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing for 10.5 hours (21 x 30-minute runs) at Kentucky Lake during May 2008.

	Inch Class																					
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	Std Err
1	10	28	103	194	208	170	54													767	54.2	73.05	8.57
2							91	70	27	14										202	14.3	19.24	1.85
3									6	21	64	29	10							130	9.2	12.38	1.20
4											6	29	21	10						66	4.7	6.29	0.77
5												29	51	40	49	15	5			189	13.3	18.00	2.34
6												10		10			5			25	1.8	2.38	0.29
7																10	9	4		23	1.6	2.19	0.35
8																		4	6	10	0.7	0.95	0.27
9																		4		4	0.3	0.38	0.12
Total	10	28	103	194	208	170	145	70	33	35	70	97	82	60	49	25	19	12	6	1,416		118.00	
%	1	2	7	14	15	12	10	5	2	2	5	7	6	4	3	2	1	1	0		100		

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Table 7. Electrofishing CPUE (fish/hr) for each age of largemouth bass collected from Kentucky Lake in spring samples.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	51.95	41.89	21.80	73.90	35.50	30.90	11.99	28.70	31.79	22.16	73.08
2	22.51	26.34	14.54	17.71	29.68	26.94	12.21	12.21	10.65	18.16	18.20
3	14.37	15.76	10.54	7.10	11.18	22.12	6.13	30.14	15.12	18.87	12.32
4	18.99	20.63	15.51	9.04	8.70	18.29	7.62	10.54	7.10	7.99	6.23
5	3.81	4.97	3.96	2.43	2.24	2.35	6.96	20.66	17.00	20.22	17.93
6	2.77	3.33	2.35	1.69	1.66	2.47	0.95	3.12	1.99	2.83	2.29
7	0.33	0.38	0.23	0.21	0.23	0.31	0.10	1.44	1.25	2.13	2.22
8	0.66	0.76	0.45	0.43	0.45	0.62	0.20	0.30	0.30	0.61	0.98
9	0.33	0.38	0.23	0.21	0.23	0.31	0.10	0.20	0.10	0.28	0.41

(Kentucky Bass Database.xls)

Table 8. Population assessment of largemouth bass based on spring sampling at Kentucky Lake from 2003-2007, using the Kentucky Lake specific assessment criteria.

	2004		2005		2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3)	13.7	4	13.8	4	13.8	4	13.8	4	13.8	4
Recruitment (Spring CPUE of age-1)	11.99	1	28.70	2	31.79	2	22.16	1	73.08	4
Size Structure (Spring CPUE of 12.0-14.9 in.)	22.70	2	46.50	3	23.60	2	28.75	2	19.05	2
Size Structure (Spring CPUE of ≥ 15.0 in.)	18.10	2	23.60	3	20.90	2	26.08	4	24.19	3
Size Structure (Spring CPUE of ≥ 20.0 in.)	1.30	1	0.80	1	0.60	1	1.25	1	1.90	2
Instantaneous Mortality (Z)	0.697		0.639		0.666		0.560		0.575	
Annual Mortality (A)%	50.2		47.2		48.6		32.2		43.7	
Total Score	10		13		11		12		15	
Assessment Rating	F		G		F		G		G	

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

(Kentucky Bass Database.xls)

Table 9. Species composition, relative abundance and CPUE (fish/hr) of black bass collected during 5.0 hours (10 x 30-minute runs) of diurnal electrofishing runs for black bass at Kentucky Lake during October 2008.

	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
Blood River																						
Smallmouth bass		6	4	1		7	10		1	2	2	2			1					36	14.40	3.19
Spotted bass	1		2		1	1	1		1		1	1								9	3.60	1.47
Largemouth bass	6	20	35	36	21	15	43	47	30	16	14	11	7	5	5	1	2	1		315	126.00	7.67
Jonathan																						
Smallmouth bass			3			2	2		2		1		1		1		1		1	14	5.60	2.04
Spotted bass		1		1	1	3		1	1		2	3	1							14	5.60	4.17
Largemouth bass	3	4	15	25	22	14	75	99	62	25	14	20	21	16	12	2	3	6	1	439	175.60	27.15
TOTAL																						
Smallmouth bass		6	7	1		9	12		3	2	3	2	1		2		1		1	50	10.00	2.31
Spotted bass	1	1	2	1	2	4	1	1	2		3	4	1							23	4.60	2.11
Largemouth bass	9	24	50	61	43	29	118	146	92	41	28	31	28	21	17	3	5	7	1	754	150.80	15.66

wfdwrky.d08

Table 10. Number of bass and relative weight (Wr) for each length group of black bass collected at Kentucky Lake during October 2008. Standard errors are 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	Blood River	135	91	(0.79)	41	89	(1.52)	21	91	(1.84)
	Jonathan Creek	250	92	(0.58)	59	91	(1.10)	61	92	(1.37)
	Total	385	92	(0.47)	100	90	(0.90)	82	92	(1.12)

		Length Group								
		7.0-10.9 in			11.0-13.9 in			≥ 14.0 in		
Species	Area	No.	Wr		No.	Wr		No.	Wr	
Spotted bass	Blood River	3	97	(4.10)	2	76	(8.45)	1	73	
	Jonathan Creek	5	102	(3.51)	3	79	(14.58)	4	99	(2.90)
	Total	8	100	(2.64)	5	78	(8.47)	5	94	(5.74)
Smallmouth bass	Blood River	17	93	(3.56)	5	83	(2.73)	3	81	(4.19)
	Jonathan Creek	4	91	(7.13)	3	83	(7.78)	4	86	(5.37)
	Total	21	93	(3.12)	8	83	(3.03)	7	84	(3.41)

wfdwrky.d08

Table 11. 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.

Year Class	Age 0[A] Mean Length	Std Err	Age 0[A] CPUE	Std Err	Age 0 ≥5.0 in[A] CPUE	Std Err	Age 1[B] CPUE	Std Err
1998	6.4	0.15	27.66	5.02	21.92	4.51	41.89	6.40
1999	4.3	0.08	43.56	12.16	9.56	2.78	21.80	4.04
2000	6.2	0.11	42.20	3.62	32.40	3.38	73.90	7.96
2001	5.6	0.08	23.20	4.80	18.40	3.66	35.50	5.26
2002	5.7	0.12	36.20	9.62	23.40	4.13	30.90	0.00
2003	4.9	0.08	30.67	5.57	15.67	2.01	11.99	0.00
2004	4.6	0.09	26.00	6.16	9.83	1.66	28.70	5.60
2005	5.0	0.14	17.80	4.07	10.00	1.71	31.79	6.69
2006	4.8	0.13	19.00	3.77	8.80	1.72	22.16	3.95
2007	7.1	0.06	122.20	26.51	106.40	24.60	73.05	8.57
2008	5.8	0.08	33.80	6.94	27.20	4.81		
Average	5.5		38.39		25.78		37.17	

[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.

[B] Data from diurnal electrofishing samples collected the following spring (April/May).
Data from 1990 to 1997 is listed in previous years reports.

wfdwrky.dxx, wfdwragk.dxx, wfdpsdky.dxx

Table 12. Species composition, relative abundance, and CPUE (fish/net-night) of crappie collected by trap nets fished during 80 net-nights in two embayments of Kentucky Lake during October 2007.

		Inch Class														
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std Err
Blood River	White Crappie	6	8	1	1			2	6	1		4		29	0.73	0.16
	Black Crappie	39	15	5	12	16	27	53	47	87	100	49	12	462	11.55	1.44
Jonathan Cr.	White Crappie	2	7	1	1	1			4	2	7	1	2	28	0.70	0.17
	Black Crappie	14	9	1		19	115	197	79	187	158	64	3	846	21.15	2.90
TOTAL	White Crappie	8	15	2	2	1		2	10	3	7	5	2	57	0.71	0.12
	Black Crappie	53	24	6	12	35	142	250	126	274	258	113	15	1,308	16.35	1.70

wfdtpntk.d07

Table 13. Crappie population parameters used to manage the population at Kentucky Lake, with values determined from fall trap netting.

Year	Total CPUE (f/nn) excluding age-0			CPUE (f/nn) age-0			Mean length (in) age-2 at capture			CPUE (f/nn) for crappie ≥8.0 in			CPUE (f/nn) age-1			CPUE (f/nn) for crappie >10.0 in		
	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
1998	9.60	31.27	40.87	9.49	8.64	18.13	9.3	9.3	9.3	5.75	11.27	17.02	3.21	17.49	20.70	1.68	1.34	3.02
1999	5.40	21.66	27.06	0.95	1.00	1.95	9.5	8.9	9.1	2.30	12.66	14.96	3.42	6.30	9.72	1.26	1.83	3.09
2000	2.70	18.63	21.33	0.45	1.31	1.76	10.0	8.9	9.4	2.38	10.57	12.95	1.01	7.56	8.57	0.77	2.17	2.94
2001	4.69	22.59	27.28	26.76	24.52	51.28	10.8	9.3	9.8	2.21	12.55	14.76	2.34	9.67	12.01	1.29	3.17	4.46
2002	3.90	15.14	19.04	0.71	3.06	3.77	10.8	9.9	10.4	2.74	8.60	11.34	3.30	9.80	13.10	0.68	4.21	4.89
2003 [A]	3.75	20.33	24.08	10.46	5.40	15.86	10.8	9.9	10.4	2.55	6.20	8.75	2.34	15.52	17.86	1.35	1.76	3.11
2004	7.47	32.46	39.93	0.65	0.98	1.63	10.8	9.2	9.7	2.71	11.67	14.38	6.20	18.60	24.80	1.09	2.99	4.08
2005 [A]	3.91	22.75	26.66	2.29	1.92	4.21	10.8	9.2	9.7	2.45	13.78	16.23	2.55	10.31	12.86	1.12	3.42	4.54
2006 [A]	2.62	16.07	18.69	1.24	1.18	2.42	10.8	9.2	9.7	1.60	11.86	13.46	1.68	6.60	8.28	1.10	2.78	3.88
2007	1.50	13.59	15.09	0.48	1.88	2.36	11.2	10.2	10.7	1.50	11.73	13.23	0.85	7.21	8.06	0.74	5.50	6.24
2008 [A]	0.36	14.92	15.28	0.35	1.43	1.78	11.2	10.2	10.7	0.36	12.95	13.31	0.16	6.15	6.31	0.21	8.25	8.46
Average	4.17	20.85	25.03	4.89	4.67	9.56	10.5	9.5	9.9	2.41	11.26	13.67	2.46	10.47	12.93	1.03	3.40	4.43

[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 1997 is listed in previous years reports.

Kentucky Lake Crappie Database

Table 14. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected with trap nets (80 net-nights) at Kentucky Lake during October 2008. 95% confidence interval is in parentheses.

Location	Species	N	PSD	RSD_{10}
Blood River	White Crappie	14	93 (± 14)	36 (± 26)
	Black Crappie	403	86 (± 3)	62 (± 5)
Jonathan Creek	White Crappie	18	89 (± 15)	67 (± 22)
	Black Crappie	822	83 (± 3)	50 (± 4)
Total	White Crappie	32	90 (± 10)	53 (± 18)
	Black Crappie	1,225	84 (± 2)	54 (± 3)

wfdtpntk.d08

Table 15. Age frequency and CPUE (fish/nn) of white crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October 2008. Age data was obtained using otoliths.

	Inch Class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std Err
	8	15	2	2	1								28	49.1	0.35	0.08
1							2	10	1				13	22.8	0.16	0.05
2									2	6	1		9	15.8	0.11	0.04
3											1		1	1.8	0.01	
4										1	3	2	6	10.5	0.08	0.03
Total	8	15	2	2	1		2	10	3	7	5	2	57		0.71	
%	14	26	4	4	2		4	18	5	12	9	4		100		

wfdtpntk.d08, wfdtpagk.d07

Table 16. Age frequency and CPUE (fish/nn) of black crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October 2008. Age data was obtained using otoliths.

	Inch Class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std Err
0	53	24	6	9	11	11							114	8.7	1.43	0.26
1				3	24	131	250	45	39				492	37.6	6.15	0.84
2								72	196	22			290	22.2	3.63	0.45
3									13	56	6		75	5.7	0.94	0.13
4								9	13	168	94	15	299	22.9	3.74	0.50
5									13	12	6		31	2.4	0.39	0.05
9											6		6	0.5	0.08	0.01
Total	53	24	6	12	35	142	250	126	274	258	112	15	1,307		16.34	
%	4	2	0	1	3	11	19	10	21	20	9	1		100		

wfdtpntk.d08, wfdtnagk.d07

Table 17. Population assessment determined from white and black crappie based on fall trap netting at Kentucky Lake from 2004-2008, using the Kentucky Lake crappie specific assessment criteria.

	2004		2005		2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Population Density (CPUE of age-1 and older crappie)	39.93	4	26.66	3	18.69	2	15.09	2	15.29	2
Recruitment (CPUE of age-1 crappie)	24.80	4	12.86	2	8.28	1	8.06	1	6.31	1
Recruitment (CPUE of age-0 crappie)	1.63	1	4.21	1	2.42	1	2.35	1	1.78	1
Size Structure (CPUE of > 8.0 in)	14.38	4	16.24	4	13.46	4	13.23	3	13.31	4
Growth (Mean age-2 length at capture)	9.7	4	9.7	4	9.7	4	10.7	4	10.7	4
Instantaneous Mortality (Z)	0.649		0.788		0.729		0.872		0.4399	
Annual Mortality (A)%	47.7		54.5		51.7		58.2		35.6	
Total Score:		17		14		12		11		12
Assessment Rating:		G		G		F		F		F

Rating
5 - 7 = Poor (P)
8 - 12 = Fair (F)
13 - 17 = Good (G)
18 - 20 = Excellent (E)

WFDTPNTK.D08, WFDTPNTK.D07, WFDTPNTK.D06, WFDTPNTK.D05, WFDTPNTK.D04

Table 18. Length frequency and CPUE (fish/hr) of blue and channel catfish collected from Kentucky Lake in June 2008 using low pulse (15 PPS) electrofishing around mainlake channel drops. The total sample time was 3.5 hours (7 - 0.5 hours runs).

	Inch Class																																
Species	5	6	7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	37	38	39	40	41	44	46	Total	CPUE	Std Err
Blue catfish					3	3	3	6	4	7	6	1		3	2	10	6	3	8	5	2	2	3	2	1	2		1		1		1	85	24.29	10.63
Flathead catfish		1		2		1				1			1	1				1	1		1						1	1			1		13	3.71	1.02
Channel catfish	1	2	1	2	2	2	2	1		1	2		1	2			1																20	5.71	2.20

wfdcrlok.d08

Table 19. Relative weight (Wr) of each length group of blue and channel catfish collected at Kentucky Lake during June 2008. Fish were collected low pulse (15 PPS) electrofishing along the main and secondary river channels.

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
	30	106	5.66	44	116	3.2	8	105	8.3	82	112	2.85

	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
	7	84	9.79	7	125	6.41				14	104	7.96

wfdcflpk.d08

Table 20. Species composition, relative abundance, and CPUE (fish/hr) of redear sunfish collected during 2.75 hours (11 runs; each 900s) of diurnal electrofishing at Kentucky Lake on 13 and 21 May, 2008.

	Inch Class												
Species	3	4	5	6	7	8	9	10	11	12	Total	CPUE	Std Err
Redear Sunfish	1	1		6	9	32	57	35	6	2	149	99.33	27.89

wfdrek.d08

Table 21. Spring diurnal electrofishing CPUE (fish/hr) of each length group of redear sunfish collected at Kentucky Lake during May in 2008.

	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
2008	0.00	0.00	1.45	0.61	21.82	2.31	144.73	17.72	20.73	3.99	168.00	17.73

wfdrek.d08

Table 22. 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 in the May 2008.

		Age					
Year-Class	N	1	2	3	4	5	6
2007	4	4.7					
2006	14	3.6	6.9				
2005	17	3.4	6.3	8.6			
2004	3	4.5	7.2	9.4	10.5		
2003	1	3.0	6.1	7.8	9.1	10.5	
2002	1	3.2	6.2	7.3	8.3	8.8	9.2
Mean		3.7	6.6	8.7	9.8	9.7	9.2
Smallest		2.2	4.3	7.1	8.3	8.8	9.2
Largest		6.7	8.6	11.3	12.1	10.5	9.2
Std Err		0.1	0.2	0.2	0.6	0.8	
Low 95% CI		3.4	6.3	8.2	8.6	8.0	
High 95% CI		4.0	6.9	9.1	11.0	11.3	

* Intercept = 0.
wfdreagk.d08

Table 23. Age frequency and CPUE (fish/hr) of redear sunfish collected during 2.75 hours (11 runs; 900s each) of electrofishing at Kentucky Lake during late May 2008.

	Inch Class												
Age	3	4	5	6	7	8	9	10	11	Total	Percent	CPUE	Std Err
1	1	2		4						7	2.0	2.64	0.72
2			1	13	31	12				57	12.0	20.59	2.01
3					12	104	169		1	286	62.0	103.96	11.77
4								37		37	8.0	13.58	2.55
5								19		19	4.0	6.79	1.28
6							56			56	12.0	20.45	2.98
Total	1	2	1	17	43	116	225	56	1	462		168.01	
%	0.2	0.4	0.2	3.9	9.3	25.1	48.7	12.1	0.2		100.0		

wfdrek.d08
wfdreagk.d08

Table 24. Lake-specific population assessment of redear sunfish based on spring sampling at Kentucky Lake in May 2008.

	2008	
Parameter	Value	Score
Mean length age-3 at capture	8.8	4
Years to 8.0 inches	3	4
Spring CPUE ≥8.0 inches	144.73	4
Spring CPUE ≥ 10.0 inches	20.73	4
Instantaneous Mortality (z)	0.270	
Annual Mortality (A)%	23.7	
Total Score		16
Assessment Rating		E

Rating
4-6 = Poor (P)
7-10 = Fair (F)
11-13 = Good (G)
14-16 = Excellent (E)

(KREDB) Kentucky Lake Redear Database

Table 25. Fishery statistics derived from a creel survey at Lake Barkley (45,600) from 1 March through 31 October 2008.

Fishing Trips			
	No. of fishing trips (per acre)	145,774	(3.2)
	Average trip length (hours)	4.29	
Fishing Pressure			
	Total angler-hours (S.E.)	625,656	(21,386)
	Angler-hours/acre	13.7	
Catch / Harvest			
	No. of fish caught (S.E.)	1,032,144	(106,870)
	No. of fish harvested (S.E.)	345,581	(46,368)
	Pounds of fish harvested	269,374	
Harvest Rates			
	Fish/hour	0.46	
	Fish/acre	7.58	
	Pounds/acre	5.91	
Catch Rates			
	Fish/hour	1.55	
	Fish/acre	22.63	
Miscellaneous Characteristics (%)			
	Male	85.21	
	Female	14.79	
	Resident	71.65	
	Non-resident	28.35	
Method (%)			
	Still fishing	34.53	
	Casting	52.59	
	Trolling	0.60	
	Fly Rod	0.07	
	Spider Rig	0.53	
	Crappie Casting	4.22	
	Crappie Still fishing	7.46	
Mode (%)			
	Boat	81.30	
	Bank	14.42	
	Dock	4.28	

Table 26. Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Lake Barkley (45,600 a) from the 1 March to 31 October 2008 creel survey.

		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									2,750	8,658	8,760	2,699	1,681	357											
	R		42	42	42	461	880	1,759	3,057	252	42	42		169												
Black crappie	H									1,488	3,283	2,320	1,007	263	132											
	R					47	187	1,170	889	100	150	348														
Largemouth bass	H														8,818	10,814	6,776	3,899	1,996	1,578	650	93	93	46	46	
	R							19,041	3,050	52,041	13,098	94,346	37,965	70,183	18,082	14,372	9,468	6,013	2,431	2,047	1,024	341	256	128	85	
Smallmouth bass	H														133	530	88	177	221	44	88					
	R							1,344	81	1,548	530	2,159	815	1,100	674	337	412	337	75	37	38					
Spotted bass	H									43			128	85	42											
	R							170	42	467	170	849	382	552	85	42	41									
Bluegill	H			59	1,064	23,528	87,905	54,386	3,429																	
	R		165	8,349	60,088	87,825	25,540	7,250		110																
Redear sunfish	H					124	932	1,989	3,169	3,666	1,491	870	63													
	R			271	54	487	757	812	162	216	108	54	55													
Longear sunfish	H				1,294	1,336	459																			
	R			1,621	16,528	8,788																				
Warmouth	H						60	119																		
	R				190	266	342	151																		
Green sunfish	R				279	419																				
Channel catfish	H								427	1,174	160	2,667	1,547	6,881	9,122	6,988	6,454	7,788	2,454	4,854	1,334	1,174	480	373	320	213
	R			134		537	268	1,923	313	1,699	134	1,878	313	492	581	358	89	179		313	89	268		226			
Blue catfish	H								73	697	367	1,321	991	1,908	1,394	1,394	624	917	404	514	257	440	73	404	183	183
	R					1,317		285		498	214	391		107	142	107	142	249	36	36	36			107	34	
Flathead catfish	H										42	42						84								
	R							41		41		57								83						
Bullhead	H									80	80		39													
	R										48															
White bass	H						50	503	553	1,660	854	855	1,710	1,157	352	101	51									
	R			171		399	342	2,850	969	11,629	2,052	10,318	2,736	2,052	570	627	172									
Striped bass	H															89						44				
	R							1,251		50		50		300	220	125				31						
Hybrid striped bass	H															24	48		23							
	R											29				29										
Yellow bass	H					127	676	3,845	3,254	2,240	127	42														
	R			269	45	4,715	6,511	10,912	4,221	3,862	494	404														
Sauger	H																	34								
	R										54															
Sucker	R							54																		
Drum	H							49	98	98	197	49	49	148	49		49	51								
	R				42	466	169	1,694	466	1,736	127	1,440	212	974	1,270	847	127	804	85	381	254	677	169	720		42
Skipjack herring	H					98	98	98	49	49	98	343	245			245	246									
	R					53	53	264	264	1,163	106	846	317	317		106										
Gar	R																					37		37		
Rainbow trout	R													73												
Golden shiner	H					35		34																		
	R					280	280	280	139																	
Blacknose Crappie	H												54													
Illegal Black bass	H									43	87	43	43	433												
Illegal Striper or Hybrid	H											53	54													
Illegal Bl. Crappie	H								236																	
Illegal Wh. Crappie	H								204																	
Illegal other	H						718																			

Table 26 (cont'd). Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Lake Barkley (45,600 a) from the 1 March to 31 October 2008 creel survey.

Species		Inch Class																					Total
		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	44	45	46	47	48	
White crappie	H																						24,905
	R																						6,788
Black crappie	H																						8,493
	R																						2,891
Largemouth bass	H																						34,809
	R																						343,971
Smallmouth bass	H																						1,281
	R																						9,487
Spotted bass	H																						298
	R																						2,800
Bluegill	H																						170,371
	R																						189,327
Redear sunfish	H																						12,304
	R																						2,976
Longear sunfish	H																						3,089
	R																						26,937
Warmouth	H																						179
	R																						949
Green sunfish	R																						698
Channel catfish	H		107	52																			54,569
	R																						9,794
Blue catfish	H	37	72																				12,253
	R																						3,701
Flathead catfish	H																						168
	R																						222
Bullhead	H																						199
	R																						48
White bass	H																						7,646
	R																						34,887
Striped bass	H																						133
	R																						2,027
Hybrid striped bass	H																						95
	R																						58
Yellow bass	H																						10,311
	R																						31,433
Sauger	H																						34
	R																						54
Sucker	R																						54
Drum	H				127																		964
	R																						12,702
Skipjack herring	H																						1,569
	R																						3,489
Gar	R														37							36	147
Rainbow trout	R																						73
Golden shiner	H																						69
	R																						979
Blacknose Crappie	H																						54
Illegal B. bass	H																						649
Illegal Striper or Hybrid	H																						107
Illegal Bl. Crappie	H																						236
Illegal Wh. Crappie	H																						204
Illegal other	H																						718

Table 27. Fish harvest statistics derived from a creel survey at Lake Barkley (45,600 a) from 1 March - 31 October 2008.

	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	Sauger
No. caught	**392,647**	378,780	10,769	3,098	**43,132**	31,693	11,384	**80,897**	64,363	333	15,954	247	**406,829**	359,698	15,280	30,025	1,129	698	88
(per acre)	**(8.61)**	(8.31)	(0.24)	(0.07)	**(0.95)**	(0.70)	(0.25)	**(1.77)**	(1.41)	(0.01)	(0.35)	(0.01)	**(8.92)**	(7.89)	(0.34)	(0.66)	(0.02)	(0.02)	(0.00)
No. harvested	**36,389**	34,809	1,281	298	**33,452**	24,905	8,493	**67,189**	54,569	168	12,253	199	**185,943**	170,371	12,304	3,089	179	290	34
(per acre)	**(0.80)**	(0.76)	(0.03)	(0.01)	**(0.73)**	(0.55)	(0.19)	**(1.47)**	(1.20)	(0.00)	(0.27)	(0.00)	**(4.08)**	(3.74)	(0.27)	(0.07)	(0.00)	(0.01)	(0.00)
% of total no. harvested	**10.53**	10.07	0.37	0.09	**9.68**	7.21	2.46	**19.44**	15.79	0.01	3.55	0.06	**53.81**	49.30	3.56	0.89	0.05		0.01
Lb. harvested	**88,336**	84,851	3,190	295	**26,632**	19,563	7,000	**95,684**	77,965	228	17,383	109	**47,394**	39,837	7,122	377	58		62
(per acre)	**(1.94)**	(1.86)	(0.07)	(0.01)	**(0.58)**	(0.43)	(0.15)	**(2.10)**	(1.71)	(0.00)	(0.38)	(0.00)	**(1.04)**	(0.87)	(0.16)	(0.01)	(0.00)		(0.00)
% of total lb. harvested	**32.79**	31.50	1.18	0.11	**9.89**	7.26	2.60	**35.52**	28.94	0.08	6.45	0.04	**17.59**	14.79	2.64	0.14	0.02		0.02
Mean length (in)		16.7	17.2	12.8		11.3	11.6		16.5	14.8	18.0	11.1		7.1	9.1	5.7	7.5		18.0
Mean weight (lb)		2.42	2.42	0.92		0.69	0.86		1.43	1.40	2.23	0.58		0.22	0.52	0.11	0.29		1.83
No. of fishing trips for that species	**68,088**				**20,975**			**21,856**					**22,209**						
% of all trips	**46.7**				**14.4**			**15.0**					**15.2**						
Hours fished for that species	**292,232**				**90,026**			**93,803**					**95,322**						
(per acre)	**(6.41)**				**(1.97)**			**(2.06)**					**(2.09)**						
No. harvested fishing for that species	**35,207**				**32,096**			**55,098**					**162,143**						
Lb harvested fishing for that species	**85,678**				**25,640**			**81,577**					**40,959**						
No./hour harvested fishing for that species	**0.09**				**0.39**			**0.68**					**1.89**						
% success fishing for that species	**19.6**				**39.7**			**51.3**					**53.4**						

t = < 0.005

Table 27 (continued). Fish harvest statistics derived from a creel survey at Lake Barkley (45,600 a) from 1 March-31 October 2008.

	Morone Group	White bass	Striped bass	Yellow bass	Hybrid Striped bass	Drum	Skipjack herring	Gar	Golden shiner	Sucker	Blacknose crappie	Illegal bass	Illegal Bl. Crappie	Illegal Wh. Crappie	Illegal other	Illegal Striper or Hybrid	Rainbow trout	Anything
No. caught	**86,591**	42,533	2,161	41,744	153	13,666	5,057	147	1,048	54	54	649	236	204	718	107	73	
(per acre)	**(1.90)**	(0.93)	(0.05)	(0.92)	(0.00)	(0.30)	(0.11)	(0.00)	(0.02)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.02)	(0.00)	(0.00)	
No. harvested	**18,185**	7,646	133	10,311	95	837	1,569	0	69	0	54	649	236	204	718	107	0	
(per acre)	**(0.40)**	(0.17)	(0.00)	(0.23)	(0.00)	(0.02)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.02)	(0.00)		
% of total no. harvested	**5.26**	2.21	0.04	2.98	0.03	0.24	0.45		0.02		0.02	0.19	0.07	0.06	0.21	0.03		
Lb. harvested	**8,728**	5,480	338	2,660	249	649	908		8		69	721	75	76		100		
(per acre)	**(0.19)**	(0.12)	(0.01)	(0.06)	(0.01)	(0.01)	(0.02)		(0.00)		(0.00)	(0.02)	(0.00)	(0.00)		(0.00)		
% of total lb. harvested	**3.24**	2.03	0.13	0.99	0.09	0.24	0.34		0.00		0.03	0.27	0.03	0.03		0.04		
Mean length (in)		12.9	17.5	8.5	17.3	12.3	11.4		7.0		13.0	13.1	9.0	9.0	7.0	12.5		
Mean weight (lb)		0.90	2.19	0.24	2.61	0.89	0.42		0.12		1.26	1.13	0.32	0.37		0.98		
No. of fishing trips for that species	**2,601**						35											**10,009**
% of all trips	**1.8**						0.0											**6.9**
Hours fished for that species	**11,162**						151											**42960**
(per acre)	**(0.24)**						(0.0)											**(0.94)**
No. harvested fishing for that species	**8,713**						176											
Lb harvested fishing for that species	**5,232**						58											
No./hour harvested fishing for that species	**0.89**						4.00											
% success fishing for that species	**41.1**																	**18.6**

t = < 0.005

Table 28. Monthly black bass angling success at Lake Barkley during the 2008 creel survey.

Month	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
Mar	17,832	5,445	9,318	39,994	17,294	0.34	5,385	0.11
Apr	36,947	4,745	6,884	29,547	33,477	0.92	4,569	0.13
May	54,779	6,030	10,924	46,887	46,933	0.81	5,885	0.10
Jun	110,182	10,784	12,948	55,572	107,296	1.53	10,349	0.15
Jul	41,720	2,474	8,095	34,744	40,093	1.05	2,237	0.06
Aug	22,617	1,911	5,117	21,962	21,713	0.84	1,806	0.07
Sept	45,652	2,494	6,283	26,965	44,491	1.43	2,495	0.08
Oct	62,917	2,505	8,518	36,560	61,057	1.39	2,481	0.06
Total	392,647	36,389	68,088	292,232	372354		35,207	
Mean						1.11		0.09

Table 29. Black bass catch and harvest statistics derived from the 1 March to 31 October 2008 creel survey at Lake Barkley (45,600 a).

	Largemouth bass				Smallmouth bass				Spotted bass			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches	≥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	34,809	202,494	54,247	378,780	1,281	4,074	1,910	10,769	298	1,783	168	3,098
% of bass harvested by number	95.7				3.5				0.8			
Total weight of bass (lb)	84,851	169,409	127,144	454,381	3,190	2,611	4,007	12,053	295	1,354	130	2,424
% of bass harvested by weight	96.1				3.6				0.3			
Mean length (in)	16.7				17.2				12.8			
Mean weight (lb)	2.42				2.42				0.92			
Rate (f/hr)	0.053				0.002				0.000			

Table 30. Panfish catch and harvest statistics derived from the 1 March to 31 October 2008 creel survey at Lake Barkley (45,600 a).

	Bluegill				Redear Sunfish			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		6.0-9.9 in	≥10.0 in			6.0-9.9 in	≥10.0 in	
Total no. of panfish	170,371	120,615	110	359,698	12,304	2,218	433	15,280
% of panfish harvested by number	91.6				6.6			
Total weight of panfish (lb)	39,837	15,094	14	63,531	7,122	615	120	7,947
% of panfish harvested by weight	84.1				15.0			
Mean length (in)	7.1				9.1			
Mean weight (lb)	0.22				0.52			
Rate (f/hr)	0.200				0.010			

	Warmouth				Green Sunfish				Longear Sunfish			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		6.0-9.9 in	≥10.0 in			6.0-9.9 in	≥10.0 in			6.0-9.9 in	≥10.0 in	
Total no. of panfish	179	759	0	1,129	0	419	0	698	3,089	8,788	0	30,025
% of panfish harvested by number	0.1				0.0				1.7			
Total weight of panfish (lb)	58	145	0	239	0	49	0	82	377	777	0	2,761
% of panfish harvested by weight	0.1				0.0				1.7			
Mean length (in)	7.5				0.0				5.7			
Mean weight (lb)	0.29				0.00				0.11			
Rate (f/hr)	0.000				0.000				0.005			

Table 31. Monthly panfish angling success at Lake Barkley during the 2008 creel survey.

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
Mar	6,881	4,249	688	2,954	4,847	2.85	2,872	1.69
Apr	28,029	9,841	1,624	6,970	6,679	1.39	3,120	0.65
May	267,503	135,641	11,356	48,738	251,884	5.23	130,047	2.70
Jun	44,443	11,329	3,921	16,830	32,514	3.61	7,570	0.84
Jul	15,963	5,626	1,718	7,373	7,761	1.51	3,965	0.77
Aug	10,874	5,489	816	3,503	4,239	2.74	3,023	1.96
Sept	16,983	9,021	1,084	4,653	12,747	4.16	7,347	2.40
Oct	16,153	4,748	1,002	4,301	12,550	3.57	4,199	1.19
Total	406,829	185,943	22,209	95,322	333,221		162,143	
Mean						3.96		1.89

Table 32. Catfish catch and harvest statistics derived from the 1 March to 31 October 2008 creel survey at Lake Barkley (45,600 a).

	Bullhead				Blue Catfish				Channel Catfish				Flathead Catfish			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of catfish	199	0	0	247	12,253	498	889	15,954	54,569	2,683	2,103	64,363	168	0	83	333
% of catfish harvested by number	0.3				18.2				81.2				0.2			
Total weight of catfish (lb)	135	0	0	135	17,383	261	464	19,320	77,965	1,425	1,120	83,171	228	0	126	479
% of catfish harvested by weight	0.1				18.2				81.5				0.2			
Mean length (in)	11.1				18.0				16.5				14.8			
Mean weight (lb)	0.58				2.23				1.43				1.40			
Rate (f/hr)	0.000				0.024				0.073				0.000			

Table 33. Monthly catfish angling success at Lake Barkley during the 2008 creel survey.

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
Mar	1,975	1,735	688	2,954	957	0.54	957	0.54
Apr	2,680	2,197	1,200	5,152	967	0.41	791	0.34
May	23,829	22,231	5,654	24,266	15,620	0.72	14,893	0.69
Jun	26,198	21,731	6,400	27,468	23,311	1.02	20,642	0.90
Jul	9,795	7,422	2,636	11,312	8,948	0.80	7,117	0.63
Aug	7,886	5,281	200	8,614	7,296	0.97	5,038	0.67
Sept	6,458	5,160	1,897	8,142	5,570	0.68	4,681	0.57
Oct	2,076	1,432	133	5,894	1,313	0.48	979	0.36
Total	80,897	67,189	21,856	93,803	63,982		55,098	
Mean						0.81		0.68

Table 34. Monthly crappie angling success at Lake Barkley during the 2008 creel survey.

Month	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
Mar	8,976	8,018	6,248	26,814	8,797	0.44	8,019	0.40
Apr	20,341	16,431	8,897	38,184	19,419	0.50	15,860	0.40
May	8,500	6,030	3,114	13,367	7,555	0.65	5,303	0.45
Jun	1,579	1,198	518	2,223	1,523	1.23	1,197	0.96
Jul	237	169	188	808	170	0.30	170	0.30
Aug	0	0	88	379	0	0.00	0	0.00
Sept	444	103	345	1,480	68	0.07	68	0.07
Oct	3,054	1,503	1,577	6,770	2,982	0.53	1,479	0.26
Total	43,132	33,452	20,975	90,026	40,514		32,096	
Mean						0.50		0.39

Table 35. Crappie catch and harvest statistics derived from the 1 March to 31 October 2008 creel survey at Lake Barkley (45,600 a).

	White Crappie				Black Crappie				Blacknose Crappie			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches	≥ 10.0 in	≤10.0 in	≥ 10.0 in		≥ 10.0 in	≤ 10.0 in	≥ 10.0 in		≥ 10.0 in	≤10.0 in	≥ 10.0 in	
Total no. of crappie	24,905	6,283	505	31,693	8,493	2,293	598	11,384	54	0	0	54
% of crappie harvested by number	74.4				25.4				0.2			
Total weight of crappie (lb)	19,563	1,460	383	21,406	7,000	653	483	8,136	69	0	0	69
% of crappie harvested by weight	73.5				26.3				0.3			
Mean length (in)	11.3				11.6				13.0			
Mean weight (lb)	0.69				0.86				1.26			
Rate (f/hr)	0.03				0.01				0.00			

Table 36. Monthly *Morones* angling success at Lake Barkley during the 2008 creel survey.

Month	Total no. of *Morones* caught	Total no. of *Morones* harvested	No. of *Morones* fishing trips	Hours fished by *Morones* anglers	*Morones* caught by *Morones* anglers	*Morones* caught/ hour by *Morones* anglers	*Morones* harvested by *Morones* anglers	*Morones* harvested/ hour by *Morones* anglers
Mar	5,565	3,171						
Apr	11,027	2,328	35	152	44	3.33	44	3.33
May	28,843	3,487	383	1,645	16,710	11.50	2,180	1.50
Jun	23,365	4,521	814	3,493	20,969	9.02	3,377	1.45
Jul	4,914	847	329	1,414	2,406	1.93	407	0.33
Aug	2,189	139	243	1,041	1,251	1.88	139	0.21
Sept	5,057	1,401	443	1,903	3,383	2.65	1,230	0.96
Oct	5,631	2,291	353	1,513	1,837	1.10	1,336	0.80
Total	86,591	18,185	2601	11,162	46,600		8,713	
Mean						3.97		0.89

Table 37. Morones catch and harvest statistics derived from the 1 March to 31 October 2008 creel survey at Lake Barkley (45,600 a).

	White bass				Yellow bass			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of Morones	7,646	15,106	1,369	42,533	10,311	404	0	41,744
% of Morones harvested by number	42.0				56.7			
Total weight of Morones (lb)	5,480	9,516	862	27,456	2,660	79	0	8,827
% of Morones harvested by weight	62.8				30.5			
Mean length (in)	12.9				8.5			
Mean weight (lb)	0.90				0.24			
Rate (f/hr)	0.011				0.017			

	Striped bass				Hybrid Striped bass			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		12.0-14.9 in	≥15.0 in			12.0-14.9 in	≥15.0 in	
Total no. of Morones	133	350	376	2,161	95	29	29	153
% of Morones harvested by number	0.7				0.5			
Total weight of Morones (lb)	338	116	601	1,483	249	39	40	328
% of Morones harvested by weight	3.9				2.9			
Mean length (in)	17.5				17.3			
Mean weight (lb)	2.19				2.61			
Rate (f/hr)	0.000				0.000			

Table 38. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 10 hours (20 runs; each 0.50 hours) of diurnal electrofishing at Lake Barkley from 21 April to 5 May 2008.

Area	Species	Inch Class																				Total	CPUE	Std Err
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Lower																								
Donaldson Cr.	Smallmouth bass																							
	Spotted bass			1	1					1												3	3.00	3.00
	Largemouth bass		2	3	7	4	6	4	2	8	6	11	19	19	19	10	13	7	3			143	143.00	1.00
Ford's Bay	Smallmouth bass																							
	Spotted bass	1	1	1		1		1	2	1	4	4	5	4	5	1		1				32	64.00	0.00
	Largemouth bass			2	2	2	5	5	2	1	3	4	6	7	10	11	3	1				64	128.00	0.00
Parsons Bay	Smallmouth bass													1								1	1.00	1.00
	Spotted bass																							
	Largemouth bass	2	7	4	8	5	2	4	1	1	2	11	11	19	14	6	6	2	1		2	109	109.00	11.00
Middle																								
Little River	Smallmouth bass																							
	Spotted bass																							
	Largemouth bass	3	10	33	24	12	10	7	6	9	23	30	51	35	24	12	16	8	4	2		319	127.60	10.46
Eddy Cr.	Smallmouth bass		1		2		2	1	3		1	3	1									14	5.60	2.64
	Spotted bass							1														1	0.40	0.40
	Largemouth bass			3	6	15	35	39	18	11	22	44	57	37	28	14	10	4	5	2	1	351	140.40	15.89
Upper																								
Willow Cr.	Smallmouth bass																							
	Spotted bass									1		1										2	4.00	
	Largemouth bass				1	1	4	4	4	2		2	5	1	3	3	1		1			32	64.00	
Demumbers Bay	Smallmouth bass				1								1	1								3	2.00	2.00
	Spotted bass									1												1	0.67	0.67
	Largemouth bass	2	8	22	19	18	21	22	13		2	7	4	5	3	2	5	2	2	4		161	107.33	9.82
Total	Smallmouth bass		1		3		2	1	3		1	3	2	2								20	2.00	0.85
	Spotted bass	1	1	2	1	1		2	2	4	4	5	5	4	5	1		1				39	3.90	3.18
	Largemouth bass	7	27	67	67	57	83	85	46	32	58	109	153	123	101	58	54	24	16	8	3	1,237	123.70	6.32

(wfdpsdb.d08)

Table 39. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during late April/early May since 1998.

	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
1998	22.20	4.7	26.2	4.2	28.60	3.0	29.80	3.5	7.05	1.0	106.80	5.90
1999	16.30	1.9	21.0	2.2	22.70	2.5	34.00	2.6	4.67	0.7	93.90	6.00
2000	32.80	4.2	28.6	2.3	24.70	2.3	27.90	2.4	2.74	0.7	114.10	6.00
2001	70.40	8.3	61.2	5.1	31.10	2.5	19.00	1.5	1.60	0.7	181.70	10.80
2002	26.40	3.6	49.7	5.9	40.60	4.1	16.30	1.8	1.33	0.4	133.00	8.50
2003	41.10	5.2	38.5	3.9	75.30	5.3	26.90	2.3	1.68	0.4	181.80	10.40
2004	11.30	1.3	40.9	2.9	29.30	1.6	24.70	2.2	1.80	0.4	106.20	5.10
2005	36.60	4.9	19.3	1.9	59.40	4.8	37.50	3.3	2.00	0.6	152.70	10.30
2006	15.60	2.2	26.7	2.2	51.80	3.9	30.80	2.4	2.10	0.6	124.20	7.40
2007	4.80	0.9	21.36	2.6	66.50	4.7	47.60	4.5	1.80	0.5	140.27	9.73
2008	24.10	3.5	25.8	3.9	32.60	3.9	41.20	4.5	3.00	0.5	123.70	6.30
Average	27.42		32.7		42.05		30.52		2.71		132.58	

(Barkley_LMB_Database.xls)
Data is available since 1985 in previous annual reports

Table 40. PSD and RSD values calculated for each black bass species collected during 10.0 hours (20 runs; each 0.50 hours) of spring diurnal electrofishing at each area of Lake Barkley from 21 April to 5 May 2008. 95% confidence intervals are in parentheses

Area	Species	No. fish ≥ 8.0 in	PSD (± 95% CI)	RSD[A] (± 95% CI)
Donaldson	Largemouth bass	127	84 (6)	56 (9)
Ford's	Largemouth bass	58	78 (11)	55 (13)
	Spotted bass	29	86 (13)	55 (18)
Parson's	Largemouth bass	83	90 (6)	60 (10)
Little River	Largemouth bass	237	86 (4)	43 (7)
Eddy Creek	Largemouth bass	327	69 (6)	31 (5)
	Smallmouth bass	11	45 (30)	9 (18)
Willow	Largemouth bass	30	53 (18)	30 (17)
Demumbers	Largemouth bass	105	39 (10)	25 (9)
	Spotted bass	15		
Total	Largemouth bass	996	74 (3)	41 (3)
	Smallmouth bass	16	63 (25)	38 (25)
	Spotted bass	34	85 (12)	47 (17)

(wfdpsdb.d08)

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

Table 41. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Lake Barkley in April and May 2008.

	Inch Class																			
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	Std Err
1	72	72	57	87													288	24.3	28.80	3.00
2					83	42	23	11									159	13.4	15.85	2.30
3					8	5	10	49	81	26							179	15.1	17.90	2.02
4										26							26	2.2	2.58	0.36
5									20	78	53	35	24	12			222	18.7	22.18	2.39
6									10	26	53	35					124	10.4	12.41	1.44
7											26	35	24	12	13		110	9.3	11.02	1.37
8														23			23	1.9	2.32	0.34
9													12		13		25	2.1	2.47	0.40
10														12			12	1.0	1.16	0.17
12																19	19	1.6	1.90	0.40
Total	72	72	57	87	91	47	33	60	111	156	132	105	60	59	26	19	1,187			
%	6.1	6.1	4.8	7.3	7.7	4.0	2.8	5.1	9.4	13.1	11.1	8.8	5.1	5.0	2.2	1.6	100			

wfdpsdb.d08, wfdlbagb.d07

Table 42. Electrofishing CPUE (fish/hr) for each age of largemouth bass collected from Lake Barkley spring samples from 1998-2008.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	23.03	17.33	23.40	76.86	25.10	59.04	29.00	42.50	18.43	6.69	28.8
2	15.16	18.01	21.50	70.04	72.40	13.11	17.80	9.10	27.78	17.90	15.85
3	23.81	11.71	15.20	8.88	10.70	65.91	25.50	50.90	28.63	41.34	17.9
4	8.14	15.33	14.90	11.04	10.80	33.67	23.30	35.70	23.30	3.92	2.58
5	16.09	4.98	4.90	0.48	0.70	5.72	5.50	8.30	14.06	31.42	22.18
6		10.86	10.60	5.29	4.70	0.00	2.10	2.70	7.68	17.97	12.41
7			1.32	0.48	0.40	1.64	1.20	1.70	1.48	12.92	11.02
8				1.48	0.10	0.00	0.20	0.30	0.74	1.85	2.32
9				0.48	0.70	1.00	0.70	0.90		2.70	2.47
10						0.21				0.93	1.16
11						0.55					
12										1.18	1.90

(Barkley_LMB_Database.xls)

Table 43. Lake specific population assessment of largemouth bass based on spring sampling at Lake Barkley from 2004-2008.

	2004		2005		2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3)	12.9	3	12.9	3	13.6	4	12.6	2	12.6	2
Recruitment (Spring CPUE of age-1)	29.20	2	42.50	3	18.40	1	6.69	1	28.80	2
Size Structure (Spring CPUE of 12.0-14.9 in.)	29.30	2	59.40	4	51.80	3	66.50	4	32.60	2
Size Structure (Spring CPUE of ≥ 15.0 in.)	24.70	2	37.50	3	30.80	3	47.60	4	41.20	3
Size Structure (Spring CPUE of ≥ 20.0 in.)	1.80	1	2.00	1	2.00	1	1.80	1	3.00	2
Instantaneous Mortality (Z)	0.632		0.674		0.431		0.317		0.339	
Annual Mortality (A)%	47		49		40		27		29	
Total Score		10		14		12		12		11
Assessment Rating		F		G		G		G		F

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

(Barkley_LMB_Database.xls)

Table 44. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during May from 1998 - 2008. This table also includes the other parameters that are included in the BLFMP and used in calculating the black bass assessment.

	Mean length age-3 at	Age-1		Length Group 12.0 - 14.9 in		≥15.0 in		≥20.0 in		Total	
Year	capture	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
1998	12.0	23.00	4.77	28.60	3.00	29.80	3.50	7.00	1.02	106.80	5.90
1999	12.6	17.30	1.34	22.70	2.50	34.00	2.60	4.70	0.73	93.90	6.00
2000	12.6[A]	37.30	2.93	24.70	2.30	27.90	2.40	2.70	0.67	114.10	6.00
2001	14.7	81.00	8.59	31.10	2.50	19.00	1.50	1.60	0.67	181.70	10.80
2002	14.7[A]	28.90	3.21	40.60	4.10	16.30	1.80	1.30	0.37	133.00	8.50
2003	12.9	59.20	6.36	75.30	5.30	26.90	2.30	1.70	0.35	181.80	10.40
2004	12.9[A]	29.20	2.42	29.30	1.60	24.70	2.20	1.80	0.43	106.20	5.09
2005	12.9[A]	42.50	5.44	59.40	4.80	37.50	3.30	2.00	0.55	152.70	10.30
2006	13.4	18.40	2.35	51.80	3.87	30.80	2.40	2.00	0.57	124.20	7.36
2007	12.6	6.70	0.68	66.50	4.70	47.60	4.50	1.80	0.50	140.27	9.73
2008	12.6[A]	28.80	3.00	32.60	3.88	41.20	4.51	3.00	0.53	123.70	6.32
Average	13.0	33.85		42.05		30.52		2.66		132.58	

Data from 1985 to 1997 is listed in previous years reports.

(Barkley LMB Database.xls) * Data not available [A] Previous years data used

Table 45. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 5.0 hours of diurnal electrofishing (10 runs; each 0.50 hours) for black bass in each area of Lake Barkley on 13 and 15 October 2008.

	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
Middle																							
Eddy Creek																							
Largemouth bass		1	11	30	74	50	21	41	52	46	21	20	29	18	9	8	5	2	1	1	440	176.00	28.15
Spotted bass																					0	0.40	0.40
Smallmouth bass				2	1			3		1			1	2	1						11	4.40	2.40
Lower																							
Little River																							
Largemouth bass	1	3	11	32	54	62	19	23	22	40	19	27	25	15	9	5	5	3			375	150.00	9.98
Spotted bass						1	1														2	0.80	0.80
Smallmouth bass							1					1	1	1		1					5	2.00	1.26
Total																							
Largemouth bass	1	4	22	62	128	112	40	64	74	86	40	47	54	33	18	13	10	5	1	1	815	163.00	14.73
Spotted bass						1	1														2	0.40	0.40
Smallmouth bass				2	1		1	3		1		1	2	3	1	1					16	3.20	1.34

(wfdwrb.d08)

Table 46. Number of fish and the relative weight (Wr) values for each length group of largemouth, spotted, and smallmouth bass collected at Lake Barkley during 5.0 hours (10 runs; each 0.50 hours) of diurnal electrofishing on 13 and 15 October 2008.

		Length Group											
		8.0 - 11.9 in			12.0 -14.9 in			≥15.0 in			Total		
Species	Area	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Largemouth bass													
	Eddy Creek	160	94.2	0.7	70	94.0	0.9	44	98.2	1.5	274	94.8	0.6
	Little River	104	93.2	1.0	71	91.4	2.2	37	99.0	1.7	212	93.6	0.9
	Total	264	93.8	0.6	141	92.7	1.2	81	98.5	1.1	486	94.3	0.5
		7.0 - 10.9 in			11.0 - 13.9 in			≥14.0 in			Total		
		N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Spotted bass													
	Eddy Creek												
	Little River	2	104.5	6.5							2	104.5	6.5
	Total	2	104.5	6.5							2	104.5	6.5
Smallmouth bass													
	Eddy Creek	3	85.9	4.0	1	75.0		4	92.0	4.1	8	87.6	3.1
	Little River	1	78.1		1	85.9		3	75.7	0.7	5	78.2	2.0
	Total	4	83.9	3.5	2	80.4	5.4	7	85.0	4.0	13	84.0	2.4

(wfdwrb.d08)

Table 47. 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
2001	5.4		21.20	4.00	16.00		32.60	3.40
2002	5.3		26.70	2.40	10.10		59.00	6.40
2003	5.1		35.20	4.40	20.90		29.20	2.40
2004	5.4	0.8	39.80	5.75	30.40	4.27	42.50	5.40
2005	5.4	0.14	5.40	1.20	4.80	1.20	18.43	2.35
2006	4.8	0.15	9.33	1.73	4.00	1.29	6.69	0.68
2007	6.8	0.09	68.68	11.78	59.40	10.70	28.80	3.00
2008	6.2	0.05	55.60	6.74	50.20	6.31	*	

[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.

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

* Data will be collected during the spring, diurnal electrofishing sample of 2008.

wfdwrb.dxx, wfdpsdb.dxx

Table 48. Species composition, relative abundance, and CPUE (fish/hr) of redear sunfish collected during 3.75 hours (15 runs; each 900s) of diurnal electrofishing at Lake Barkley (Devil's Elbow, Donaldson, and Craven's Bay) in May 2008.

	Inch Class												
Species	3	4	5	6	7	8	9	10	11	12	Total	CPUE	Std Err
Redear sunfish	4	11	5	28	27	46	86	59	20	1	287	71.75	14.71

wfdpsdr.d08

Table 49. Spring diurnal electrofishing CPUE (fish/hr) of each length group of redear sunfish collected at Lake Barkley during late April/early May from 2005-2008.

	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
2005			0.40	0.40	8.40	3.66	33.60	14.50	23.60	14.66	42.40	11.82
2007			1.33	0.84	10.00	4.10	88.00	25.17	28.67	9.40	99.33	27.89
2008			5.00	1.57	13.75	4.62	53.00	11.78	20.00	6.04	71.75	14.71
Average			0.87		9.20		60.80		26.14		70.87	

wfdpsdr.dxx

Table 50. 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 in the spring 2008.

		Age								
Year-Class	N	1	2	3	4	5	6	7	8	9
2007	16	4.4								
2006	32	3.8	6.8							
2005	40	4.3	7.5	9.2						
2004	17	4.1	7.0	9.0	10.3					
2003	4	3.3	6.1	8.0	9.2	10.3				
2002	5	4.3	6.5	8.4	9.4	10.2	10.7			
2001	3	4.7	7.2	8.0	8.9	9.4	9.9	10.2		
1999	1	3.5	5.3	6.0	7.0	7.3	7.6	8.2	8.5	8.9
Mean		4.1	7.1	8.9	9.7	9.8	10.1	9.7	8.5	8.9
Smallest		2.0	4.3	6.0	7.0	7.3	7.6	8.2		
Largest		7.0	10.0	11.3	12.1	11.9	11.8	12.1		
Std Err		0.1	0.1	0.2	0.2	0.4	0.6	0.8		
Low 95% CI		4.0	6.8	8.6	9.2	9.0	9.0	8.1		
High 95% CI		4.3	7.3	9.2	10.2	10.6	11.2	11.3		

* Intercept = 0.

wfdreagb.d08

Table 51. Age frequency and CPUE (fish/hr) of redear sunfish collected during 3.75 hours (15 runs; 900s each) of electrofishing at Lake Barkley during May 2008.

	Inch Class													
Age	3	4	5	6	7	8	9	10	11	12	Total	Percent	CPUE	Std Err
1	4	11	1	2							18	6.0	4.39	1.50
2			4	23	17	6					50	18.0	12.64	3.85
3				3	10	26	46	40	3		128	45.0	32.02	6.90
4						9	17	12	10	1	49	17.0	12.19	2.79
5							11	3	2		16	6.0	4.06	1.00
6						3		3	5		11	4.0	2.75	0.65
7							11			1	12	4.0	2.99	0.82
9						3					3	1.0	0.72	0.22
Total	4	11	5	28	27	46	86	59	20	1	287		71.75	
%	1	4.0	2.0	10.0	9.0	16.0	30.0	21.0	7.0	0.0		100.0		

wfdpsdr.d08
wfdreagb.d08

Table 52. Statewide population assessment of redear sunfish based on spring sampling at Lake Barkley from 2005-2008.

	2005		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score
Mean Length age-3 at capture	8.3	4	8.3	4	9.2	4
Years to 8.0 inches	3	4	3	4	3	4
Spring CPUE ≥8.0 inches	33.60	4	88.00	4	53.00	4
Spring CPUE ≥ 10.0 inches	23.60	4	28.67	4	20.00	4
Instantaneous Mortality (z)					0.727	
Annual Mortality (A)%					52	
Total Score		16		16		16
Assessment Rating		E		E		E

Rating
4-6 = Poor (P)
7-10 = Fair (F)
11-13 = Good (G)
14-16 = Excellent (E)

Barkley_Redear_Sunfish_Database.xls

Table 53. Length frequency and CPUE (fish/hr) of blue, flathead, and channel catfish collected with low pulse electrofishing at Lake Barkley from 18-19 June 2008. A total of 3.5 hours (7 runs; 0.5 hours each) of electrofishing was conducted.

	Inch Class																																		Std
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	28	30	32	33	34	36	38	39	45	Total	CPUE	Err
Blue catfish	1	5	8	9	14	54	99	46	47	71	29	11	9	9	7	10	9	7	3	3	3	2		1	1		1	1		1				461	115.25	24.06
Flathead catfish															1		1		2		1	1	1	2		1			1		1	1	1	14	18.50	6.33
Channel catfish	6	21	13	4	3	14	8	2	3																									74	3.50	1.59

(wfdcatb.d08)

Table 54. Age frequency and CPUE (fish/hr) of blue catfish collected during low pulse electrofishing at Lake Barkley from 18-19 May 2008.

	Inch Class																					Std
Age	8	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	27	28	33	Total	Percent	CPUE	Err
2	14																			14	5.0	3.50	1.30
3		46	47																	93	33.0	23.25	4.61
4				71	29	6		2												108	38.0	26.75	7.09
5						6	9	5	5			1	2	2						30	10.0	7.10	1.69
6								3	2	10	7	2	1	2	1	1				29	10.0	7.08	2.45
7											2	2	1		2			1		8	3.0	2.08	0.87
8												1					1			2	1.0	0.48	0.30
9																1			1	2	1.0	0.50	0.33
Total	14	46	47	71	29	12	9	10	7	10	9	6	4	4	3	2	1	1	1	286			
%	6	19	19	29	12	5	4	4	3	4	4	2	2	2	1	1	0	0	0				

(wfdcatb.d08) (wfdbcagb.d04)

Table 55. Relative weight (Wr) of each length group of blue, flathead, and channel catfish collected at Lake Barkley from 18-19 June 2008. Fish were collected during 3.5 hours (7 runs; 0.5 hours each) of low pulse 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
	193	99.4	3.3	29	99.7	1.9	3	109.0	6.5	225	99.6	2.9
Flathead 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
	1	107.2		8	131.6	5.83	5	113.9	5	14	123.5	4.5
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
	5	97.1	1.9							5	97.1	1.9

(wfdcatb.d08)

Table 56. Length frequency and CPUE (fish/net-night) of each inch-class of white and black crappie collected by trap-net (87 net-nights) at Lake Barkley from 21 October-31 October 2008.

		Inch Class															Std
Location	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Err
Little River																	
	White Crappie	20	75	25	27	45	52	4	30	16	5	16	5	1	321	7.00	1.00
	Black Crappie	19	23	3	2			6	6	4	5	1			69	1.50	0.26
Donaldson Creek																	
	White Crappie	9	8	6	27	24	24	3		2	6	5			114	2.88	0.49
	Black Crappie	1	7	2	4	7	13	66	33	3	10	7	1		154	3.85	0.70
Total																	
	White Crappie	29	83	31	54	69	76	7	30	18	11	21	5	1	435	5.08	0.62
	Black Crappie	20	30	5	6	7	13	72	39	7	15	8	1		223	2.59	0.37

(wfdtpntb.d08)

Table 57. CPUE (fish/net-night) for length-groups of crappie collected from multiple years of trap netting on Barkley Lake. Includes mean lengths at capture for age 2 crappie and % of trap netting catch that is age-4 or older (catch excludes age-0 fish).

	CPUE > 8.0 in			CPUE > 10.0 in			Mean Length @ age 2		% Age 4 and Older		
Year	WC	BC	WC & BC	WC	BC	WC & BC	WC	BC	WC	BC	WC & BC
1998	4.50	1.51	6.01	1.25	0.21	1.46	9.5	8.2	5.11	0.63	2.99
1999	1.92	1.00	2.92	1.35	0.09	1.44	10.3	9.2	1.03	1.65	1.27
2000	2.03	1.86	3.89	0.79	0.60	1.39	11.4	10.5	9.19	0.95	3.99
2001	1.08	1.55	2.63	0.94	1.03	1.96	11.3	10.2	2.17	7.78	5.79
2002	2.56	2.74	5.30	1.10	0.64	1.74	10.4	10.0	2.71	6.80	4.88
2003	2.26	1.63	3.89	1.09	1.13	2.21	11.1	10.3	4.20	4.27	4.24
2004	5.47	1.82	7.29	1.04	0.74	1.78	11.1*	10.3*	1.83	3.43	2.30
2005	3.8	1.4	5.20	2.75	0.62	3.37	11.3	10.8	0.58	0.29	1.14
2006	2.68	0.96	3.64	0.96	0.38	1.34	10.7	10.5	0.66	0.93	0.51
2007	1.82	1.44	3.26	1.38	0.49	1.82	10.7*	10.5*	0.30	0.00	0.90
2008	1.65	1.08	2.73	0.65	0.36	1.01	11.3	11.3	3.70	8.70	0.67
Average	2.7	1.5	4.3	1.2	0.6	1.8	10.8	10.0	3.1	3.0	3.0

(Barkley_Crappie_Database.xls)
* Age and growth not collected; value from previous year used
Data since 1985 are available in previous annual reports

Table 58. Proportional stock density (PSD) and relative stock density (RSD) of white and black crappie collected by trap-nets (87 net-nights) at Lake Barkley from 21 October-31 October 2008. Numbers in parentheses represent 95% confidence intervals.

Location	Species	N	PSD	RSD_{10}
Little River	White Crappie	201	38 (7)	21 (5)
	Black Crappie	24	92 (12)	42 (20)
Donaldson	White Crappie	91	18 (8)	14 (7)
	Black Crappie	144	83 (6)	15 (6)
Total	White Crappie	292	32 (6)	19 (4)
	Black Crappie	168	85 (6)	18 (5)

(wfdtpntb.08)

Table 59. 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 in the fall 2008.

		Age						
Year-Class	N	1	2	3	4	5	6	7
2007	20	6.0						
2006	10	3.9	7.5					
2005	13	4.3	8.5	11.3				
2004	2	3.4	6.8	9.5	11.7			
2003	3	4.4	8.7	10.3	12.0	12.9		
2001	1	5.9	10.1	11.6	12.5	13.1	13.5	13.8
Mean		4.9	8.1	11.0	12.0	13.0	13.5	13.8
Smallest		2.7	5.3	8.0	10.7	11.6	13.5	13.8
Largest		9.4	10.1	12.1	12.8	13.9	13.5	13.8
Std Err		0.2	0.2	0.2	0.4	0.5		
Low 95% CI		4.5	7.7	10.6	11.3	12.0		
High 95% CI		5.3	8.5	11.4	12.7	13.9		

* Intercept = 0.

wfdtnagb.d08

Table 60. 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 in the fall 2008.

		Age			
Year-Class	N	1	2	3	4
2007	46	4.7			
2006	15	4.6	9.3		
2005	12	4.2	7.4	10.2	
2004	1	4.5	7.4	9.8	12.1
Mean		4.6	8.4	10.1	12.1
Smallest		3.6	6.7	8.2	12.1
Largest		9.8	10.1	11.6	12.1
Std Err		0.1	0.2	0.2	
Low 95% CI		4.4	8.0	9.7	
High 95% CI		4.8	8.8	10.6	

* Intercept = 0.

wfdtnagb.d08

Table 61. Age frequency and CPUE (fish/net-night) of black crappie collected during 87 net-nights at Lake Barkley from 21 October-31 October 2008.

	Inch Class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	Percent	CPUE	Std. Err.
0	20	30	5	6	7	1	5						74	33.00	0.86	0.14
1						12	62	39	2		2		117	52.00	1.36	0.28
2									3	11			14	6.00	0.17	0.04
3							5		2	4	6		17	7.00	0.19	0.04
4												1	1	0.00	0.01	0.01
Total	20	30	5	6	7	13	72	39	7	15	8	1	223			
%	9	13	2	3	3	6	32	17	3	7	4					

(wfdtpntb.d08) (wfdtnagb.d08)

Table 62. Age frequencies and CPUE (fish/net-night) of white crappie collected during 87 net-nights at Lake Barkley during 21 October-31 October 2008.

	Inch Class																
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	Percent	CPUE	Std Err
0	29	83	31	54	69	70	7							343	79.0	3.99	0.53
1						6		30	14	3	2			55	12.0	0.63	0.13
2									4	7	2			13	3.0	0.15	0.03
3										1	15	2		18	4.0	0.21	0.05
4											2	1		3	1.0	0.03	0.01
5											2	1	1	4	1.0	0.04	0.01
7												1		1	0.0	0.01	0.01
Total	29	83	31	54	69	76	7	30	18	11	21	5	1	437			
%	7	19	7	12	16	17	2	7	4	3	5	1	0				

(wfdtpntb.d08) (wfdtnagb.d08)

Table 63. Lake-specific population assessment for crappie from Lake Barkley trap-net data collected in November 2004-2008.

	2004		2005		2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Population Density (CPUE of age-1 and older crappie)	9.18	2	6.50	1	7.60	2	3.78	1	2.80	1
Recruitment (CPUE of age-1 crappie)	6.32	2	3.10	1	6.00	2	1.80	1	1.99	1
Recruitment (CPUE of age-0 crappie)	3.23	1	8.60	1	0.20	1	2.00	1	4.85	1
Size Structure (CPUE of > 8.0 in)	7.29	4	5.20	3	3.60	2	3.20	2	2.73	1
Growth (Mean age-2 length at capture)	10.7	4	10.7	4	10.6	3	10.6	3	11.3	4
Instantaneous Mortality (Z)		1.51		1.42		1.49		0.91		0.865
Annual Mortality (A)%		77.8		75.8		77.5		59.9		58.0
Total Score:		13		10		10		8		8
Assessment Rating:		G		F		F		F		F

(Barkley_Crappie_Database.xls)

Table 64. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass, bluegill and redear sunfish collected during 1.25 hours (6 runs; each 600s) of diurnal electrofishing at Lake Pennyrile on 18 April, 2008

	Inch Class																		
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	CPUE	Std Err
Largemouth bass				1	21	14	5	9	16	17	23	11	1	2	1	1	122	117.11	14.48
Bluegill	8	31	38	62	40	33	64	10	1								287	278.82	85.42
Redear Sunfish		3	2	11	9	6	7	28	12	2							80	77.40	40.35

wfdpsdp.d08

Table 65. Spring, diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Pennyrile Lake from 1998-2008.

	Length Group									
	< 8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in		Total	
Year	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
1998	12.00	8.00	70.00	1.00	7.00	1.00	2.00	2.00	91.00	21.00
1999[A]	26.00	8.00	102.00	8.00	3.00	1.00	2.00	2.00	133.00	1.00
2000[A]	46.00	4.00	87.00	5.00	11.00	7.00	3.00	3.00	147.00	1.00
2001[A]	54.00	0.00	138.00	10.00	12.00	4.00	5.00	1.00	209.00	15.00
2002	132.30	24.20	116.20	14.70	30.80	5.40	5.40	3.30	284.00	36.90
2003	96.60	17.60	118.80	9.40	24.80	4.80	0.90	0.90	241.00	27.30
2004	27.50	7.10	63.70	10.70	26.40	4.70	2.20	1.40	119.80	14.40
2005	101.10	11.60	127.50	21.00	25.30	5.80	6.60	2.60	260.40	22.90
2006	81.00	21.60	105.00	11.80	26.00	5.03	6.00	2.58	218.00	30.31
2007	41.33	2.46	66.00	3.97	14.00	2.25	2.67	1.33	124.00	5.20
2008	38.87	5.09	62.99	11.96	13.28	2.82	1.96	1.24	117.11	14.48
Mean	59.70		96.11		17.60		3.43		176.76	

[A] Data collected by spring, nocturnal electrofishing.
wfdpsdp.dxx
Date from 1990 to 1997 is listed in previous year reports.

Table 66. PSD and RSD values obtained for largemouth bass, bluegill and redear sunfish collected during 1.25 hours of diurnal electrofishing (6 runs; each 600s) at Lake Pennyrile on 18 April 2008.

Species	N	PSD (+/- 95% CI)	RSD* (+/- 95% CI)
Largemouth bass	81	20 (9)	2 (3)
Bluegill	249	44 (6)	5 (3)
Redear sunfish	75	65 (11)	19 (9)

* Bluegill = RSD_8, Redear sunfish = RSD_9.

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Table 67. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Lake Pennyrile spring samples.

	Year										
Age	1998	1999[AB]	2000[AB]	2001[A]	2002[C]	2003	2004[D]	2005[D]	2006[D]	2007[D]	2008[D]
1	5.00	22.69	41.06	26.00	111.51	59.39	13.05	85.65	68.27	33.11	27.92
2	9.30	22.34	37.53	103.76	49.89	83.41	38.09	55.89	39.09	28.72	28.78
3	28.30	40.07	25.23	39.13	34.77	23.39	12.83	28.37	25.68	12.97	13.62
4	26.60	20.26	14.88	6.25	28.38	33.92	26.06	35.10	34.38	21.40	17.98
5	7.70	15.18	15.11	21.57	31.52	25.75	17.50	29.18	25.91	17.21	18.01
6	3.00	6.21	3.76	4.14	9.99	7.26	5.39	7.82	8.38	3.45	4.25
7	5.00	2.62	2.31	3.00	8.02	3.42	1.95	3.54	3.11	2.74	2.47
8	4.00	2.58	1.63	0.00	2.54	3.63	2.70	3.91	4.19	1.73	2.12
9		0.00	0.00	0.00	0.00		0.00				
		0.06	0.50	1.14	1.10		2.21				

[A] Spring electrofishing samples were collected nocturnally.

[B] Age and growth data was not collected. Age and growth data collected during 1998 and 2001 was used as surrogate data.

[C] Age and growth data was not collected. Age and growth data collected during 2001 and 2003 was used as surrogate data.

[D] Age and growth data was not collected. Age and growth data collected during 2003 was used as surrogate data.

Pennyrile_LMB_Database.xls

Table 68. Lake specific population assessment of the largemouth bass population based on spring diurnal electrofishing at Lake Pennyrile from 2004-2008.

	2004[B]		2005[B]		2006[B]		2007[B]		2008[B]	
Parameter[A]	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3)	9.7	1	9.7	1	9.7	1	9.7	1	9.7	1
Recruitment (Spring CPUE of age-1)	13.10	1	85.70	4	68.30	3	33.10	2	27.92	1
Size Structure (Spring CPUE of 12.0-14.9 in.)	26.40	2	25.30	2	26.00	2	14.00	1	13.28	2
Size Structure (Spring CPUE of ≥ 15.0 in.)	2.20	1	6.60	2	6.00	2	2.70	1	1.96	2
Size Structure (Spring CPUE of ≥ 20.0 in.)	0.00	1	3.30	3	0.00	0	0.67	1	0.00	0
Total Score		6		12		8		6		6
Assessment Rating		Poor		Good		Fair		Poor		Poor

[A] Population assessment scores are obtained for lakes < 1000 acres.

[B] Age and growth data was not collected. Age and growth data collected during 2003 was used as surrogate data.

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

Pennyrile_LMB_Database.xls

Table 69. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Lake Pennyrile during May from 1998-2008.

		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											
	2008	38.09	19.9	136.2	43.0	93.2	42.7	11.3	4.7	278.82	85.42
	2007	4.00	1.79	35.33	8.60	23.33	7.55	1.33	0.84	64.00	15.87
	2005	51.70	20.00	262.60	64.00	45.10	13.40	1.10	1.10	360.40	72.30
	2004	3.10	3.10	38.50	10.60	23.10	11.90	6.20	4.50	70.80	21.70
	2003	27.70	5.20	80.00	14.50	18.50	5.20	12.30	5.20	138.50	8.80
	2002	77.60	22.90	98.40	32.00	29.60	7.30	1.60	1.10	207.20	52.10
	2001	0.0	0.0	21.00	3.00	65.90	53.90	3.00	3.00	89.80	53.90
	2000	80.80	9.00	95.80	18.00	65.90	12.00	9.00	3.00	251.50	35.90
	1999	6.00	0.0	61.00	15.00	72.00	2.00	4.00	0.0	143.00	17.00
	1998	16.00	4.00	40.00	2.00	16.00	6.00	1.00	1.00	73.00	11.00
	Mean	33.36		81.40		39.94		4.39		155.36	
Redear sunfish											
	2008	2.65	1.76	20.98	9.19	12.75	6.34	41.03	25.14	77.40	40.35
	2007	2.00	1.37	21.33	7.91	16.67	8.09	10.67	1.69	50.67	16.35
	2005	1.10	1.10	37.40	12.80	27.50	10.70	23.10	5.30	89.00	28.70
	2004	0.0	0.0	20.00	12.80	40.00	17.10	9.20	2.90	69.20	31.10
	2003	0.0	0.0	55.40	12.70	26.20	3.10	21.50	2.90	103.10	13.00
	2002	0.0	0.0	59.20	11.40	49.20	9.90	53.80	20.90	162.30	27.30
	2001	0.0	0.0	21.00	15.00	12.00	6.00	9.00	3.00	44.90	21.00
	2000	3.00	3.00	41.90	18.00	24.00	0.0	134.70	68.90	206.60	50.90
	1999	0.0	0.0	11.00	3.00	40.00	4.00	65.00	11.00	119.00	11.00
	1998	0.0	0.0	6.00	2.00	16.00	8.00	9.00	1.00	32.00	12.00
	Mean	2.19		29.42		26.43		37.70		95.42	

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Table 70. Lake-specific population assessment of the bluegill sunfish population at Lake Pennyrile from 2003-2008.

	2003[A]		2004[A]		2005[A]		2007[A]		2008[A]	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-2)	2.9	1	2.9	1	2.9	1	2.9	1	2.9	1
Growth (Years to reach 6.0 in)	4	2	4	2	4	2	4	2	4	2
Size Structure (CPUE ≥ 6.0 in)	30.80	2	29.23	2	46.20	3	24.70	2	104.51	4
Size Structure (CPUE ≥ 8.0 in)	12.30	4	6.15	2	1.10	1	1.30	1	11.32	4
Total Score:		9		7		7		6		11
Assessment Rating:		F		F		F		P		G

[A] Age and growth data was not collected. Age and growth data from 2002 was used as surrogate data.

(Pennyrile_BLG_Database)

2006 data was not collected on Bluegill

Rating
4-6 = Poor (P)
7-10 = Fair (F)
11-13 = Good (G)
14-16 = Excellent (E)

Table 71. Lake-specific population assessment of the redear sunfish population at Lake Pennyrile from 2003-2008.

	2003		2004		2005		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3)	5.4[B]	1	5.4[B]	1	5.4[B]	1	5.4	1	5.4	1
Growth (Years to reach 8.0 in)	5[B]	2	5[B]	2	5[B]	2	5	2	5	2
Size Structure (CPUE ≥ 8.0 in)	21.5	1	9.2	1	23.1	1	10.7	1	41.0	2
Size Structure (CPUE ≥ 10.0 in)	0.0	0	0.0	0	0.0	0	0.0	0	2.0	3
Total Score:		8		6		8		7		8
Assessment Rating:		F		P		F		F		F

[B] Age and growth data was not collected. Age and growth data collected during 2002 was used as surrogate data.
(Pennyrile_RDR_Database)
No population data was collected in 2006

Rating
4-6 = Poor (P)
7-10 = Fair (F)
11-13 = Good (G)
14-16 = Excellent (E)

Table 72. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during diurnal electrofishing at Lake Beshear during 2008.

		Inch Class																						
Season	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
Spring	Largemouth bass		1	5	9	3	3	4	4	12	8	7	13	8	7	10	10	10	6	5	4	129	51.60	6.82
Fall	Largemouth bass	1	7	18	6	1	2	4	8	9	2	2	1	8	12	5	7	5	2	1		101	40.40	2.32

wfdpsdlb.d08 and wfdwrlb.d08

Table 73. Spring diurnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Beshear.

	Mean length age-3 at	Age-1		Length Group												Total	
				≤8.0 in		≥12.0 in		12.0 - 14.9 in		≥15.0 in		≥18.0 in		≥20.0 in			
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
1998		0.00		5.00	1.3	70.00	8.7	17.00	4.4	53.00	5.3	22.00	2.2	8.50	1.7	88.00	8.3
1999		3.50		4.00	1.8	39.50	6.7	14.00	2.9	25.50	4.9	8.00	2.7	1.00	1.0	55.00	8.8
2000		3.20		11.20	3.7	36.00	8.7	4.00	2.1	32.00	7.6	16.40	3.1	2.80	0.5	65.20	10.9
2001	14.1	1.00	2.0	5.00	2.4	26.00	6.1	10.50	2.5	15.50	3.8	5.50	1.3	1.50	1.0	73.00	6.7
2002		3.50		11.50	1.7	64.50	10.7	28.00	4.2	36.50	8.6	11.50	2.9	3.50	1.3	100.00	16.4
2003	14.0	0.80	3.8	5.20	2.9	33.60	7.8	8.00	1.9	25.60	7.2	3.60	0.7	2.00	1.1	45.20	9.5
2004		6.40		4.40	1.6	52.00	9.3	9.60	2.6	42.40	8.5	16.00	3.7	2.80	1.4	68.40	11.7
2005		38.80		30.80	4.9	51.60	6.2	7.20	2.1	44.40	5.9	19.60	2.4	3.60	1.2	94.80	8.5
2006	12.7	24.80	7.8	27.60	8.2	41.20	5.6	7.20	2.9	34.00	3.0	18.00	1.9	4.80	1.5	84.00	13.3
2007		13.00	2.4	15.00	3.3	50.33	8.6	15.00	4.2	35.33	5.2	16.00	2.6	4.67	1.0	83.00	12.8
2008		10.15	1.4	8.40	3.9	32.00	4.6	11.20	3.8	20.80	3.4	10.00	2.7	3.60	1.7	51.60	6.8
Average	13.6	9.56		11.65		45.16		11.97		33.18		13.33		3.52		73.47	

wfdpsdlb.dxx
Data from 1986 to 1997 is listed in previous year reports.

Table 74. Age frequency and CPUE (fish/hr) of largemouth bass collected from Lake Beshear in May 2008 during 2.5 hours of diurnal sampling. Used WFDLBAGB.d06 data set to determine age frequencies.

	Inch Class																			
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	Std Err
1	5	9	3	3	4	1											25	20.8	10.00	3.7
2						3	12	7	3								25	20.8	10.15	1.4
3								1	3	4	6	1					15	12.5	5.91	1.7
4									1	9	2	2					14	11.7	5.39	1.1
5												4	3	10	4		21	17.5	8.33	1.2
6												1	7			6	14	11.7	5.42	1.2
7															4		4	3.3	1.60	0.5
8															2		2	1.7	0.80	0.3
Total	5	9	3	3	4	4	12	8	7	13	8	8	10	10	10	6	120		47.60	
%	4	8	3	3	3	3	10	7	6	11	7	7	8	8	8	5		100		

wfdpsdlb.D07, wfdlbbag.D06

Table 75. Population assessment determined from largemouth bass based on spring sampling at Lake Beshear from 2004-2008 using the Lake Beshear specific assessment.

	2004		2005		2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3)	14.0	4	14.0	4	12.7	3	12.7	3	12.7	3
Recruitment (Spring CPUE of age-1)	6.40	1	38.80	4	24.80	3	13.00	2	10.15	1
Size Structure (Spring CPUE of 12.0-14.9 in.)	9.60	1	7.20	1	7.20	1	15.00	2	11.20	2
Size Structure (Spring CPUE of ≥ 15.0 in.)	42.40	4	44.40	4	34.00	3	35.33	3	20.80	2
Size Structure (Spring CPUE of ≥ 20.0 in.)	2.80	2	3.60	2	4.80	3	4.67	3	3.60	2
Instantaneous Mortality (Z)	0.547		0.430		0.262		0.344		0.316	
Annual Mortality (A)%	54.7		34.9		23.0		29.1		27.1	
Total Score		12		15		13		13		10
Assessment Rating		G		G		G		G		F

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

Lake Beshear Bass Data Base

Table 76. 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
2001	4.5	0.2	4.40	1.60	0.80	0.49	15.00	2.94
2002	4.2	0.2	5.00	1.29	0.00		13.50	1.33
2003	3.3	0.1	24.00	4.76	0.50	0.5	4.32	1.94
2004	3.8	0.1	17.60	4.12	0.00		38.80	1.80
2005	4.4	0.1	21.00	7.68	0.00		37.04	9.50
2006	4.2	0.1	23.00	7.51	3.00	1.91	25.00	4.24
2007	4.8	0.1	21.60	3.49	9.60	2.32	10.15	1.42
2008	4.3	0.1	12.40	1.17	2.00	0.89		

[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, 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 77. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Hematite Lake.

		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
Redear											
	2008	2.00	1.37	88.67	61.52	2.67	1.98			140.00	77.80
	2007	1.50	1.18	348.00	115.76	6.00	2.20			355.50	118.32
	2006	12.00	3.20	132.00	16.00	2.00	2.00			146.00	14.00
	2005	3.99	4.00	147.70	34.80	35.93	19.00			187.62	49.00
	2004	8.40	3.60	216.00	26.10	27.50	3.60	1.20	1.20	253.90	25.80
	2002	1.00	1.00	73.00	17.50	69.00	10.00	16.00	4.00	159.00	22.90
	Mean	4.82		167.56		23.85		3.44		207.00	

wfdpsdhl.dxx

Table 78. Relative species abundance, size distribution, and CPUE (fish/hr) of fish collected during diurnal electrofishing at Hematite Lake in April 2008. Three sample runs, each 900 seconds were made.

	Inch Class																			
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	Std Err
Largemouth bass		1	5	2	3	2			1	1		1	1	5		1	2	1	26	34.67	2.67
Redear sunfish		3	34	88	11	4													140	186.67	110.98
Bluegill	1	2	28	55	15	4													105	140.00	77.60

wfdpsdhl.d08

Table 79. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass, crappie, and redear sunfish collected during 1.25 hours (5 runs; each 900s) of diurnal electrofishing at Lake Blythe in April, 2008.

	Inch Class																	Total	CPUE	Std Err
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Largemouth bass	3	4	1		1	5	16	18	9	4			1			2	1	1	66	52.80	6.30

wfdblyth.d08

Table 80. Age frequency and CPUE (fish/hr) of largemouth bass collected from electrofishing at Lake Blythe in April 2008. Age data was obtained using otoliths collected in 2007.

	Inch Class													
Age	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	Std Err
1	3	4	1		1	2					11	17.7	8.80	1.44
2					1	3	16	15			35	56.5	28.00	5.04
3									7		7	11.3	5.60	1.75
4								3	2		5	8.1	4.00	0.95
5										4	4	6.5	3.20	0.80
Total	3	4	1	0	2	5	16	18	9	4	62		49.60	
%	5	6	2	0	3	8	26	29	15	6		100		

wfdblyth.d08 wfdblyag.d07

Table 81. Relative species abundance and size distribution of sportfish species collected during diurnal 6 hours of electrofishing on the lower Tennessee River (tailwaters, Haddox Ferry, and Paducah Riverfront) on 15-17 September 2008.

	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	Total	CPUE	StdErr
Largemouth bass		5	11	36	74	90	49	22	17	55	63	35	9	7	6	4	6	4	1						494	82.33	19.55
Smallmouth bass			4	6	3	2	2	4	8	4	7	2	2	1	1	2		1							49	8.17	3.2
Spotted bass			4	6					2	1	1		1												15	2.50	0.82
Sauger				2	1	1	1		1	8	2		1	3	1	1									22	3.67	1.53
White bass			1	1	1		1	2		2	5	2	2	4	1										22	3.67	1.15
Striped bass				2	1																				3	0.50	0.36
Hybrid striped bass							1																		1	0.17	0.17
Yellow bass			5		18	33	22	8	1			1													88	14.67	11.2
Black crappie							4	1	1	1	1														8	1.33	0.45
White crappie			1			1	4	3		3		1													13	2.17	1.7
Redear sunfish				3	2		2																		7	1.17	0.46
Bluegill sunfish	4	24	27	40	23	8	10	1																	137	22.83	3.71
Flathead catfish						1	2	1	1	3	2			1			1						1	1	14	2.33	0.73
Channel catfish									3	4	3	2	1			1	2	1	2	2	2	1	1	2	27	4.50	1.69
Blue catfish						1					1														2	0.33	0.33

wfdtnrsf.d08

Table 81 continued. Relative species abundance and size distribution of non-sportfish species collected during diurnal 6 hours of electrofishing on the lower Tennessee River (tailwaters, Haddox Ferry, and Paducah Riverfront) on 15-17 September 2008.

	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	31	32	33	34	35	36	37	43	Total	CPUE	StdErr
Spotted gar												1					1				1	3					1										7	1.17	0.46
Longnose gar																								1		1			1						1	1	5	0.83	0.52
Shortnose gar																	1	1	2		1	2		3	1							1					12	2.00	0.6
Bowfin																						1	1	1	1	1	3	1					1				10	1.67	0.92
American eel																						1															1	0.17	0.17
Redhorse			1			1	6	1	1	3							1																				14	2.33	1.18
Spotted sucker								1		1		2		1																							5	0.83	0.52
Common carp																				1	2	3	2	4				1									13	2.17	0.72
Grass carp									1	1	1	1	1																					1			6	1.00	0.52
River carpsucker			3	4	5	5		2							2	1	2	1				1															26	4.33	2.16
Silver carp				9	3	2	2	4		1	1											1	2		1					1	1		1		1		30	5.00	3.13
Smallmouth buffalo																		1			1	2	1	2													7	1.17	0.46
Black buffalo														1	2	2	3	2	3	3	4	1	1	1	1	1											25	4.17	1.73
Bigmouth buffalo																			1	1																	2	0.33	0.33
Warmouth					1	1																															2	0.33	0.22
Green sunfish			3	6	2	2																															13	2.17	1.06
Longear	3	49	138	132	51	7	1																														381	63.50	12.69
Log perch				1																																	1	0.17	0.17
Yellow perch			1																																		1	0.17	0.17
Freshwater drum			8	4	1	1	2	1	1			1		1	1	1		1	1																		24	4.00	2.42
Emerald shiner		4	9																																		13	2.17	0.87
Golden shiner				3	1	1																															5	0.83	0.46
Striped mullet																		1	1																		2	0.33	0.22

wfdtnrsf.d08

Table 82. Relative species abundance and size distribution of sportfish species collected during diurnal 6 hours of electrofishing on the Mississippi River (Columbus Belmont and Wickliffe) on 2-3 October 2008.

	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	35	44	45	Total	CPUE	StdErr
Sauger						1																											1	0.33	0.29
White bass				3	3	1		1		1	2	6	2	5	6	2											1						32	10.67	3.75
Striped bass												1	1	2						2	2	1	2	1			1						13	4.33	2.33
Hybrid striped bass														3	4	1	2	2			2												14	4.67	2.00
Flathead catfish		4	2	2	11	9	3	1	2	2	3		2	1		3		2	2	1		1			1	1		1		1	1	1	57	19.00	6.60
Channel catfish	3	3							1						1	1	1	1		1	1												13	4.33	2.16
Blue catfish		4	5	1	1	2	8	8	6	5	4		3	3	3	1	1	2	3	4		3	1			1			1				70	23.33	3.80

Table 82 continued. Relative species abundance and size distribution of non-sportfish species collected during diurnal 6 hours of electrofishing on the Mississippi River (Columbus Belmont and Wickliffe) on 2-3 October 2008.

	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	35	44	45	Total	CPUE	StdErr
Shovelnose Sturgeon																					1												1	0.33	0.46
Longnose gar																							1						1				2	0.67	0.52
Shortnose gar														1					1	1													3	1.00	0.6
Mooneye			1		2																												3	1.00	0.92
Blue sucker																			1		1	2	1										5	1.67	0.52
Common carp																1							1	1									3	1.00	0.72
Quillback															1																		1	0.33	0.52
River carpsucker														1																			1	0.33	2.16
Silver carp						1									1	1				1	1	1	5	6					2	1			20	6.67	3.13
Black buffalo															1																		1	0.33	1.73
Freshwater drum		1	1	3	1	5	3		3	4	3	2	3	1	1	1																	32	10.67	2.42

wfdmsrsf.d08

Table 83. Relative species abundance and size distribution of sportfish species collected during diurnal 6 hours of electrofishing on the lower Cumberland River on 22-25 September 2008.

Species	Inch Class																																	Total	CPUE	StdErr
	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	32	33	34	35	36	37	43			
Blue Catfish					5	4	1	1	4		3	3	4	5	5	3	1	2				2	2				1						1	1				48	8.00	3.94
Channel Catfish			1		2	3	7	7	1	5	2	1	2	1	5	6	1	2	2	1			1			1											51	8.50	2.61
Flathead Catfish						3	1	4	2	8	3	7	3		2	1		1		1	1		1	1			1		1								41	6.83	1.75
White Bass				1	5	3	13	8	1	1	6		1	1	1																						41	6.83	4.37
Striped Bass															1							1	1		1												4	0.67	0.67
Bluegill	2	1	3	18	20	3	9																														56	9.33	2.97
Redear Sunfish						2		1																													3	0.50	0.26
Smallmouth Bass				4	12	4		2	10	15	7	2	2	2	1			1		1																63	10.50	1.13
Spotted Bass			1	10	3			5	9	3	4		1	2																						38	6.33	3.02
Largemouth Bass				7	28	43	20	4	8	7	10	10	8	6	1	10	1	1																		164	27.83	4.64
Black Crappie											2																										2	0.33	0.33
Sauger										2		1																									3	0.50	0.26
Hybrid Striped Bass												1																									1	0.17	0.17

Table 83 continued. Relative species abundance and size distribution of non-sportfish species collected during diurnal 3 hours of electrofishing on the lower Cumberland River on 22-25 September 2008.

Species	Inch Class																																				Total	CPUE	StdErr
	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	30	31	32	33	34	35	36	37	40			
Spotted gar																			1	2	2	4	2	1														12	4.00	2.41
Longnose gar																			1			3		1		2	1	1	2		1					1	13	4.33	1.81
Shortnose gar										1					1	1				1		1									2		1				8	2.67	1.58
Bowfin																			1							1												2	0.67	0.45
Grass Carp											1																											1	0.33	0.33
Common Carp																									1													1	0.33	0.33
Silver Carp				1		2		2	2												1	1	1															10	3.33	1.76
River Carpsucker														1		2																							3	1.00	1.00
Quillback										1																												1	0.33	0.33
White Sucker							1																															1	0.33	0.33
Smallmouth buffalo														1		2	2	1			1			1														8	2.67	0.90
Bigmouth buffalo																1	1					2			1													5	1.67	1.04
Black buffalo																1				1																			2	0.67	0.45
Yellow bass			1		1		1	1																															4	1.33	0.75
Green Sunfish				1																																			1	0.33	0.33
Warmouth							1																																1	0.33	0.33
Longear		8	49	97	48	3		1																															206	68.67	28.86
Log perch				1																																			1	0.33	0.33
Freshwater drum							1			2	2	4	4	2	5	3	4	2	2	1	3	3		1		1													40	13.33	5.15

Table 84. Relative species abundance and size distribution of sportfish species collected during diurnal 6 hours of electrofishing on the Ohio River on 18-and 23 October 2008.

	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	Total	CPUE	StdErr
Blue Catfish		1	2	1		2	5	3	1	2	1		2	4	1	4		5	2	2		1				13.00	6.26	
Channel Catfish	1	5	1			1	1	2	1	1	2		1	3	3	6	2	1	1	2						11.33	4.70	
Flathead Catfish							1	3		1	1	2	2		1	1			1	4					1	6.00	3.35	
White Bass				2	1	2	2		1	1		1	1	1												4.00	2.58	
Bluegill		1	14	16	13	2																				15.33	14.14	
Redear Sunfish					1		1	1																		1.00	1.00	
Spotted Bass			1						2	1	3		1													2.67	0.67	
Largemouth Bass				5	2	1	1	2	1		1	1		2												5.33	2.51	
Hybrid Striped Bass													1	1												0.67	0.42	

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Table 84 continued. Relative species abundance and size distribution of non-sportfish species collected during diurnal 6 hours of electrofishing on the Ohio River on 18-and 23 October 2008.

	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	Total	CPUE	StdErr
Spotted Gar																	1				1					2	1.33	1.33
Longnose Gar																2										2	1.33	0.84
River Carpsucker			1												1											2	1.33	0.84
Blue Sucker																		1								1	0.67	0.67
Bigmouth Buffalo																	1									1	0.67	0.67
Yellow Bass			2																							2	1.33	1.33
Freshwater Drum											1			1	1	3	4			2	2	1	1			16	10.67	4.7
Striped Mullet																	2	4	4	2						12	8.00	7.23

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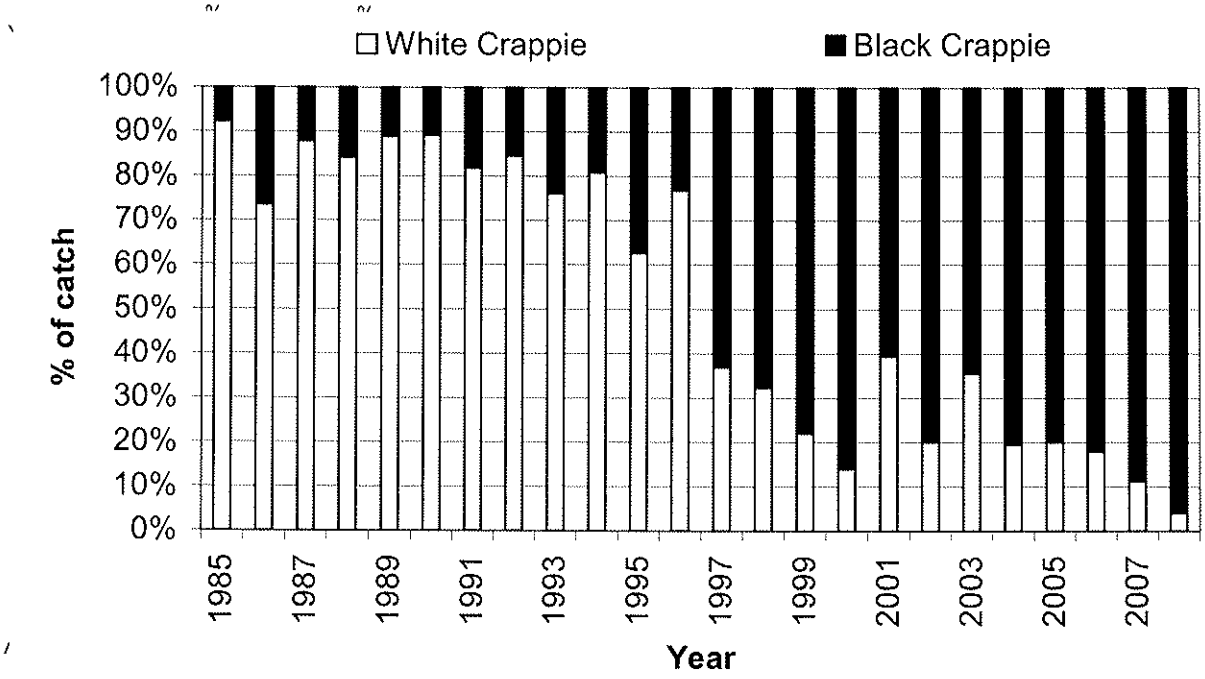
Figure 1. Relative species composition of white and black crappie collected during annual fall trap-netting from 1985-2008 at Kentucky Lake.



(Kentucky_Crappie_Database.xls)

Figure 2. Plot of retention time (days) for water in Kentucky Lake and CPUE (f/nn) for age-1 crappie at Kentucky Lake.

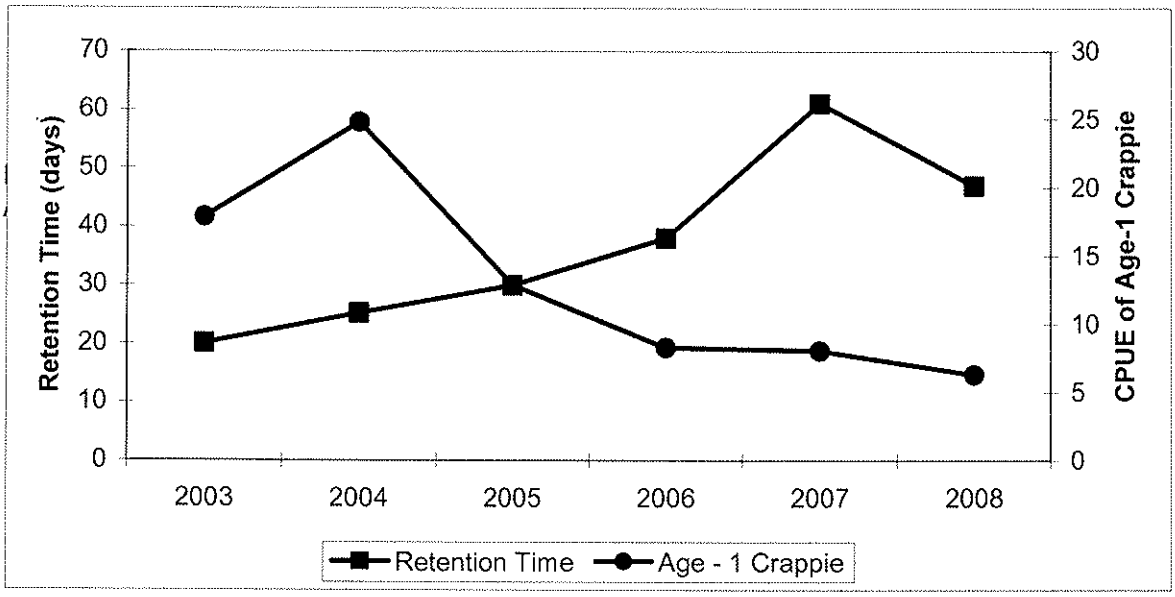
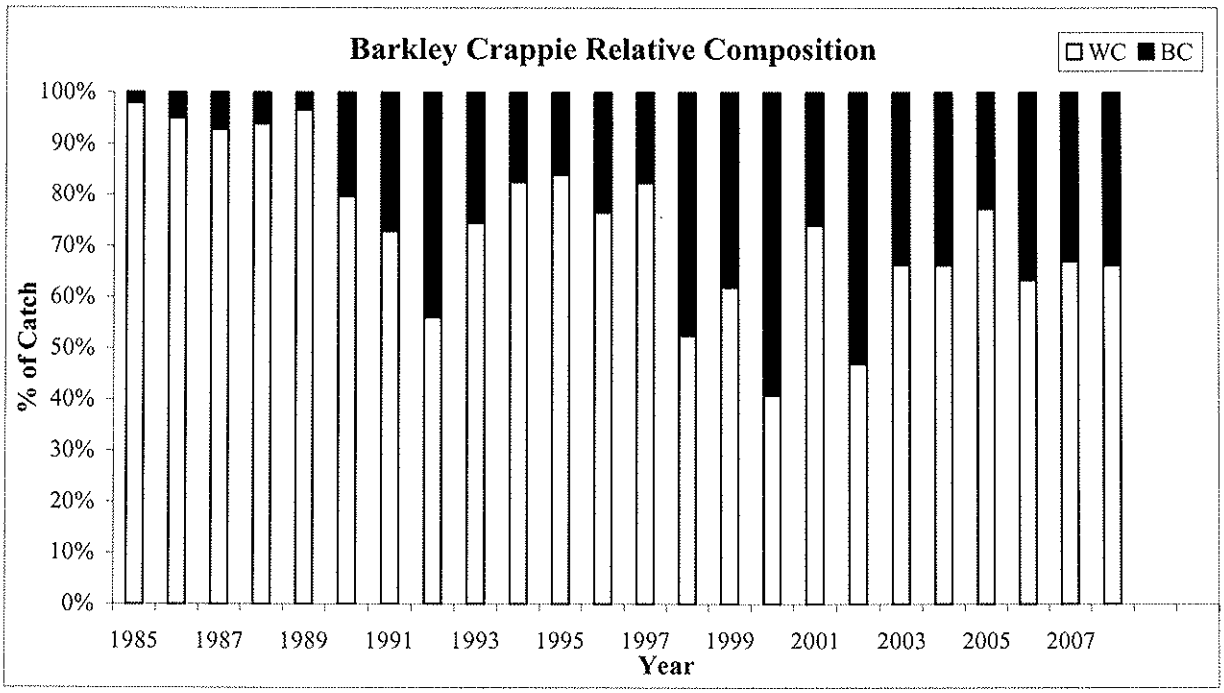
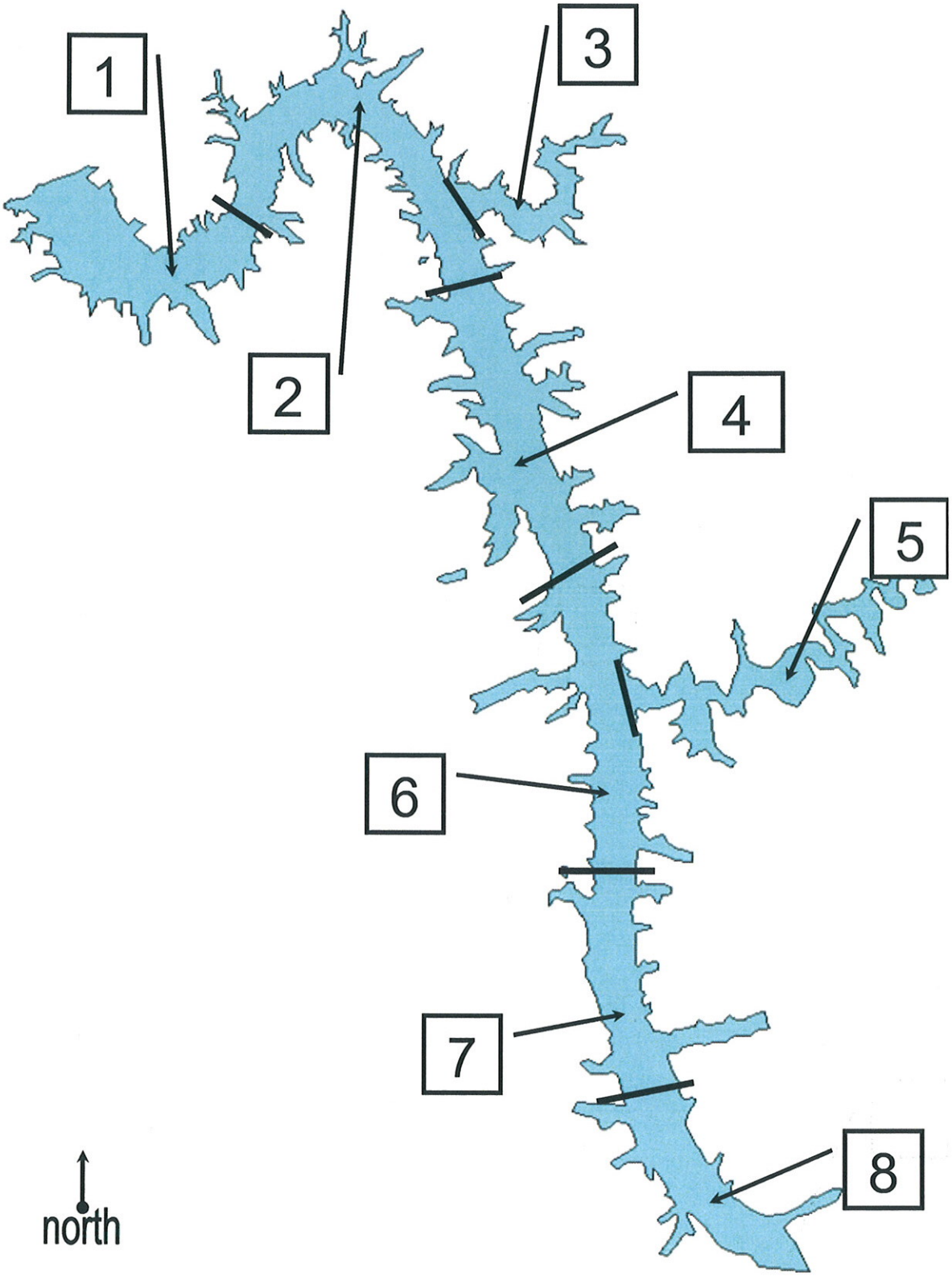


Figure 3. Relative species composition of white and black crappie collected during annual fall trap-netting from 1985-2008 at Lake Barkley.



(Barkley_Crappie_Database.xls)

Appendix A. Lake Barkley creel survey areas, 2008.



Appendix B. Barkley Lake creel survey questionnaire.

BARKLEY LAKE ANGLER ATTITUDE SURVEY 2008

Lake creel survey questionnaire.

1. Have you been surveyed this year? Yes, stop survey No, continue to answer questions

2. Zip Code_____ Name (optional) _____

AR - 2%, FL - 3%, IL - 45%, IN - 8%, OH - 6%, TN - 10%

3. What species do you fish for at Lake Barkley (check all that apply)? (N = 515)
Redear - 23.4%, Black Bass - 70.3%, Crappie - 46.2%, Catfish - 28.3%, White Bass - 10.8%
Other - 1.0%

4. Which species do you fish for most at Lake Barkley (check only one)? (N = 286)
Redear - 3.5%, Black Bass - 64%, Crappie - 15%, Catfish - 13.6%, White Bass - 2.1%,
Other - 1.7%

5. What level of satisfaction do you have with the redear fishery at Lake Barkley? (N = 286)
5.2% very satisfied **8.0%** somewhat satisfied **5.6%** neutral
2.8% somewhat dissatisfied **1%** very dissatisfied **77.3%** no opinion

6. Would you support or oppose a size limit on redear sunfish? **(307)**
9.4% support **2.4%** oppose **88.1%** no opinion

7. What level of satisfaction do you have with the crappie fishery at Lake Barkley? **(286)**
11.9% very satisfied **19.9%** somewhat satisfied **6.6%** neutral
5.9% somewhat dissatisfied **0.3%** very dissatisfied **55.2%** no opinion

8. What level of satisfaction do you have with the black bass fishery at Lake Barkley? **(286)**
35.3% very satisfied **32.2%** somewhat satisfied **5.9%** neutral
4.2% somewhat dissatisfied **0.3%** very dissatisfied **22.0%** no opinion

9. What level of satisfaction do you have with the catfish fishery at Lake Barkley? **(286)**
14.0% very satisfied **7.7%** somewhat satisfied **2.4%** neutral
0.7% somewhat dissatisfied **0.3%** very dissatisfied **74.8%** no opinion

10. Are you satisfied with the current size and creel limits on all sport fish at Lake Barkley? **(284)**
95.4% Yes **4.6%** No

11. When you fish at Lake Barkley, have you fished around KDFWR fish attractors? **(286)**
62.2% Yes **37.8 %** No

11a. If yes, which attractors do you use? (178)
42.1% Stake Beds **5.6%** Brush Piles **52.2%** Both

11b. If no, choose the answer that best describes why you do not use the fish attractors? (107)
52.3% I catch more fish in other locations **12.1%** They are not placed in the right locations
10.3% I don't know where to find attractors **5.6%** I don't know how to fish or what baits to use around them
19.6% Other

11c. How would you rate your fishing success around each type of fish attractor? (169)
Stake Beds: **14.2%** Excellent **39.1%** Good **36.1%** Fair **10.7%** Poor
Brush Piles: **9.2%** Excellent **41.3%** Good **38.5%** Fair **11.0%** Fair

12. Would you support or oppose a regulation where anglers could continue to keep the same number of catfish under 34 inches as in the past, but could keep only 1 catfish greater than 34" per day? (286)
26.2% Support **10.8%** Oppose **62.9%** No Opinion

NORTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 presents a summary of conditions encountered while sampling at state-owned lakes and ACOE reservoirs during the 2008 field season.

Nolin River Lake

Black Bass Sampling

Electrofishing to monitor the black bass population at Nolin Lake was performed during April 2008 (Tables 2-7). Catch rates for largemouth bass in 2008 increased for all size ranges. The CPUE of < 8.0 in largemouth in 2008 was similar to the 2007 catch rate and much higher than previous years. Many of the fish in the < 8.0 in size range in 2007 moved to the 8.0-11.9 in size range in 2008 leading to a dramatic increase in the catch rate of 8.0-11.9 in fish. The catch rate of 3.56 fish/hr for largemouth bass ≥ 20.0 in is the highest ever recorded. The strong 2005 and 2006 year classes should grow into the larger size ranges and continue to increase catch rates of larger fish.

Fall electrofishing to determine CPUE and mean length of age 0 largemouth bass (Tables 8-9) was conducted in October. The catch rate of age 0 fish increased dramatically in 2008 while the average size of age 0 fish declined. The catch rate for age 0 fish ≥ 5.0 in increased slightly from 2007, but was well below the CPUE observed in 2005 and 2006 that has resulted in the increased catch rates of ≤ 8.0 and 8.0-11.9 in fish. The Nolin Lake Strategic Management Plan (SMP) objectives for largemouth bass state: a mean length at age 3 of ≥ 12.5 in, a CPUE of ≥ 30.00 f/h for age 1 fish, a CPUE of ≥ 25.50 f/h for 12.0-14.9 in fish, a CPUE of ≥ 12.50 f/h for ≥ 15.0 in fish, and a CPUE of ≥ 1.00 f/h for ≥ 20.0 in fish. All management objectives were met in 2008.

Crappie Sampling

Trap netting was conducted during October to assess Nolin Lakes' crappie population (Tables 10-13). A total of 685 crappie were collected during 76 net-nights of effort for a total CPUE of 9.01 fish/net-night. Of the 685 crappie collected, 637 (92%) were white and 48 (8%) were black. Catch rates in 2008 were similar to catch rates collected during 2006 and 2007. The catch rate for crappie began declining in 2005 from the numbers collected during 2001-2004 surveys. Growth rate continues to be excellent so numbers should rebound given a strong year class. The length-weight equation is log W = -3.66 + 3.41 (log L). Nolin Lake SMP objectives for white crappie management state: a CPUE (excluding age 0 fish) of ≥ 10.0 f/nn, a CPUE for age 1 fish of ≥ 6.00 f/nn, a CPUE of age 0 fish of ≥ 3.00 f/nn, a CPUE of ≥ 8.0 in fish of ≥ 7.00 f/nn, and a mean length of age 2+ fish at capture of ≥ 9.6 in. The only management objective met in 2008 was mean length at capture (10.4 in).

Creel Survey

A random, stratified, roving, 5-day per week creel survey was conducted at Nolin River Lake April 01 – October 31, 2008 to estimate angler pressure and angler catch/harvest statistics (Tables 14-20). For survey purposes the lake was divided into an upper and lower section with one section being surveyed per day (5-hour time period) in either a morning or afternoon time period. Each section was further divided into 3 equal subsections which were randomly and progressively counted and interviewed spending an equal amount of time (100 min.) in each.

Anglers expended an estimated 122,543 hours fishing at Nolin Lake in 2008. This is a decline of 24,253 hours from the estimated 146,796 angler hours estimated in 2004 when Nolin was last surveyed. A portion of this decline is probably due to the shorter survey period in 2008 (April 01 – October 31) versus 2004 (March 01 – October 31).

High lake levels during much of April and an unusually late severe cold period may have also negatively impacted estimates. When ranked by preference, anglers expended an estimated 57,714 man-hours pursuing black bass, 30,287 hours for crappie, 13,392 hours for panfish, 10,916 hours for "anything", 5,389 for walleye, 3,373 for white bass, and 1,468 hours for catfish. When compared with 2004 estimates, significant changes occurred in the black bass and anything angler groups. Anything group man-hours decreased from 43,462 hours in 2004 to 10,916 hours in 2008 and black bass angler hours increased from 46,945 hours in 2004 to 57,714 hours in 2008. Minor differences were observed in crappie and catfish angler hours which decreased in 2008 and walleye, white bass, and panfish angler hours which increased in 2008.

In 2008 anglers caught an estimated 125,754 fish and harvested an estimated 29,048 fish. This is a substantial decline from the 2004 estimate of 245,073 fish caught and 103,253 fish harvested. Of the 119,313 fewer fish caught in 2008, the majority can be attributed to the decline in the number of crappie (94,223 in 2004 vs. 32,852 in 2008) and panfish (87,521 in 2004 vs. 37,145 in 2008) caught. Since panfish are the primary creel of the "anything" angler, the substantial decline in the number of anything group angler-hours probably accounts for the majority of the decrease in panfish catch and harvest. A shorter survey period, abnormally high lake level in the spring, and a decline in the crappie population when compared to 2004 could all negatively impact the number of crappie caught and harvested. Although white bass angler-hours increased in 2008 (2,499 hrs. in 2004 vs. 3,374 hrs. in 2008) white bass catch/harvest decreased (13,505/6,201 in 2004 vs. 3,065/303 in 2008). The decline in white bass numbers can also be attributed to abnormally high spring water levels. Most white bass at Nolin are harvested in the upper reaches of the lake during the spawning run, and high water levels made these areas of the lake inaccessible to anglers and white bass moved further upstream above the bounds of the survey area. An angler attitude survey was also conducted during the creel survey to determine angler opinions regarding regulations and their satisfaction with angling at Nolin Lake. Results of this survey are presented in Figure 1.

Rough River Lake

Black Bass Sampling

Spring electrofishing to assess the black bass population could not be conducted in 2008 due to high water level throughout the sampling time frame.

Black bass were electofished in October to document CPUE and mean length of age 0 largemouth bass (Tables 21-22). Mean length of age 0 largemouth bass, CPUE of age 0 largemouth, and CPUE of largemouth bass > 5.0 in were all similar to values determined for these parameters during previous surveys.

Crappie Sampling

Trap netting to assess Rough River Lake's crappie population was conducted during October (Tables 23-26). Catch rates for crappie since 2005 have been low compared to catch rates collected during 2002-2004. With the exception of the age 0 catch rate the trend continued in 2008. The catch rate of age 0 crappie in 2008 is higher than has been collected in the past 15 years. Although sampling anomalies could be a factor, Rough River Lake remained 10-15 feet above summer pool and stable throughout the spawning period which probably accounts for a significant portion of this increase. Crappie growth rates continue to be excellent, and with good survival of the strong 2008 year class, the number of older and larger crappie in the population should increase for the next 2-3 years. The log 10 length weight equation is log W = -3.46 + 3.16(log L). Rough River Lake SMP objectives for white crappie management state: a CPUE of $\geq$ 10.00 fish/nn (excluding age 0 fish), a CPUE of 7.00 fish/nn for age 1 fish, a CPUE of $\geq$ 3.00 fish/nn for age 0 fish, a CPUE of $\geq$ 6.00 fish/nn for white crappie $\geq$ 8.0 in, and a mean length of $\geq$ 9.8 in for age 2+ fish at capture. Only the CPUE of age 0 fish and the mean length of age 2+ fish at capture objectives were met.

Hybrid Striped Bass Sampling

Gill netting to sample the hybrid striped bass population was conducted the first week of November (Tables 27-31). Catch rate and size distribution are similar to values collected during previous surveys. Population assessment values have fluctuated little since 1999. This is a very stable population with good growth rates. The log 10 length weight equation is log W = -3.41 + 3.04 (log L). Rough River Lake SMP management objectives state: a mean length at capture of ≥ 16.5 in for age 2+ fish, a CPUE (excluding age 0 fish) of ≥ 25.00 fish/nn, a CPUE of ≥ 15.00 fish/nn for ≥ 15.0 in fish, and a CPUE of ≥ 8.00 fish/nn for age 1 fish. All objectives were met with the exception of the CPUE of age 1 fish.

Channel Catfish Sampling

Channel catfish were sampled in conjunction with hybrid striped bass in November to document catch rates, length distribution, and condition. Length-frequency and CPUE data is presented in Table 32 and relative weight data in Table 33.

Lake Malone

Largemouth Bass Sampling

Electrofishing for the largemouth bass population assessment was conducted during April (Tables 34-38). A trend the last several years has been an increase in the catch rate of 8.0-11.9 in bass and a decrease in the catch rate of bass 12-14.9 in bass. A simultaneous decrease in growth rate has also been documented. This trend appears to have stabilized, and possibly started to reverse in 2008. The catch rate of 8.0-11.9 in bass has now stabilized for the last 3 years and the catch rate of 12.0-14.9 in bass more than doubled in 2008. Increases were also observed in the catch rates of ≥ 15.0 in and ≥ 20 in fish. Lake Malone was again electrofished in October for relative weight and mean length and CPUE of age 0 fish (Tables 39-41). Relative weights are good and similar to those collected in previous years. The mean length of age 0 bass is similar to previous years, but the CPUE of age 0 bass is much lower. If not just a sampling anomaly this should lead to a decrease in the catch rate of 8.0-11.9 in bass in the next couple of years. Lake Malone SMP objectives for management of largemouth bass state: a mean length of ≥ 12.0 in at age 3 at capture, a CPUE of ≥ 20.00 f/h for age 1 fish, a CPUE of ≥ 35.00 f/h for 12.0-14.9 in fish, a CPUE of ≥ 40.00 f/h for ≥ 15.0 in fish, and a CPUE of ≥ 6.00 f/h for ≥ 20.0 in fish. The only objectives not met in 2008 were the mean length of age 3 fish and spring CPUE of age 1 fish.

Bluegill/Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations at Lake Malone was conducted during May (Tables 42-45). The trend of increasing catch rates for 3.0-5.9 and 6.0-7.9 in bluegill continued in 2008. This has been the case since 2000 and is most likely the result of a long-term decrease in the number of 8.0-11.9 in largemouth bass following the implementation of a 12.0-14.9 in protective slot limit in 1996. Although the catch rate for 8.0-11.9 in bass has been increasing the last 5-6 years, their numbers are still much lower than in the early 1990's. The Lake Malone SMP objectives for bluegill management state: a mean length of 4.5 in for age 2 fish at capture, 3-3+ years to reach 6.0 in, a CPUE of ≥ 50.00 f/h for ≥ 6.0 in fish, and a CPUE of at least 1.00 f/h for ≥ 8.0 in fish. With the exception of the CPUE of > 8.0 in fish, all objectives were met.

There was a slight decrease in the catch rate of redear sunfish compared to 2007, but it is still much higher than any collected since the mid 1990's when redear numbers began to decline. The estimated number of redear sunfish caught and harvested declined significantly between creel surveys conducted in 1998 and 2006.

Mauzy Lake

Mauzy Lake was drawn down during October 2008 to facilitate repair work on the leaking water control structure. The lake will be drawn down 13 feet for repairs, but has remained 8-10 feet below normal all winter with repair work scheduled for sometime during 2009. Spring sampling will probably not be possible in 2009. Future sampling will determine how this drawdown subsequently affects the structure of the lakes fish populations.

Largemouth Bass

Electrofishing to assess the largemouth bass population at Mauzy Lakewas performed during April (Tables 36, 46-49). The total catch rate for largemouth bass at Mauzy in 2008 increased substantially from 2007. The increase was mainly the result of an increased CPUE of < 8.0 in and 8.0-11.9 in bass. Following a drawdown and renovation in 2003 there was an initial increase then subsequent decrease in catch rates as a strong year class of fish progressed through the size ranges. This was presumably due to an increase in available forage and poor recruitment during the drawdown. Continued poor recruitment during 2005-2007 had been a concern, but these numbers increased substantially in 2008. Age-growth data collected in 2007 were much improved since last collected in 2004. Mauzy was electrofished again in October (Tables 40, 50-51) to document relative weight and mean length and catch rate of age 0 bass. Relative weights for bass collected at Mauzy Lake are good. The mean length and CPUE of age 0 fish are similar to that collected during 2007, the first year these numbers were documented.

Bluegill/Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations could not be conducted in 2008 due to thick milfoil beds along the shoreline. A leaking water control structure allowed the lake to remain lower than normal resulting in an increased abundance of shoreline vegetation.

Following the 2003 renovation, and subsequent low recruitment of largemouth bass, the number of 3.0-5.9 in bluegill increased tremendously. Without adequate predation these smaller bluegill began to stunt and few were entering the 6.0-7.9 in size range. The increase in largemouth bass recruitment observed in 2008 should begin to reduce the abundance of 3.0-5.9 in bluegill and allow this population to re-structure.

Redear sunfish were stocked in Lake Mauzy in 2004 and 2005 following renovation in 2003. Less than 10 redear sunfish were collected in electrofishing surveys prior to 2007, during which 49 were collected. Hopefully numbers will continue to increase and this will become a viable fishery.

Carpenter Lake

Largemouth Bass

Largemouth bass were electrofished at Carpenter Lake during April for population assessment (Tables 36, 52-55). The total catch rate of largemouth bass at Carpenter Lake nearly doubled from 2007 to 2008 due to an increase in the catch rate of largemouth bass < 12.0 in. Catch rates at Carpenter Lake can be erratic, but a trend for the last several years has been an increase in the catch rate of < 12.0 in bass and a slow, but steady decrease in the catch rate of bass ≥ 12.0 in. In addition, gizzard shad were first discovered in Carpenter Lake in April 2006. Future monitoring will document impacts from the gizzard shad population, changes in growth rate or size structure and determine management decisions. Carpenter Lake SMP objectives for largemouth bass management state: a mean length of ≥ 11.5 in at age 3 at capture, a CPUE of ≥ 46.00 fish/h for age 1 fish, a CPUE of ≥ 35.00 fish/h for 12.0-14.9 in fish, a CPUE of ≥ 20.00 fish/h for ≥ 15.0 in fish and a CPUE of ≥ 1.00 fish/h for ≥ 20.0 in fish. The CPUE of age 1 fish and CPUE of > 20.0 in fish were the only objectives met in 2008. Largemouth bass were electrofished again in October to build an index of mean length and CPUE data for age 0 fish (Tables 56-57). Mean length of age 0 fish in 2008 equaled the mean length determined in 2007 while the CPUE of age 0 fish in doubled in 2008.

Bluegill Redear Sunfish Sampling

Electrofishing for bluegill/redear sunfish population assessments was conducted in May (Tables 58-62). Bluegill catch rates at Carpenter Lake have been highly erratic, due in part to sampling variability and efficiency, but a general trend the last several years has been an increase in the catch rates for 3.0-5.9 in bluegill and 6.0-7.9 in bluegill and a decrease in the catch rate of bluegill > 8.0 in. The increase in the number of < 12.0 in bass over the last few years should have negatively impacted the number of small bluegill, but this has not been the case. More than likely the addition of gizzard shad to the population in 2006 has negated any effect the small bass might have on the number of small bluegill. Future sampling will determine how the gizzard shad and the increase in sublegal bass impact the bluegill population. Carpenter Lake SMP bluegill management objectives state: a mean length of ≥ 5.0 in at age 2 at capture, 2-2+ years to reach 6.0 in, a CPUE of at least 50.00 f/h for bluegill ≥ 6.0 in, and a CPUE of at least 15.00 f/h for bluegill ≥ 8.0 in. The only objective met in 2008 was the CPUE objective for bluegill ≥ 6.0 in.

New Kingfisher Lake

Largemouth Bass

Electrofishing to assess the largemouth bass population at New Kingfisher Lake was performed in April (Tables 36, 63-66). For the last several years, New Kingfisher Lake's largemouth bass population has been dominated by an abundance of slow-growing 8.0-11.0 in fish. Sub-legal bass have been removed for several years by electrofishing in an effort to reduce competition and increase growth. Although the number of < 8.0 in bass increased significantly, a decrease in the number of 8.0-11.9 in bass and an increase in the number of 12.0-14.9 in bass in 2008 indicate this trend may have been reversing. However, both Old and New Kingfisher Lakes suffered major fish kills the first week of September and many of the > 12.0 in bass were lost. Both Old and New Kingfisher Lakes have become shallow, are highly eutrophic, and have periodic oxygen depletions leading to shad die offs in late summer. Renovation (draining and dredging) would enhance the long term viability of these lakes tremendously. Kingfisher Lake was again electrofished in October (Tables 67-68) to build an index of mean length and CPUE of age 0 fish.

Bluegill Sampling

The bluegill population was electrofished during May to determine population statistics (Tables 69-73). Bluegill catch rates at Kingfisher Lake are erratic, but the general trend has been a decreasing number of > 6.0 inch bluegill and an increasing number of < 6.0 in bluegill. This trend continued in 2008 with a dramatic increase in the CPUE of 3.0-5.9 in bluegill. This is probably a response to the decrease in the 8.0-11.9 in largemouth bass.

Old Kingfisher Lake

Largemouth Bass

Old Kingfisher Lake was electrofished during April (Table 36, 74) and October (Table 75) to document size structure and CPUE for largemouth bass. Old Kingfisher Lake has not been sampled for many years. Historically Old and New Kingfisher Lakes were connected by a large drainage tile and fish populations were similar. The last several years the tile has become occluded and their fish populations vastly different. The catch rate for largemouth at Old Kingfisher Lake is much lower than at New Kingfisher, but size distribution is much better. Recruitment does however appear limited at Old Kingfisher, most likely due to the abundance of small bluegill and crappie.

Bluegill

Electrofishing to document bluegill population parameters at Old Kingfisher Lake was conducted during May (Table 76). The bluegill population is dominated by an overabundance of 5.0 in fish. Largemouth bass numbers are too low to provide adequate predation to keep this population in balance.

In addition to the stunted bluegill population there is an abundance of gizzard shad and 3.0-5.0 in crappie. As noted, both Kingfisher Lakes would benefit tremendously from total renovation.

Washburn Lake

Largemouth Bass

Electrofishing to assess largemouth bass population parameters at Washburn Lake was conducted during April (Tables 36, 77-80). Washburn's largemouth population has never stabilized following renovation in 2000. Surveys conducted from 2002-2004 revealed an abundance of slow growing 8.0-11.9 in bass. A fertilizer program was initiated in the spring of 2004 and growth rates increased substantially from 2004 to 2007. The catch rate of 8.0-11.9 in bass has continually declined since 2003 as this initial group of fish progressively moved out of this length group. Low numbers of < 8.0 in bass collected during 2003-2005 indicate recruitment problems during those years with few fish available to move into the 8.0-11.9 in range. The catch rate of < 8.0 in bass increased substantially during 2008 and should improve catch rates for larger fish in the future.

A phytoplankton bloom could not be achieved following fertilizer applications during the spring of 2008. The lake became increasingly clear and a subsequent alkalinity test revealed an alkalinity of 40 ppm. Approximately 50 tons of lime was applied in July 2008. When re-tested in December, the alkalinity had increased to 60 ppm. The increase in alkalinity should again allow the production of a phytoplankton bloom in 2009. Washburn was electrofished in October to determine relative weights and begin building an index of CPUE and mean length of age 0 bass (Tables 40, 81-82).

Bluegill Sampling

Sampling to assess Washburn Lake's bluegill population was conducted in May (Tables 83-87). Poor sampling conditions due to extremely clear water probably influenced catch rates of smaller fish. The catch rate for 3.0-5.9 in bluegill decreased substantially while the catch rate for 6.0-7.9 in bluegill increased substantially. The increased catch rate of 6.0-7.9 in bluegill is likely due an abundant 2005 year class as well as these larger fish being on shallow spawning beds during sampling.

Peabody WMA

SCUBA transects were conducted during June to assess fish populations at Goose (Table 88) and Bottom (Table 89) Lakes on Peabody WMA. Musky Lake could not be surveyed due to low visibility following high water conditions. The SCUBA transects were initiated in 2005 to survey the fish population of selected Peabody WMA lakes where clear water and high conductivity made electrofishing ineffective.

Observations at Goose Lake since 2005 indicate a stable largemouth bass population with good size distribution. The bluegill and redear sunfish populations also appear stable and contain good numbers of large fish. Surveys at Bottom Lake suggest a relatively balanced largemouth bass and bluegill population and an excellent redear sunfish population. Largemouth bass numbers are relatively low. Slow growth rate is probably also an issue due to abundant vegetation. At Bottom Lake, like many of the strip-mine lakes, the clear water and abundant vegetation promote excellent bluegill and redear sunfish populations, but limit largemouth bass growth.

Merlin Lake

Merlin Lake, located in Muhlenberg Co. on the Vogue Unit of Peabody WMA, was electrofished in April to document catch rate and size structure for the largemouth bass, bluegill, and redear sunfish populations (Table 90). This is the first year Merlin Lake has been sampled. The lower visibility and conductivity of this lake allow for effective electrofishing. A fertilization program was also initiated in 2008. Merlin Lake has a well balanced fish population with good catch rates and size distribution for largemouth bass, bluegill, and redear sunfish. Electrofishing to monitor the fish populations will continue as will fertilization.

Table 1. Annual summary of sampling conditions by waterbody, species sampled and date for NWFD lakes during 2008.

Water body	Species	Date	Time (24hr)	Gear	Weather [A]	Water temp F	Water level	Secchi (in)	Conditions	Pertinent sampling comments [C]
Nolin River Lake	LMB	4/25/2008	1000	shock	Sunny, windy	67	515	28	Fair	Windy (15-20 mph). Windward banks muddy.
Nolin River Lake	LMB	4/28/08	930	shock	Cloudy, windy, cool	66	515	30	Fair/poor	Cloudy, windy and cool, lake choppy, larger fish holding away from bank
Nolin River Lake	Flathead	6/10/08	2100	shock	calm, clear	78	515		Good	
Nolin River Lake	Flathead	7/16/08	2100	shock	Clear, full moon	82	515		Good	
Nolin River Lake	Crappie	10/20-24/08		trap net	55-65	62-65	511-508		Good	
Nolin River Lake	WE/WB			Gill net						Not sampled.
Nolin River Lake	LMB	10/7/08	1000	shock	Sunny, windy	72	513	30	Good/fair	Fish deep, not on bank except yoy
Nolin River Lake	LMB	10/9/08	1000	shock	Bright, sunny	72	513	36	Good/fair	Fish deep hard to dip, cold front previous night
Rough River Lake	LMB	10/6/08	1000	shock	Sunny, warm	73	493 5	20	Good	Could not sample lower lake sites- water black and turning over
Rough River Lake	LMB	10/14/08	1000	shock	Partly cloudy	74	492	32	Fair/good	Water clear, small fish did not shock well
Rough River Lake	Crappie	10/27-31/08		trap net	38-58 degress	58	492-490	18-20	Good	
Rough River Lake	HSB	11/5-7/08		Gill net	Sunny 55-70 deg	61	486	26	Good	
Lake Malone	LMB	4/23/08	900	shock	Partly cloudy	68	1 0 high	36	Good/fair	Water a little clear, fish holding deeper.
Lake Malone	BG/RE	5/29/08	900	shock	Sunny	68	pool	28	Good	
Lake Malone	LMB	10/13/08	900	shock	Mostly cloudy	72	1.0 ft low	24	Good	
Mauzy Lake	LMB	4/22/08	900	shock	Mostly sunny, calm	67	pool	20	Good	
Mauzy Lake	BG/RE		900							Too much vegitation to sample
Mauzy Lake	LMB	10/8/08	900	shock	Cloudy	70	1 5 low	18	Good	
Carpenter Lake	LMB	4/21/08	900	shock	Sunny, calm	67	pool	28	Good	
Carpenter Lake	BG/RE	5/28/08	900	shock	Sunny, cool, windy	68	pool	36	Fair	Cold front previous night. Bright, sunny, cool and windy
Carpenter Lake	LMB	10/2/08	900	shock	Partly cloudy, breezy	74	0 5 low	?	Good	
New Kingfisher Lake	LMB	4/21/08	1100	shock	Sunny, calm	67	pool	28	Good	
New Kingfisher Lake	BG/RE	5/28/08	1130	shock	Sunny, breezy	71	pool	36	Good/fair	Cold front previous night Bright, sunny, cool and windy
New Kingfisher Lake	LMB	10/2/2008	1100	shock	Partly cloudy breezy	73	0 5 low	24	Good	Major fish kill first week in September.
Old Kingfisher Lake	LMB	4/21/08	1230	shock	Sunny, calm	70	pool	18	Good	
Old Kingfisher Lake	BG/RE	5/28/08	100	shock	Sunny, cool, breezy	71	pool	28	Good	
Old Kingfisher Lake	LMB									Not sampled. Major fish kill first week of September
Washburn	LMB	4/22/2008	900	shock	Sunny, breezy	63	pool	20	Good	Water slightly muddy
Washburn	BG/RE	5/27/2008	900	shock	Cloudy, humid	73	pool	60+	poor	Water very clear, lots of filamentous algae. Fish very tight to bank, running ahead of boat.
Washburn	LMB	10/3/2008	900	shock	Sunny, cool	?	1.0 ft low	?	poor	Heavy algal bloom, fish hard to see/dip. Abundant niaid beds.

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in April 2008.

		Inch Class																						
Area	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
Upper	Largemouth bass	8	38	32	27	18	11	22	32	61	56	40	12	5	5	6	2	3	4			382	152.80	19.53
	Spotted bass	5	12	4	5	3	4	4	6	6	3											52	20.80	5.08
Lower	Largemouth bass	10	46	37	8	3	10	25	25	20	21	17	8	4	3	2	4	1	7	4	1	256	128.00	2.94
	Spotted bass	9	18	2	14	7	1		5	3	1		1									62	31.00	3.70
Total	Largemouth bass	18	84	69	35	21	21	47	57	81	77	57	20	9	8	8	6	4	11	4	1	638	141.78	11.24
	Spotted bass	14	30	6	19	10	5	4	11	9	4		1									114	25.33	3.56

nwdnlpsd.d08

Table 3. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Nolin River Lake during April 2008; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8.0 in	PSD (± 95%)	RSD[a] (± 95%)
Upper	Largemouth bass	259	51 (6)	10 (3)
	Spotted bass	26	35 (19)	
Lower	Largemouth bass	162	47 (8)	17 (6)
	Spotted bass	18	28 (21)	6 (10)
Total	Largemouth bass	411	50 (5)	12 (4)
	Spotted bass	44	32 (13)	2 (4)

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

nwdnlpsd.d08

Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Nolin River Lake during spring electrofishing 1999-2008.

	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.
2008	50.44	7.87	45.78	5.42	34.22	4.33	11.33	1.56	3.56	1.04	141.78	11.24
2007	53.33	9.95	17.33	2.24	27.56	4.86	8.22	1.31	0.67	0.47	106.44	14.21
2006	17.78	2.82	15.78	1.54	23.56	2.68	7.56	1.48	0.44	0.44	64.67	5.68
2005	27.11	4.98	27.11	4.14	25.33	3.86	14.22	2.32	0.44	0.29	93.78	10.08
2004	23.74	1.61	16.44	3.65	16.22	2.41	8.89	2.58	0.44	0.29	65.33	6.76
2003	12.89	3.73	10.22	2.3	8.89	2.21	7.56	1.99	0.00		39.56	9.16
2002	4.00	1.33	9.78	2.59	8.00	3.13	8.00	1.63	0.00		29.78	5.44
2001	5.50	1.68	27.00	7.44	18.00	3.30	9.00	2.80	0.00		59.50	11.72
2000	9.50	3.11	35.00	6.27	41.50	5.12	14.00	4.34	0.50	0.50	100.00	13.07
1999	n/d		61.33	16.84	56.89	9.18	8.00	1.76	0.44	0.44	126.22	26.01

Table 5. Age-frequency and CPUE (fish/hr) per inch class of Largemouth Bass electrofished at Nolin River Lake in April 2008. Numbers in parentheses are standard errors.

	Inch Class																				
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	No.	CPUE	(Std. Error)	Age (%)
1	18	84	69	35	18														224	49.67	7.78	35
2					4	21	47	57	52	8									188	41.72	4.55	30
3									22	54	29	3							107	23.86	3.51	17
4										15	29	14	6	4	3				71	15.74	1.86	11
5									7			3	3		3				16	3.53	0.64	3
6																	4		4	0.89	0.35	1
7														4	3	6			13	2.81	0.70	2
8																		11	11	2.44	0.73	2
Total	18	84	69	35	22	21	47	57	81	77	58	20	9	8	9	6	4	11	633			
(%)	3	13	11	6	3	3	7	9	13	12	9	3	1	1	1	1	1	2				

nwdnlpsd.d08, nwdnlmag.d06

Table 6. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Nolin River Lake during April 2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	3.78	11.33	22.89	26.22	17.04	51.63	49.67
2	8.33	9.64	14.82	23.38	15.39	18.16	41.72
3	8.90	9.08	16.35	27.24	12.81	15.26	23.86
4	1.59	1.57	1.86	3.57	13.12	14.67	15.74
5	0.73	0.82	0.97	1.60	2.53	3.02	3.53
6	1.78	2.44	2.44	3.11	0.67	0.67	0.89
7					2.67	2.37	2.81
8					0.44	0.44	2.44

nwdnlpsd.d08, nwdnlmag.d06

Table 7. Population assessment for largemouth bass based on spring electrofishing at Nolin River Lake from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	13.09	4	13.09	4	13.09	4	13.09	4	13.09	4	13.09	4	13.09	4	12.64	4	12.64	4	12.64	4
Spring CPUE age 1 fish	n/d		9.00	1	5.00	1	3.78	1	11.33	1	22.89	2	26.22	2	17.04	1	51.63	4	49.67	4
Spring CPUE 12.0-14.9 in fish	56.89	4	41.50	4	18.00	2	8.00	1	8.89	1	16.22	2	25.33	3	23.56	2	27.56	3	34.22	3
Spring CPUE ≥ 15.0 in fish	8.00	2	14.00	3	9.00	2	8.00	2	7.56	2	8.89	2	14.22	3	7.56	2	8.22	2	11.33	3
Spring CPUE ≥ 20.0 in fish	0.44	2	0.50	2	0.00	0	0.00	0	0.00	0	0.22	2	0.44	2	0.44	2	0.67	2	3.56	4
Instantaneous Mortality (z)									0.534		0.684		0.617		0.447		0.609		0.553	
Annual Mortality (A)%									41.4		49.5		46.0		36.0		45.0		42.5	
Total score				14		9		8		8		12		14		11		15		18
Assessment rating				G		F		F		F		G		G		F		G		E

Table 8. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in October 2008.

		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. Error
Upper	Largemouth bass	199	244	63	28	17	11	11	24	27	16	18	13	8			1	1	2	1	684	273.60	62.28
	Spotted bass	79	130	23		6	9	8	8	3	4										270	108.00	43.81
Lower	Largemouth bass	12	21	13	12	5	1	9	12	5	5	6	12	4	2	3	1				123	61.50	3.40
	Spotted bass	1	29	13	8	20	15	14	12	8	13	6	3	1							143	71.50	13.87
Total	Largemouth bass	211	265	76	40	22	12	20	36	32	21	24	25	12	2	3	2	1	2	1	807	179.33	49.68
	Spotted bass	80	159	36	8	26	24	22	20	11	17	6	3	1							413	91.78	24.62

nwdnllmb.d08

Table 9. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Nolin River 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
2001	Total	3.0		76.00	29.20	7.30	0.90	3.78	1.10
2002	Total	4.5		28.60	11.80	14.40	1.40	11.33	3.11
2003	Total	4.4		28.40	4.90	14.20	2.60	22.89	1.57
2004	Total	4.1	0.07	41.30	11.20	9.60	1.60	26.22	4.70
2005	Total	5.0	0.08	92.00	34.94	41.78	15.36	17.04	2.67
2006	Total	4.9	0.07	84.00	22.97	40.22	7.47	51.63	9.65
2007	Total	4.1	0.07	66.44	14.34	12.89	2.81	49.67	7.78
2008	Total	3.6	0.04	139.33	45.55	16.67	4.08		

Table 10. Length frequency and CPUE (fish/hr) for each species of crappie collected in 76 net-nights of sampling at Nolin River Lake during October 2008.

	Inch Class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. Error
White crappie	1	29	149	30	7	57	124	142	70	21	6	1	637	8.38	0.91
Black crappie		9	3		7	10	9	3	5	1	1		48	0.63	0.10

nwdnltn.d08

Table 11. PSD and RSD values calculated for crappie collected in trap nets from Nolin River Lake during October 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_{10}
White Crappie	458	79 (3)	21 (4)
Black Crappie	36	53 (16)	19 (13)

nwdnltn.d08

Table 12. Age-frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 76 net-nights at Nolin River Lake in October 2008. Numbers in parentheses are standard errors.

	Inch Class														
Age	3	4	5	6	7	8	9	10	11	12	13	No.	CPUE	(Std. Error)	Age (%)
0	30	149										179	2.35		28.0
1			30	7	57	124	41	4				262	3.45	0.38	41.1
2							91	66	15			173	2.27	0.37	27.1
3							10		4	2		16	0.21	0.03	2.5
4										1		1	0.01	0.01	0.1
5										2		4	0.05	0.05	0.6
6										1		1	0.01	0.01	0.1
7											1	1	0.01	0.01	0.1
8										1		1	0.01	0.01	0.1
Total	30	149	30	7	57	124	142	70	19	7	1	638			
(%)	4.7	23.3	4.7	1.1	8.9	19.4	22.2	11.0	3.0	1.1	0.1				

nwdnltn.d08, nwdnlcag.d07

Table 13. Population assessment for white crappie based on fall trapnetting at Nolin River Lake from 1999-2008.

	Year															
	1999		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	8.72	2	10.2	2	11.99	2	13.2	3	8.56	2	8.76	2	5.91	2	7.43	2	6.03	2
CPUE of age 1	4.85	2	4.82	2	10.02	3	8.00	3	4.15	2	3.64	2	3.20	2	3.71	2	3.45	2
CPUE of age 0	0.18	1	2.62	1	4.26	2	2.04	1	5.09	2	1.42	1	2.02	1	0.38	1	2.35	1
CPUE of crappie ≥ 8.0 in	5.55	3	3.87	2	8.78	3	8.65	3	6.93	3	7.41	3	4.37	2	6.14	3	4.79	2
Mean length age 2 + at capture	9.8	4	9.1	3	9.5	3	9.8	4	9.7	4	9.7	4	9.7	4	10.4	4	10.4	4
Instantaneous Mortality (z)	1.040		0.910		1.571		1.107		0.630		0.749		0.876		0.882		0.976	
Annual Mortality (A)%	64.7		59.7		79.2		66.9		46.7		52.7		58.3		58.6		62.3	
Total score	12		10		13		14		13		12		11		12		11	
Assessment rating	F		F		G		G		G		F		F		F		F	

Table 14. Fishery statistics derived from a creel survey at Nolin River Lake (5,800 acres) from 01 April through October 30 2008.

Fishing trips		
No. of fishing trips (per acre)	26,686	(4.61)
Fishing pressure		
Total man-hours (S.E.)[a]	122,543	(2,706.55)
Man-hours/acre	21.16	
Catch/harvest		
No. of fish caught (S.E.)	125,754	(9,324.31)
No. of fish harvested (S.E.)	29,048	(3,276.22)
Lb of fish harvested	14,771	
Harvest rates		
Fish/hour	0.25	
Fish/acre	5.02	
Lb/acre	2.55	
Catch rates		
Fish/hour	1.03	
Fish/acre	21.72	
Miscellaneous characteristics (%)		
Male	88.7%	
Female	11.3%	
Resident	96.2%	
Non-resident	3.8%	
Method (%)		
Still fishing	35.5%	
Casting	59.6%	
Fly fishing	0.5%	
Trolling	4.5%	
Mode (%)		
Boat	93.0	
Bank	5.3	
Dock	1.7	

t < 0.5%

[a]S.E. = standard error

Table 15. Fish harvest statistics derived from a creel survey at Nolin River Lake (5,800 acres) during 01 April through 30 October 2008.

	Black bass group	Largemouth bass	Spotted Bass	Crappie group	White crappie	Black crappie	Panfish group	Bluegill	Rockbass	Warmouth	Longear sunfish	Catfish group	Channel catfish	Flathead catfish
No. caught	49,198	43,470	5,715	32,852	23,453	9,399	37,145	36,413	350	26	356	1,256	1,196	60
(per acre)	8.49	7.51	0.99	5.67	4.05	1.62	6.42	6.29	0.06	0.00	0.06	0.22	0.21	0.01
No. harvested	1,290	1,065	226	24,465	17,839	6,626	2,243	2,243				148	149	
(per acre)	0.22	0.18	0.39	4.23	3.08	1.14	0.39	0.39				0.03	0.03	
% of total no. harvested	4.44	3.67	0.78	84.22	61.41	22.81	7.72	7.72				0.51	0.51	
Lb harvested	2,038	1,917	121	10,937	7,727	3,211	464	464				199	199	
(per acre)	0.35	0.33	0.02	1.89	1.33	0.55	0.08	0.08				0.03	0.03	
% of total lb harvested	13.80	12.98	0.82	74.04	52.31	21.74	3.14	3.14				1.35	1.35	
Mean length (in)		15.91	10.48		9.78	9.85		7.17					15.89	
Mean weight (lb)		2.24	0.52		0.42	0.51		0.23					1.33	
No. of fishing trips for that species	12,568			6,596			2,917					320		
% of all trips	47.10			24.72			10.93					1.20		
Hours fished for that species	57,714			30,288			13,393					1,469		
(per acre)	9.97			5.23			2.31					0.25		
No. harvested fishing for that species	809			23,592			1,685					62		
Lb harvested fishing for that species	1,386			10,569			330					81		
No./hour harvested fishing for that species	0.02			0.70			0.14					0.05		
% success fishing for that species	4.48			46.33			5.88					4.55		

Table 15 cont. Continued.

	Walleye	WhiteBass	Anything group	Gar	Carp	Drum
No. caught	2132	3065		30	46	30
(per acre)	0.37	0.53		0.01	0.01	0.01
No. harvested	597	303				
(per acre)	0.10	0.05				
% of total no. harvested	2.06	1.04				
Lb harvested	906	228				
(per acre)	0.16	0.04				
% of total lb harvested	6.13	1.54				
Mean length (in)	16.40	12.19				
Mean weight (lb)	1.41	0.77				
No. of fishing trips for that species	1174	735	2377			
% of all trips	4.40	2.75	8.91			
Hours fished for that species	5390	3374	10916			
(per acre)	0.93	0.58	1.89			
No. harvested fishing for that species	528	250				
Lb harvested fishing for that species	832	191				
No./hour harvested fishing for that species	0.09	0.09				
% success fishing for that species	15.49	4.44	6.29			

Table 16. Length distribution for each species of fish harvested or released at Nolin River Lake (5,800 a) during 01 April - 30 October 2008.

	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
Largemouth bass																							
Harvested											221	201	281	80	20	60	20		40				21
Released										121			2,429	840	270	360	150	180	89				
Sublegal						2,910	2,202	7,707	2,936	11,088	6,553	4,691											
Spotted Bass																							
Harvested						19		94	38	56		19											
Sublegal				387	129	850	258	1,572	670	1314	180	103	26										
White crappie																							
Released							189	142	47	24	23												
Harvested							6,978	7,765	1,758	1,285	53												
Sublegal		28		421	1,599	3,142																	
Black Crappie																							
Released							120	40	40	241													
Harvested							3,137	2,705	568	162	54												
Sublegal		111	56	361	389	1,414																	
White Bass																							
Harvested								101	25	51	76	50											
Sublegal					32	96	128	642	225	706	578	257	64	33									
Walleye																							
Harvested													199	66	199	33		33	33	34			
Released																							
Sublegal				31				31		461	276	736											
Channel catfish																							
Harvested							25					25		49		49							
Sublegal								35	105	175	70	105	175		35	105	70	35	35	35	35	33	
Flathead Catfish																							
Harvested																							
Sublegal																				30		30	
Bluegill																							
Harvested			41	449	1,387	366																	
Sublegal			8,390	11,366	7,028	3621	72	36															
Longear sunfish																							
Harvested																							
Sublegal		214	107	35																			
Rock Bass																							
Harvested																							
Sublegal				81		188		81															

Table 16 continued.

Species	Inch Class																						
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	30
Warmouth																								
Harvested																								
Sublegal			26																					
Gar																								
Harvest																								
Sublegal																								30
Drum																								
Harvested																								
Sublegal												30												
Carp																								
Harvested																								
Sublegal																46								

Table 17. Monthly black bass angling success at Nolin River Lake (5,800 a) from 01 April - 30 Oct. 2008 creel survey period; data does not include bass < 8.0 inches that were caught and released.

Month	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
Apr	7,082	521	1,611	7,399	5,626	0.68	401	0.05
May	9,966	179	2,742	12,591	8,892	0.65	60	0.00
Jun	4,451	46	1,520	6,982	4,037	0.53	46	0.01
Jul	5,016		2,300	10,562	4,366	0.43	0	0.00
Aug	6,895	134	1,218	5,595	6,224	0.86	54	0.01
Sep	8,876	279	1,955	8,978	8,440	0.91	248	0.03
Oct	6,912	131	1,221	5,607	5,943	1.01	0	0.00
Total	49,198	1,290	12,568	57,714	43,528	0.72	809	0.02
Mean						0.72		0.02

Table 18. Black bass catch and harvest statistics derived from a creel survey at Nolin River Lake (5,800 a) from 01 April - October 30, 2008.

	Largemouth bass										Spotted Bass			
	Harvest					Catch and Release					Harvest	Catch and Release		
	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	Total	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total	Total	8.0-14.9 in	≥15.0 in	Total
Total no. of bass	0	543	461	60	1,064	15,755	22,332	1,620	268	42,404	225	4,947	26	5,489
% of black bass harvested by no.					82.51									17.49
Total weight of fish (lb)					1,916.70									120.9
% of bass harvested by weight					94.07									5.93
Mean length					15.91									10.48
Mean weight					2.24									0.52
Rate (f/hr)					0.01									0.003

Table 19. Monthly walleye angling success at Nolin River Lake (5,800 a) from 01 April - 30 Oct. 2008 creel survey period.

Month	Total no. of walleye caught	Total no. of Walleye harvested	No. of Walleye fishing trips	Hours fished by Walleye anglers	Walleye caught by Walleye anglers	Walleye caught/hour by Walleye anglers	Walleye harvested by Walleye anglers	Walleye harvested/hour by Walleye anglers
April	147	40	56	256	67	0.37	27	0.15
May	477	149	421	1,931	298	0.13	119	0.05
June	276	92	426	1,958	276	0.15	92	0.05
July	650	232	59	273	650	1.92	232	0.69
Aug	349	27	135	622	295	0.82	27	0.07
Sept	155	31	49	224	31	0.11	31	0.11
Oct	78	26	27	125	0	0.00	0	0.00
Total	2,132	597	1,174	5,390	1,617		528	
Mean						0.50		0.16

Table 20. Monthly white bass angling success at Nolin River Lake (5,800 a) from 01 April - 30 Oct. 2008 creel survey period.

Month	Total no. of white bass caught	Total no. of white bass harvested	No. of white bass fishing trips	Hours fished by white bass anglers	white Bass caught by white bass anglers	white Bass caught/hour by white bass anglers	white Bass harvested by white bass anglers	White Bass harvested/hour by White bass anglers
April	294	53						
May	149							
June			37	170				
July	1,672	93	416	1,912	1,672	0.75	93	0.04
Aug	161		162	746	134	0.27		
Sept	186		33	150	31	0.14		
Oct	602	157	54	249	183	1.27	157	1.09
Total	3,065	303	735	3,374	2,020		250	
Mean						0.49		0.23

Table 21. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in October 2008.

		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. Error
Upper	Largemouth bass	16	66	16	16	39	36	11	38	26	22	27	13	9	2	2	3	4	2	2	1	351	140.40	15.22
	Spotted bass					1	11	9	6	4		2	1									34	13.60	5.11
Lower	Largemouth bass	11	10	8	13	3	7	27	29	18	20	20	11	3	4	1	1	1	1			188	94.00	16.57
	Spotted bass		1	2	2	24	26	10	6	4	1											76	38.00	5.48
Total	Largemouth bass	27	76	24	29	42	43	38	67	44	42	47	24	12	6	3	4	5	3	2	1	539	234.40	31.80
	Spotted bass		1	2	2	25	37	19	12	8	1	2	1									110	51.60	10.59

nwdrrlmb.d08

Table 22. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Rough River 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
2001	Total	4.0		38.60	3.90	29.30	0.90	7.93	1.70
2002	Total	5.0		60.50	18.30	34.30	2.60	44.30	5.61
2003	Total	4.8		34.90	3.20	20.00	2.90	32.82	3.85
2004	Total	4.0	0.06	100.40	18.57	24.22	5.94	28.04	5.91
2005	Total	4.3	0.08	72.40	10.40	22.40	4.40	21.98	2.82
2006	Total	4.9	0.09	64.00	18.70	30.20	7.40	27.06	3.33
2007	Total	4.2	0.07	37.11	7.33	9.11	2.43	n/d	
2008	Total	5.1	0.11	56.90	13.49	28.70	7.85		

Table 23. Length frequency and CPUE (fish/hr) for each species of crappie collected in 80 net-nights of sampling at Rough River Lake during October 2008.

	Inch Class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. Error
White crappie	8	763	757	71	3	23	90	132	77	33	12	1	1970	24.63	5.02
Black crappie		19			9	14	29	12	1	1			85	1.06	0.27

nwdrrtn.d08

Table 24. PSD and RSD values calculated for crappie collected in trap nets from Rough River Lake during October 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_{10}
White Crappie	442	78 (4)	28 (4)
Black Crappie	66	65 (11)	3 (4)

nwdrrtn.d08

Table 25. Age-frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 80 net nights at Rough River Lake in October 2008. Numbers in parentheses are standard errors.

	Inch Class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	No.	CPUE	Std. Error	Age (%)
0	8	763	757	71									1599			81.2
1					3	23	90	132					248	3.10	0.58	12.6
2									77	11	6		94	1.18	0.18	4.8
3										17	3		20	0.24	0.04	1.0
4										6	3	1	10	0.12	0.02	0.5
Total	8	763	757	71	3	23	90	132	77	34	12	1	1,970			100
(%)	0.4	38.7	38.4	3.6	0.1	1.2	4.6	6.7	3.9	1.7	0.6	< 0.1				

nwdrrtn.d08, nwdrrcag.d06

Table 26. Population assessment for white crappie based on fall trapnetting at Rough River Lake from 1998-2008.

	Year															
	1998		2000		2002		2003		2004		2005		2006		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	12.11	2	4.03	1	11.99	2	13.10	3	8.22	2	4.64	2	8.16	2	4.64	2
CPUE of age 1	7.50	3	1.36	1	10.02	3	10.77	3	5.50	2	3.46	2	7.52	3	3.10	2
CPUE of age 0	1.87	1	2.12	1	4.26	2	18.85	4	1.80	1	4.61	2	2.33	1	20.00	4
CPUE of crappie ≥ 8.0 in	5.46	3	3.07	2	8.78	3	9.92	3	7.10	3	3.25	2	3.89	2	4.31	2
Mean length age 2 at capture	9.5	3	9.2	3	9.5	3	10.6	4	10.4	4	10.4	4	10.7	4	10.70	4
Instantaneous Mortality (z)	1.231		1.160		0.871		1.066		0.734		0.869		2.180		1.030	
Annual Mortality (A)%	70.8		68.7		58.5		65.5		52.0		58.1		88.7		64.3	
Total score		12		8		13		17		12		12		12		14
Assessment rating		F		F		G		G		F		F		F		G

Table 27. Length frequency and CPUE (fish/nn) for hybrid striped bass collected in 12 net-nights of sampling at Rough River Lake during November 2008.

	Inch Class																						
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Total	CPUE	Std. Error
Hybrid striped bass	17	54	19	3		26	51	14	30	68	52	66	36	21	9	4		1	1	1	473	31.53	6.82

nwdrrhsb.d08

Table 28. Mean back calculated lengths (in) at each annulus for hybrid striped bass collected at Rough River Lake in November 2008.

Year		Age									
class	No.	1	2	3	4	5	6	7	8	9	10
2007	46	9.9									
2006	40	9.5	14.4								
2005	27	10.9	14.7	17							
2004	37	10.8	16.0	17.7	18.9						
2003	15	9.5	15.2	17.4	18.4	19.1					
2002	5	8.7	14.0	16.6	18.1	18.8	19.6				
2001	1	9.0	14.6	16.9	17.9	18.8	19.2	19.6			
2000	2	8.9	14.4	16.8	17.9	18.9	19.5	20.1	20.6		
1999	2	9.5	14.2	16.5	17.8	18.6	19.5	20.1	20.5	21.0	
1998	1	10.4	15.1	17.9	19.4	20.1	20.7	21.3	21.6	22.3	22.6
Mean		10.1	15.0	17.3	18.6	19	19.6	20.2	20.8	21.4	22.6
No.		176	130	90	63	26	11	6	5	3	1
Smallest		7.2	12.2	15.4	16.5	17.7	18	19.4	19.7	20.2	22.6
Largest		13.4	17.8	19.4	20.9	20.2	21.2	21.3	21.6	22.3	22.6
Std error		0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.5	0.6	
95% CI (±)		0.2	0.2	0.2	0.2	0.2	0.4	0.7	0.8	1.2	

nwdrhbag.d08

Table 29. Age-frequency and CPUE (fish/nn) per inch class of hybrid stiped bass gill netted for 15 net-nights at Rough River Lake during November 2008. Numbers in parentheses are standard errors.

	Inch Class																			
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	No.	CPUE	Std. Error	Age (%)
0	17	54	19	3													93	6.20		19.7
1						26	51	11	8								95	6.33	1.34	20.1
2								4	23	62	14	3					104	6.94	1.54	22.0
3										6	33	24	5	1			69	4.59	1.24	14.6
4											5	29	16	12	5		67	4.47	1.12	14.7
5												8	10	6	1		25	1.65	0.39	5.3
6												3	3		2		8	0.54	0.15	1.7
7													2				2	0.11	0.03	0.4
8														1	1		2	0.15	0.04	0.4
9														1		2	3	0.21	0.07	0.6
10																2	2	0.13	0.06	0.4
Total	17	54	19	3	0	26	51	15	31	68	52	67	36	21	9	4	473			
(%)	3.6	11.4	4.0	0.6		5.6	10.8	3.2	6.5	14.4	11.0	14.2	7.6	4.4	1.9	0.8				

nwdrrhsb.d08, nwdrhbag.d08

Table 30. Population assessment for hybrid striped bass based on fall gill netting at Rough River Lake from 1999-2008.

	Year									
	1999		2001		2003		2006		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE excluding age 0	26.38	4	29.88	4	33.87	4	23.67	4	25.10	4
Mean length age 2+ at capture	16.5	2	15.9	1	16.5	2	16.9	2	16.3	2
CPUE fish ≥ 15.0 in	18.50	4	16.75	4	30.87	4	14.50	4	19.27	4
CPUE of age 1 fish	8.13	3	13.08	4	3.13	2	8.92	3	6.33	3
Instantaneous Mortality (z)					0.680		0.447		0.544	
Annual Mortality (A)%					49.8		36.1		42.0	
Total score		13		13		12		13		13
Assessment rating		G		G		G		G		G

Table 31. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Rough River Lake during November 2008. Standard errors are in parentheses.

Length Group					
8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
No.	Wr	No.	Wr	No.	Wr
38	91.10 (1.29)	51	78.08 (0.65)	149	84.91 (3.92)

nwdrrhsb.d08

Table 32. Length frequency and CPUE (fish/nn) for channel catfish collected in 12 net-nights of sampling at Rough River Lake during November 2008.

	Inch Class																				
Species	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	CPUE	Std. Error
Channel Catfish	4	4	6	3	2	1	4	6	3	4	6	3	3	4	6	4	1	1	64	4.07	0.61

nwdrrhsb.d08

Table 33. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Rough River Lake during November 2008. Standard errors are in Parentheses.

Length Group					
11.0-15.9 in		16.0-23.9 in		≥ 24.0 in	
No.	Wr	No.	Wr	No.	Wr
15	83.0	31	87.0	2	94.0
	(1.2)		(1.7)		(6.0)

nwdrrhsb.d08

Table 34. Relative abundance, and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in April 2008.

	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	6	16	15	6	4	11	39	69	78	68	83	42	24	18	17	21	13	9	3	4	546	218.40	12.35

nwdlmpsd.d08

Table 35. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Malone 1999-2008.

	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.
2008	18.80	6.47	78.80	6.59	77.20	4.96	43.60	8.06	6.40	1.47	218.40	12.35
2007	29.20	3.98	80.40	10.40	30.80	1.96	37.60	10.34	3.60	1.33	178.00	17.80
2006	31.60	3.71	81.60	14.33	22.40	2.14	28.00	5.87	5.20	1.62	163.60	19.82
2005	32.40	4.83	69.20	14.31	32.00	8.74	53.60	5.71	8.40	1.17	187.20	30.12
2004	28.40	3.87	53.60	5.74	26.40	4.17	53.20	3.93	6.00	1.55	161.60	12.75
2003	57.00	3.32	76.50	6.75	35.00	5.00	57.50	4.86	9.50	2.75	226.00	12.08
2002	8.57	3.32	43.43	4.97	43.43	8.48	41.71	7.55	8.00	3.02	137.14	17.45
2001	18.00	8.05	66.00	12.03	50.00	7.98	31.33	6.32	0.67	0.67	165.33	15.55
2000	13.33	3.37	46.00	4.23	51.33	7.83	24.00	4.00	2.00	0.89	134.67	14.52
1999	n/d		48.67	9.82	61.33	6.98	23.33	4.89	2.67	1.33	133.33	12.72

Table 36. PSD and RSD values obtained for largemouth bass taken in spring electrofishing samples at Lake Malone, Carpenter Lake, Kingfisher, Mauzy Lake, and Washburn Lake during April 2008; 95% confidence intervals are in parentheses.

Lake	No. fish ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
Malone	499	61 (4)	22 (4)
Carpenter	249	8 (3)	4 (3)
New Kingfisher	111	19 (7)	0
Old Kingfisher	49	41 (13)	18 (11)
Mauzy	251	41 (6)	33 (6)
Washburn	34	32 (16)	15 (11)

Table 37. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	12.9	4	12.9	4	12.9	4	11.5	4	11.5	4	11.5	4	11.5	4	11.5	4	10.3	2	10.3	2
Spring CPUE age 1 fish	n/d		2.44	1	14.00	1	6.00	1	35.00	2	19.00	2	19.00	2	20.20	2	29.20	2	16.40	2
Spring CPUE 12.0-14.9 in fish	61.33	4	51.33	4	50.00	4	43.43	4	35.00	3	26.40	3	32.00	3	22.40	2	30.80	2	77.20	4
Spring CPUE $\geq$ 15.0 in fish	23.33	3	24.00	3	31.33	4	41.71	4	48.00	4	53.20	4	53.60	4	28.00	3	37.60	4	43.60	4
Spring CPUE $\geq$ 20.0 in fish	2.67	3	2.00	3	0.67	1	8.00	4	8.50	4	6.00	4	8.40	4	5.20	4	3.60	3	6.40	4
Instantaneous Mortality (z)									0.416		0.365		0.387		0.526		0.330		0.357	
Annual Mortality (A)%									34.1		31.1		32.0		40.9		28.1		30.0	
Total score		14+		15		14		17		17		17		17		15		13		16
Assessment rating				G		G		E		E		E		E		G		G		G

Table 38. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Lake Malone during spring samples 2002- 2008.

	Year						
Age	2002*	2003	2004	2005	2006	2007	2008
1	6.00	35.00	19.00	19.00	20.20	29.20	16.40
2	28.3	69.16	37.54	49.74	59.13	43.00	26.38
3	28.85	34.51	29.81	37.52	36.43	9.62	11.06
4	31.09	30.13	23.43	27.49	20.01	23.74	48.92
5	15.78	16.03	13.93	13.87	8.65	21.14	40.20
6	6.84	9.31	8.74	8.34	4.45	25.04	40.20
7	7.37	12.39	12.24	11.85	5.42	12.25	12.77
8	2.86	7.03	6.77	7.89	3.17	0.00	0.00
9	5.71	9.53	7.57	9.49	4.37	0.00	0.00
10	1.49	1.90	1.36	1.60	0.96	6.00	5.20

*nocturnal sample

nwdlmlag.d07

Table 39. Relative abundance, and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in October 2008.

	Inch Class																						
Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. Error
Total	14	61	20	13	8	37	29	18	19	25	32	37	23	12	7	2	1	1	3	1	363	145.20	25.71

nwdlmlmb.d08

Table 40. Number of fish and relative weight (Wr) for length groups of largemouth bass collected in NWFD lakes during October 2008. Standard errors are in parentheses.

	Length Group					
Location	8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Malone	90	89 (1.17)	91	89 (0.90)	26	92 (1.67)
Mauzy	126	89 (0.91)	31	87 (2.87)	22	98 (2.17)
Washburn	55	88 (0.96)	0		0	

Table 41. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Lake Malone.

		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
2002	Total	4.3		39.20		14.40		35.00	5.12
2003	Total	3.1		103.20		2.40		19.00	2.88
2004	Total	4.1	0.07	49.20	10.73	8.40	1.72	19.00	3.48
2005	Total	4.9	0.09	50.00	10.00	25.50	5.00	20.20	2.08
2006	Total	5.2	0.07	65.60	5.15	42.40	3.71	29.20	3.98
2007	Total	4.5	0.17	30.40	7.36	11.20	2.58	16.40	7.14
2008	Total	4.6	0.12	14.80	4.76	6.00	2.37		

nwdlmlmb.d07

Table 42. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 1.25 hours of electrofishing at Lake Malone in May 2008.

	Inch Class												
Species	1	2	3	4	5	6	7	8	9	10	Total	CPUE	Std. Error
Bluegill	2	86	241	122	66	85	40	1			643	514.40	44.49
Redear sunfish					4	1	8	8	5	9	35	28.00	8.11

nwdlmbg.d08

Table 43. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Lake Malone.

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	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2008	70.40	17.15	343.20	34.39	100.00	19.71	0.80	0.80	0.00		514.40	44.49
2007	75.20	17.12	324.00	28.85	90.40	9.77	0.00		0.00		489.60	39.89
2006	48.00	18.51	320.00	36.19	92.80	13.76	0.80	0.80			461.60	57.01
2005	27.69	8.21	376.92	44.63	46.15	10.76	0.00				450.77	54.06
2004	16.15	9.62	300.77	49.90	73.08	15.44	0.00				390.00	56.47
2003	25.38	6.49	173.08	24.06	22.31	6.22	0.00				220.77	25.54
2002	16.67	6.21	331.67	40.59	59.17	10.50	0.00				407.50	50.54
2001	7.33	2.17	222.00	30.51	46.67	8.98	0.67	0.67			276.67	34.54
2000	21.33	5.23	130.67	21.95	50.67	15.79	2.00	0.89			204.67	30.51
1999	53.33	14.30	20.67	4.31	0.67	0.67	0.00				74.67	18.03

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.
2008	0.00		3.20	1.77	7.20	3.86	17.60	4.89	7.20	2.78	28.00	8.11
2007	0.00		4.80	3.99	9.60	4.74	16.80	4.84	12.00	4.50	31.20	9.35
2006	0.00		4.80	2.13	1.60	1.60	5.60	3.38	2.40	2.40	12.00	6.56
2005	0.00		0.77	0.77	3.08	1.26	9.23	3.59	4.62	2.61	13.08	3.98
2004	0.00		1.54	1.03	0.77	0.77	2.31	1.64	0.77	0.77	4.62	2.05
2003	0.00		0.00		0.77	0.77	4.62	1.7	1.54	1.03	5.38	2.00

Table 44. PSD and RSD values calculated for bluegill and redear sunfish collected by electrofishing from Lake Malone during May 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_8
Bluegill	555	23 (3)	0.2 (0.2)
	No.	PSD	RSD-10
Redear sunfish	35	86 (11)	40 (26)

nwdlmbg.d08

Table 45. Population assessment for bluegill based on spring electrofishing at Lake Malone from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Vaule	Score
Mean length age 2+ at capture	3.9	2	3.9	2	3.9	2	3.9	2	3.9	2	3.9	2	3.9	2	4.4	2	4.4	2	4.4	2
Years to 6.0 in	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3
CPUE of ≥ 6.0 in fish	21.33	1	52.67	3	47.33	2	56.80	3	7.75	1	73.08	3	48.00	2	93.60	4	90.40	4	100.80	4
CPUE of ≥ 8.0 in fish	0.67	2	2.00	2	0.67	2	0.00	1	0.00	1	0.00	1	0.00	1	0.80	2	0.00	1	0.80	2
Instantaneous Mortality (z)									1.028						0.452		0.573		0.599	
Annual Mortality (A)%									64.2						36.4		43.6		45.0	
Total score		8		10		9		9		7		9		8		11		10		11
Assessment rating		F		F		F		F		P		F		F		G		F		G

Table 46. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 1.00 hours of diurnal electrofishing runs at Mauzy Lake in April 2008.

	Inch Class																			
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. Error
Largemouth bass	12	44	43	5	19	47	58	23	8	4	9	9	16	15	19	17	7	355	355.00	48.23

nwdmzpsd.d08

Table 47. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Mauzy Lake during spring 1999-2008.

	Length Group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥ 20.0 in			
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2008	104.00	31.37	147.00	16.28	21.00	5.00	83.00	9.29	7.00	1.91	355.00	48.23
2007	46.00	5.29	49.00	12.26	40.00	2.83	64.00	17.51	0.00		199.00	31.0
2006	68.00	14.05	40.00	4.00	24.00	4.00	60.00	4.62	0.00		192.00	21.17
2005	52.00	8.64	25.00	6.61	147.00	11.47	21.00	7.90	4.00	1.63	245.00	22.29
2004	20.00	9.24	132.00	2.31	5.33	1.33	6.67	1.33	0.00		164.00	10.58
2003*	98.61	18.69	163.19	31.92	73.61	6.05	20.83	6.36	2.78	2.78	356.25	58.72
2002	36.00	14.05	169.33	40.55	9.33	1.33	6.67	2.67	1.33	1.33	221.33	45.39
2001	12.00	2.31	246.67	53.53	26.67	10.67	4.00	2.31	0.00		289.33	64.18
2000	37.33	5.81	224.00	20.53	2.67	1.33	5.33	3.53	0.00		269.33	25.33
1999	n/d		165.33	8.74	17.33	5.35	4.00	2.31	1.33	1.33	186.67	14.11

* Mauzy renovated summer 2003

Table 48. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Mauzy Lake during spring samples 2004 - 2008.

	Year				
Age	2004	2005	2006	2007	2008
1	2.67	34.00	24.00	21.00	99.00
2	80.80	34.40	34.40	50.58	36.64
3	52.27	5.60	15.47	64.20	137.36
4	8.13	6.17	5.87	6.72	3.50
5	9.87	10.33	8.53	33.50	39.00
6	2.27	0.50	1.07	19.00	15.50

nwdmzlag.d07, nwdmzpsd.d05,
nwdmzpsd.d06, nwdmzpsd.d08

Table 49. Population assessment for largemouth bass based on spring electrofishing at Mauzy Lake from 2000-2008.

	Year																	
	2000		2001		2002		2003*		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	10.3	2	10.3	2	10.3	2	10.3	2	10.3	2	10.3	2	10.3	2	12.2	4	12.2	4
Spring CPUE age 1 fish	25.33	2	5.33	1	25.33	2	86.81	4	2.67	1	34.00	2	24.00	2	21.00	2	99.00	4
Spring CPUE 12.0-14.9 in fish	2.67	1	26.67	2	9.33	1	73.61	4	5.33	1	147.00	4	24.00	2	40.00	3	21.00	2
Spring CPUE ≥ 15.0 in fish	5.33	2	4.00	2	6.67	2	20.83	3	6.67	2	21.00	3	60.00	4	64.00	4	83.00	4
Spring CPUE ≥ 20.0 in fish	0.00	0	0.00	0	1.33	2	2.78	3	0.00	0	4.00	4	0.00	0	0.00	0	7.00	4
Instantaneous Mortality (z)									0.884				0.755		0.3737		0.466	
Annual Mortality (A)%									58.7				53.0		31.2		37.3	
Total score		7		7		9		16		6		15		10		13		18
Assessment rating		P		P		F		G		P		G		F		G		E

*Mauzy renovated summer 2003

Table 50. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 1.00 hour of diurnal electrofishing runs at Mauzy Lake in October 2008.

	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	1	27	27	0	23	63	31	11	21	18	10	3	1	4	4	5	3	5	1	258	258.00	12.91

nwdmzlmb.d08

Table 51. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Mauzy Lake during October 2008.

		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
2007	Total	5.3	0.08	71.00	11.24	51.00	9.98	99.00	30.74
2008	Total	5.3	0.06	64.00	17.36	52.00	13.86		

nwdlmlmb.d08

Table 52. Length frequency and CPUE (fish/hr) of largemouth bass collected during 1.00 hours of 15-minute diurnal electrofishing runs at Carpenter Lake in April 2008.

	Inch Class																				
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. Error
Largemouth bass	11	67	47	11	17	86	101	25	7	1	1	5	1	1	0	3	0	1	385	385.00	50.32

nwdcapsd.d08

Table 53. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carpenter Lake during April 2008.

	Length Group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2008	136.00	17.66	229.00	28.82	9.00	2.52	11.00	4.12	385.00	50.32
2007	45.33	7.42	128.00	24.33	12.00	2.31	10.67	3.53	196.00	31.75
2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	265.33	55.44
2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60
2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72
2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43
2002	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81
2001	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64
2000	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33
1999	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01

Table 54. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carpenter Lake during spring samples 2002- 2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	12.00	162.67	56.00	132.00	78.67	39.87	120.30
2	36.93	57.60	90.13	88.93	101.60	64.27	58.50
3	25.73	55.73	56.53	107.07	55.73	61.20	150.87
4	1.33	2.67	4.00	0.00	1.33	17.33	39.17
5	0.00	0.00	0.00	0.00	5.33	1.33	4.17
6	10.67	14.67	8.00	0.00	0.00	0.00	0.00

nwdcllag.d07, nwdcapsd.d08

Table 55. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	11.6	4	11.6	4	11.6	4	11.6	4	11.6	4	11.6	4	11.6	4	11.6	4	10.3	2	10.3	2
Spring CPUE age 1 fish	n/d		2.67	1	8.00	1	12.00	1	162.67	4	56.00	4	132.00	4	78.67	4	39.87	2	120.30	4
Spring CPUE 12.0-14.9 in fish	29.33	2	48.00	3	90.67	4	12.00	1	54.67	4	22.67	2	30.67	2	24.00	2	12.00	1	9.00	1
Spring CPUE ≥ 15.0 in fish	1.33	1	0.00	1	66.67	4	21.33	4	36.00	4	21.33	3	2.67	1	9.33	2	10.67	2	11.00	2
Spring CPUE ≥ 20.0 in fish	0.00	0	0.00	0	1.33	2	0.00	0	1.33	2	2.67	3	0.00	0	0.00	1	1.33	2	1.00	2
Instantaneous Mortality (z)									0.943		1.155				1.160		0.560		0.561	
Annual Mortality (A)%									61.1		68.5				68.67		42.86		42.94	
Total score		7+		9		15		9		18		16		11		13		9		11
Assessment rating		F		F		G		F		E		G		G		G		F		G

nwdcllag.d07 nwdcapsd.d08

Table 56. Length frequency and CPUE (fish/hr) of largemouth bass collected during 1.00 hours of 15-minute diurnal electrofishing runs at Carpenter Lake in October 2008.

	Inch Class																				
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. Error
Largemouth bass	11	25	10	4	55	51	56	17	6	3	4	3	1	0	0	1	1	1	249	249.00	11.70

nwdcalmb.d08

Table 57. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Carpenter Lake during October 2008.

		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
2007	Total	5.7	0.12	52.00	20.72	41.00	15.00	120.30	18.04
2008	Total	5.7	0.05	113.00	15.78	102.00	13.22		

nwdcalmb.d08

Table 58. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected during 0.50 hours of electrofishing at Carpenter Lake in May 2008.

	Inch Class								
Species	3	4	5	6	7	8	Total	CPUE	Std. Error
Bluegill	9	18	17	47	28		119	238.00	68.54
Redear sunfish		1	2	1	5	1	10	20.00	5.16

nwdcabg.d08

Table 59. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Carpenter Lake during spring 1999-2008.

	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.
2008	0.00		88.00	18.76	150.00	50.74	0.00		0.00		238.00	68.54
2007	2.67	2.67	61.33	17.73	168.00	38.53	1.33	1.33	0.00		233.33	9.10
2006	1.33	1.33	57.33	10.00	102.67	12.12	0.00		0.00		161.33	21.31
2005	12.09	9.77	190.11	17.09	98.90	6.80	18.68	9.02	0.00		319.78	23.07
2004	12.31	4.62	26.15	7.13	46.15	11.41	1.54	1.54	0.00		86.15	20.41
2003	7.69	2.81	102.56	22.96	47.44	13.24	3.85	1.72	0.00		161.54	34.11
2002	2.30		8.05		17.24		1.15		0.00		28.74	0.00
2001			198.67	74.7	152.00	22.74	41.33	12.72	0.00		392.00	108.89
2000			4.00	2.31	10.67	4.81	12.00	6.11	0.00		26.67	9.61
1999			10.67	2.57	82.67	10.91	12.00	8.00	0.00		105.33	17.99

Table 60. PSD and RSD values calculated for bluegill and redear sunfish collected by electrofishing from Carpenter Lake during May 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_8
Bluegill	119	63 (9)	0
	No.	PSD	RSD_{10}
Redear sunfish	10	60 (32)	0

nwdcabg.d08

Table 61. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Carpenter Lake during spring samples 2002- 2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	2.30	7.69	12.31	10.99	4.39	15.11	120.30
2	14.71	98.80	25.23	180.24	121.69	27.42	58.50
3	9.43	27.26	33.23	66.76	32.09	108.67	150.87
4	2.3	7.26	6.15	26.62	2.22	80.80	39.17
5	0.00	0.00	0.00	0.00	0.00	1.33	4.17

nwdcabg.d08, nwdcbgag.d07

Table 62. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2+ at capture	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	4.6	3	4.6	3
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3	3-3+	3
CPUE of ≥ 6.0 in fish	94.67	4	22.67	1	145.67	4	18.39	1	53.33	3	47.69	2	117.58	4	84.61	4	169.33	4	150.00	4
CPUE of ≥ 8.0 in fish	12.00	3	12.00	3	41.33	4	1.15	1	4.00	2	1.54	2	18.68	4	0.00	0	1.33	2	0.00	0
Instantaneous Mortality (z)									1.427						1.657		0.386		0.571	
Annual Mortality (A)									76.0						80.9		32.0		43.9	
Total score		15		12		16		10		13		12		16		12		12		10
Assessment rating		E		G		E		F		G		G		E		G		G		F

Table 63. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in April 2008.

	Inch Class														
	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Std. Error
Largemouth bass	12	59	29	6		4	23	30	33	11	7	3	217.00	578.67	71.75

nwdnkpsd.d08

Table 64. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at New Kingfisher Lake during April 1999-2008.

	Length Group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2008	282.67	37.33	240.00	33.31	56.00	9.24	0.00		578.67	71.75
2007	98.67	27.84	392.00	92.72	21.33	2.67	2.67	2.67	514.67	112.79
2006	189.33	14.11	333.33	46.26	10.67	2.67	0.00		533.33	62.88
2005	287.18	97.44	428.21	53.54	41.03	6.78	12.82	5.13	769.23	141.21
2004	161.54	45.07	243.59	45.58	12.82	6.78	2.56	2.56	420.51	92.45
2003	105.56	28.19	425.00	55.49	8.33	4.81	0.00		538.89	59.77
2002	116.28		258.14		4.65		0.00		379.07	
2001	89.74		364.10		20.51		2.56		476.91	
2000	137.78		493.33		24.44		6.67		662.22	
1999	n/d		315.56		17.78		2.22		335.56	

Table 65. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from New Kingfisher Lake during April 2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	116.28	57.69	94.87	248.72	149.33	96.00	250.67
2	193.45	16.67	169.00	215.62	246.79	226.33	74.33
3	60.51	3.42	66.90	175.66	74.55	67.67	68.00
4	5.74	6.84	16.24	65.98	20.00	60.67	55.67
5	0.00	5.13	1.71	11.97	2.67	39.00	51.67
6	0.00	0.00	0.00	0.00	0.00	6.67	14.67
7	0.00	0.00	0.00	0.00	0.00	7.67	5.00

nwdkflag.d07, nwdkfpsd.d08

Table 66. Population assessment for largemouth bass based on spring electrofishing at New Kingfisher Lake from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	10.5	1	10.5	1
Spring CPUE age 1 fish	n/d		135.56	4	89.74	4	116.28	4	100.00	4	94.87	4	248.72	4	149.33	4	96.00	4	250.67	4
Spring CPUE 12.0-14.9 in fish	17.78	1	24.44	2	20.51	2	4.65	1	8.33	1	12.82	1	41.03	3	10.67	1	21.33	2	56.00	4
Spring CPUE ≥ 15.0 in fish	2.22	1	6.67	2	2.56	1	0.00	0	0.00	0	2.56	1	12.82	2	0.00	0	2.67	1	0.00	0
Spring CPUE ≥ 20.0 in fish	0.00	0	4.44	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)									1.330		1.230				1.335		0.608		0.562	
Annual Mortality (A)%									73.6		70.8				73.7		39.2		43.0	
Total score		5+		15		10		8		8		9		12		8		8		9
Assessment rating				G		F		F		F		F		G		F		F		F

Table 67. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in October 2008*.

	Inch Class														
Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Std. Error
Largemouth bass	11	12	2	8	14	3	1	5	4	3	1	2	66	176.00	20.13

nwdnklmb.d08

*Major fish kill 9/5/08

Table 68. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at New Kingfisher Lake during October 2008.

		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
2007	Total	4.0	0.10	122.67	50.67	13.33	2.67	250.67	29.69
2008	Total	4.3	0.17	74.67	30.75	13.33	2.67		

nwdnklmb.d08

Major fish kill 9/5/08

Table 69. Length frequency and CPUE (fish/hr) for bluegill collected in 0.37 hours of electrofishing at New Kingfisher Lake in May 2008.

	Inch Class										
Species	2	3	4	5	6	7	8	9	Total	CPUE	Std. Error
Bluegill	16	43	40	8	9	6			121	322.67	85.21
Redear								2	2	5.33	2.67

nwdnkbg.d08

Table 70. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at New Kingfisher Lake during spring 1999 - 2008.

	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.
2008	42.67	5.33	242.67	65.54	37.33	14.85	0.00		0.00		322.67	85.21
2007	5.33	2.67	69.33	26.26	45.33	5.33	0.00		0.00		120.00	33.31
2006	16.00	13.47	104.00	33.78	14.00	2.00	0.00		0.00		134.00	43.98
2005	0.00		53.85	7.69	12.82	6.78	10.26	6.78	0.00		76.92	8.88
2004	0.00		15.38	8.88	23.08	11.75			0.00		38.46	4.44
2003	12.82	6.78	56.41	2.56	15.38	7.69	5.13	2.56	0.00		89.74	5.13
2002			9.30		62.79		6.98		0.00		79.07	0.00
2001			61.54		66.67		7.69		0.00		135.90	0.00
2000			31.11		66.67		11.11		0.00		108.99	0.00
1999			6.67		20.00		4.44		0.00		31.11	0.00

Table 71. PSD and RSD values calculated for bluegill collected by electrofishing from New Kingfisher Lake during May 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_8
Bluegill	105	13 (7)	0

nwdnkbg.d08

Table 72. Electrofishing catch rate (fish/hr) for each age of bluegill collected from New Kingfisher Lake during spring samples 2002- 2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	7.56	57.69	13.46	32.69	115.00	5.33	42.67
2	22.67	16.67	4.49	21.15	7.00	74.22	246.67
3	13.95	3.42	6.84	4.27	3.33	35.56	29.33
4	27.91	6.84	13.68	8.55	6.67	4.89	4.00
5	6.98	5.13	0.00	10.26	0.00	0.00	0.00

nwdnkbg.d08, nwdkfgbag.d07

Table 73. Population assessment for bluegill based on spring electrofishing at New Kingfisher Lake from 1999-2008.

	Year																			
	1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2 at capture	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	4.3	2	4.3	2
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3	3-3+	3
CPUE of ≥ 6.0 in fish	24.44	1	77.78	4	64.44	3	69.77	3	21.62	1	23.08	1	23.08	1	14.00	1	45.33	2	37.33	2
CPUE of ≥ 8.0 in fish	4.44	2	11.11	3	6.67	2	6.98	2	5.40	2	0.00	0	10.26	3	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)									0.865						1.587		0.5735		2.14	
Annual Mortality (A)%									57.9						79.5		42.6		88.2	
Total score		11		15		13		13		11		9		12		9		7		7
Assessment rating		G		E		G		G		G		F		G		F		F		F

*2003 and 2007age data

Table 74. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.25 hours of 7.5-minute diurnal electrofishing runs at Old Kingfisher Lake in April 2008.

	Inch Class																
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. Error
Largemouth bass	2	4	2		1	5	5	18	7	2	2	3	3	3	57.00	228.00	20.00

nwdokpsd.d08

Table 75. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.125 hours of 7.5-minute diurnal electrofishing runs at Old Kingfisher Lake in October 2008*.

	Inch Class																
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. Error
Largemouth bass	1	3	0	3	2		2	2			1	1		1	16	128.00	0.00

nwdoklmb.d08

*Major fish kill 9/5/08

Table 76. Length frequency and CPUE (fish/hr) for bluegill collected in 0.37 hours of electrofishing at Old Kingfisher Lake in May 2008.

	Inch Class							
Species	2	3	4	5	6	Total	CPUE	Std. Error
Bluegill	8	23	78	170	64	343	1372.00	262.00

nwdnkbg.d08

Table 77. Relative abundance, and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2008.

	Inch Class																	
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Std. Error
Largemouth bass	25	30	9	7	7	7	2	3		3		2	2		1	98	261.33	59.57

nwdwlpsd.d08

Table 78. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Washburn Lake* during April 2001-2008.

	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.
2008	170.67	42.92	61.33	21.83	16.00	0.00	13.33	9.61	0.00		261.33	59.57
2007	133.33	35.28	80.00	4.62	16.00	4.62	21.33	9.61	0.00		250.67	30.75
2006	96.00	9.24	98.67	39.28	64.00	0.00	18.67	5.33	2.67	2.67	277.33	25.44
2005	43.59	11.18	146.15	16.01	28.21	5.13	2.56	2.56	2.56	2.56	220.51	25.25
2004	46.15	4.44	353.85	49.45	0.00		0.00		0.00		400.00	51.22
2003	123.08	33.53	438.46	49.45	0.00		0.00		0.00		561.54	52.36
2002	50.00		321.43		0.00		0.00		0.00		371.43	0.00
2001	260.00		8.00		0.00		0.00		0.00		268.00	0.00

*Washburn Lake renovated summer 1999 and restocked spring 2000

Table 79. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Washburn Lake during spring samples 2003- 2008.

	Year					
Age	2003	2004	2005	2006	2007	2008
1	131.62	48.29	41.03	94.67	131.20	165.87
2	380.96	218.38	53.38	36.73	81.98	67.73
3	8.16	27.56	27.21	17.88	19.09	9.33
4	40.79	105.77	65.56	42.73	8.00	5.33
5	0.00	0.00	0.00	0.00	2.40	5.07

nwdwlpsd.d08 nwdwllag.d07

Table 80. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake from 2003-2008*.

	Year											
	2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	11.2	3	11.2	3	11.2	3	11.2	3	13.1	4	13.1	4
Spring CPUE age 1 fish	131.62	4	48.29	3	41.03	3	94.67	4	131.20	4	165.87	4
Spring CPUE 12.0-14.9 in fish	0.00	0	0.00	0	28.21	2	64.00	4	16.00	1	16.00	1
Spring CPUE ≥ 15.0 in fish	0.00	0	0.00	0	2.56	1	18.67	3	21.33	3	13.33	2
Spring CPUE ≥ 20.0 in fish	0.00	0	0.00	0	2.56	3	2.67	3	0.00	0	0.00	0
Instantaneous Mortality (z)							0.669		0.944		1.117	
Annual Mortality (A)%							48.8		61.1		67.3	
Total score		7		6		12		17		12		11
Assessment rating		P		P		G		E		G		F

*Washburn Lake renovated and restocked spring 2000

Table 81. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in October 2008.

	Inch Class										
Species	4	5	6	7	8	9	10	11	Total	CPUE	Std. Error
Largemouth bass	6	38	27	2	15	31	5	4	128	341.33	35.88

nwdwllmb.d08

Table 82. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Kingfisher Lake during October 2008.

		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
2007	Total	5.9	0.06	472.00	60.40	424.00	56.19	165.87	42.07
2008	Total	6.2	0.08	170.67	42.92	170.67	42.92		

nwdwllmb.d08

Table 83. Length frequency and CPUE (fish/hr) for bluegill collected in 0.37 hours of electrofishing at Washburn Lake in May 2008.

	Inch Class								
Species	2	3	4	5	6	7	Total	CPUE	Std. Error
Bluegill	1	1	37	19	41	22	121	322.67	69.49

nwdwabg.d08

Table 84. PSD and RSD values calculated for bluegill collected by electrofishing from Washburn Lake during May 2008; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD_8
Bluegill	120	52 (9)	0

nwdwabg.d08

Table 85. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Washburn Lake during May 2008.

	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.
2008	2.67	2.67	152.00	37.81	168.00	48.66	0.00		0.00		322.67	69.49
2007	58.67	14.11	245.33	37.05	40.00	12.22	0.00		0.00		344.00	54.45
2006	58.67	50.67	138.67	39.28	32.00	16.00	0.00		0.00		229.33	81.63
2005	161.54	31.87	155.77	18.94	9.62	3.68	0.00		0.00		326.92	39.29
2004	80.77	7.36	48.08	3.68	11.54	4.97	21.15	10.59	0.00		161.54	12.95
2003	7.69	3.14	71.15	12.71	113.46	39.89					192.31	39.85
2002			46.51		102.33						148.84	0.00
2001			28.00		64.00		4.00				96.00	0.00

*Washburn Lake renovated summer 1999 and restocked spring 2000

Table 86. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Washburn Lake during spring samples 2003- 2008.

	Year					
Age	2003	2004	2005	2006	2007	2008
1	0.00	0.00	0.00	141.87	163.20	25.07
2	100.34	16.35	71.57	71.47	176.80	253.6
3	72.73	8.65	5.36	16.00	4.00	14.42

nwdwabg.d08, nwdwbgag.d06

Table 87. Population assessment for bluegill based on spring electrofishing at Washburn Lake 2003-2008.

	Year											
	2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		
Mean length age 2+ at capture	5.4	4	5.4	4	5.4	4	5.3	4	5.3	4	5.3	4
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4
CPUE of ≥ 6.0 in fish	118.00	4	32.69	2	9.62	1	32.00	2	40.00	2	168.00	4
CPUE of ≥ 8.0 in fish	0.00	0	22.00	4	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)									1.050		2.046	
Annual Mortality (A)%									64.99		87.08	
Total score		12		14		5		10		10		12
Assessment rating		G		E		P		G		G		G

Table 88. Length frequency, composition, and number per hour of fish observed during 1.50 hours of 30-minute scuba transects swam at Goose Lake (Peabody WMA) in June 2005-2008.

		Length Group						
Species	Year	5.0-8.0 in	8.0-12.0 in	12.0-15.0 in	>15.0 in	Total	No./hr	Std. Error
Largemouth bass	2005	14	29	15	9	67	44.67	8.17
	2006	18	28	8	2	56	37.33	8.21
	2007	7	14	8	3	32	21.33	1.45
	2008	24	23	12	1	60	40.00	3.21

		Length Group						
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in	Total	No./hr	Std Error
Bluegill	2005	141	62	12		215	143.33	42.10
	2006	181	106	1		288	192.00	23.06
	2007	135	106	11	2	254	169.33	23.79
	2008	114	72	4		190	126.67	9.49
Redear sunfish	2005	0	0	8		8	5.33	2.67
	2006	5	23	3		32	20.67	1.45
	2007	6	19	17	1	43	28.67	3.18
	2008	21	35	8		64	42.67	6.96

Table 89. Length frequency, composition, and number per hour of fish observed during 1.00 hours of 20-minute scuba transects swam at Bottom Lake (Peabody WMA) in July 2006-2008.

		Length Group						
Species	Year	5.0-8.0 in	8.0-12.0 in	12.0-15.0 in	>15.0 in	Total	No./hr	Std. Error
Largemouth bass	2006	23	7	1	2	33	33.00	2.00
	2007	15	25	4	1	45	45.00	2.08
	2008	10	10		2	22	22.00	2.40

		Length Group						
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in	Total	No./hr	Std Error
Bluegill	2006	40	59	7	1	107	107.00	3.76
	2007	128	18	19	1	166	166.00	3.93
	2008	132	117	5		254	254.00	9.53
Redear sunfish	2006	1	11	16		28	28.00	2.40
	2007	19	45	28	1	93	93.00	6.66
	2008	20	42	12	3	77	77.00	13.13

Table 90. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.75 hours of 15-minute diurnal electrofishing runs at Merlin Lake (Peabody WMA) in 2008.

	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	Std. Error
Largemouth bass		1	3	12	12	2	14	34	39	27	11	1	0	0	0	2	2	0	1	1	162	216.00	32.58
Bluegill	3	7	11	19	10	23	10	3													86	114.67	12.72
Redear Sunfish		1	0	2	1	2	4	1	1												12	16.00	10.58

Figure 1. Results of Nolin River Lake angler attitude survey conducted April 01-October 31, 2008.

NOLIN RIVER LAKE ANGLER ATTITUDE SURVEY 2008
(N = 565)

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

2. Name _____ and Phone number _____ **(Optional)**

3. Which species of fish do you fish for at Nolin River Lake (**check all that apply**)?
Bass **71.5%** Crappie **44.7%** Walleye **10.6%** White Bass **9.0%** Channel Catfish **10.0%** Flathead Catfish **3.2%**
Bluegill **9.9%** Anything **1.2%**

4. Which one species do you fish for most at Nolin River Lake (**check only one**)? **N = 491**
Bass **66.0%** Crappie **28.9%** Walleye **1.0%** White Bass **0.8%** Channel Catfish **1.8%** Flathead Catfish **0%**
Bluegill **0.4%** Anything **1.0%**

-Answer the following questions for each species you fish for – (see question 3)

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Nolin River Lake? **N = 383**
Very satisfied **53.3%** Somewhat satisfied **35.0%** Neutral **5.0%** Somewhat dissatisfied **6.5%** Very dissatisfied **0.3%**
No opinion **0%**

5a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction? **N = 26**

Number of fish 65.4% **Size of fish 30.8%** **Too many anglers 3.8%**

Channel Catfish Anglers

6. What level of satisfaction do you have with the channel catfish fishing at Nolin River Lake? **N = 67**
Very satisfied **44.8%** Somewhat satisfied **29.9%** Neutral **14.9%** Somewhat dissatisfied **3.0%** Very dissatisfied **0.0%** No opinion **7.5%**

6a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction? **N = 1**

Size of fish 100.0 %

Flathead Catfish Anglers

7. What level of satisfaction do you have with the flathead catfish fishing at Nolin River Lake? **N = 38**
Very satisfied **36.8%** Somewhat satisfied **28.9%** Neutral **18.4%** Somewhat dissatisfied **0%** Very dissatisfied **2.6%** No opinion **13.2%**

7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction? **N = 3**

Number of fish 33.3% **Size of fish 66.7%**

8. Do you noodle or hand grab for flathead catfish at Nolin River Lake? **N = 35** Yes **2.9%** No **97.1%**

8a. If yes, how many days per year? **N = 2** **20 days 50%** **200 days 50%**

9. Do you support or oppose the use of this method (hand grabbing) of fishing for flathead catfish at Nolin River Lake? **N = 40**
Support **35%** Oppose **25%** No opinion **40%**

9a. If you oppose this method of fishing for catfish, what level of impact do you feel it is having on the flathead catfish population at Nolin River Lake? **N = 0**
Very negative □ Somewhat negative □ None/Neutral □ No opinion □

Crappie Anglers

10. What level of satisfaction do you have with the crappie fishing at Nolin River Lake? **N = 193**
Very satisfied **49.2%** Somewhat satisfied **35.8%** Neutral **7.8%** Somewhat dissatisfied **4.7%** Very dissatisfied **1.6%** No opinion **1.0%**

10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction? **N = 10**

Number of fish 70.0% **Size of fish 10.0%** **Excessive water fluctuation 30.0%**

Walleye Anglers

11. What level of satisfaction do you have with the walleye fishing at Nolin River Lake? **N = 57**

Very satisfied **35.1%** Somewhat satisfied **31.6%** Neutral **12.3%** Somewhat dissatisfied **7.0%** Very dissatisfied **0%** No opinion **14.0%**

11a. If you responded with somewhat or very dissatisfied in question (12) – what is the single most important reason for your dissatisfaction? **N = 5**

Number of fish 60.0% Size of fish 20.0% Too many anglers 20.0%

White Bass Anglers

12. What level of satisfaction do you have with the white bass fishing at Nolin River Lake? **N = 52**

Very satisfied **59.6%** Somewhat satisfied **23.1%** Neutral **11.5%** Somewhat dissatisfied **1.9%** Very dissatisfied **0%** No opinion **3.8%**

12a. If you responded with somewhat or very dissatisfied in question (13) – what is the single most important reason for your dissatisfaction? **N = 1**

Number of fish 100.0%

All Anglers

13. Would you support or oppose removing the "1 fish under" portion of the current 15 inch size limit on largemouth and smallmouth bass at Nolin River Lake? This would result in a straight 15-inch minimum size limit with a daily creel limit of 6 fish. **N = 527**
Support **59.6%** Oppose **17.6%** No opinion **22.8%**

13a. If you do not support removing the "1 fish under" portion of the current 15 inch size limit, what is your primary reason for wanting to keep the 1 fish under 15 inches? **N = 79**

Allow kids to keep 8.9% Bass tournaments 57.0% Happy with reg. as it is 3.8% To eat 20.3% Doesn't hurt population 10.1%

14. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? **N = 502**

Support **47.8%** Oppose **11.4%** No opinion **40.8%**

15. Are you satisfied with the current size and creel limits on all sport fish at Nolin River Lake? **N = 449** Yes **89.8%** No **10.2%**

If NO:

15a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Bass size (N = 8): 10" (12.5%) 12" (50.0%) 17" (12.5%) 20" (25.0%)

Bass Creel (N = 1): 6 fish (100.0%)

Crappie size (N = 26): 10" (92.3%) 11" (7.7%)

Crappie creel (N = 12): 15 fish (58.3%) 20 fish (41.7%)

Walleye size (N = 2): 12" (50.0%) 18" (50.0%)

16. KDFWR would like your opinion of a proposed statewide regulation that would provide limited protection of trophy-size catfish. Would you support or oppose a regulation where the angler could continue to keep the same number of catfish under 34 inches as in the past but could keep only 1 catfish greater than 34 inches per day?

Support **58.7%** Oppose **4.8%** No opinion **36.5%**

SOUTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 summarizes lake sampling conditions in 2008.

Barren River Lake (10,000 acres)

Black Bass

Black bass were collected by diurnal electrofishing in May and results are shown in Tables 2-11. The total black bass catch rate was 167.10 f/h. Largemouth bass accounted for 82% (CPUE=137.17 f/h), spotted bass accounted for 17 % (CPUE=28.17 f/h) and smallmouth bass accounted for 1% (CPUE =1.83 fish/hr) of the bass population sample. Otoliths were taken for age and growth assessment from the spring sample.

Largemouth bass length group catch rates and size structure indices (PSD=69 RSD_{15}=39) were similar to previous year averages (Table 4). The largemouth bass population assessment remains "Good", similar to previous years (Table 5). Largemouth bass achieved 15.0 inches in 4.3 years (calculated from von Bertalanffy growth function; FAST version 3.0). The mean length at capture of age-3 fish rose slightly from 14.1 inches in previous years to 14.4 in (Tables 6 and 8).

The spotted bass population continues to be low density (28.17 f/h), but high quality (PSD=64 RSD_{14}=21). Spotted bass reached a quality length (11.0 in) by age 3 and a preferred length (14.0 in) by age 6 (Tables 7 and 9). The smallmouth population statistics are unknown due to the chronic small sample sizes.

Fall diurnal black bass sampling in early October indicated a higher than average number (358.00 f/h) of young of the year largemouth (Tables 10-11). Age-0 largemouth catch rate greater than 5.0 in (59.67 f/h) was the second highest in the past 7 years. Spring conditions were favorable for a good year class as drought of 2007 allowed a good stand of vegetation (Knotweed - an emergent wetland plant) to develop on mud flats and shallow areas not inundated by water. During 2008, much of the debris (dead, but upright stands of Knotweed) remained and may have facilitated survival/development of the 2008 year class. The last excellent year class was in 2003. Small sample size of larger bass, likely due to early sample time, prohibited calculation of length-weight equations.

Crappie

Trap netting for crappie resulted in the collection of 362 total crappie (339 black crappie and 23 white crappie) in 106 net nights (Tables 12-16). Most crappie fell within the 8.0-10.0 in classes. The crappie population remains dominated by black crappie (94 %). White crappie recruitment remains chronically low (since 2000). Assessment for black crappie was "Fair" and white crappie was also "Fair". The combined crappie assessment was "Fair" as it has been for past years (Tables 14 -16). Small sample size of white crappie negated calculation of the length-weight equation. The following length-weight equation for black crappie should be used with caution due to the small sample size (n=188).

$$\text{Black Crappie } \text{Log}_{10}(\text{weight}) = -3.40172 + 3.15671 * \text{Log}_{10}(\text{Length})$$

White Bass / Hybrid Stripped Bass

Gill netting for white bass and hybrid striped bass was completed in November. Good numbers of hybrids were collected; however, white bass population numbers continue to be low. Sampling results can be found in the Lake Fisheries Research Section annual performance report.

Briggs Lake (18 acres)

Black Bass

Diurnal largemouth electrofishing samples were collected on April 22 (Table 17). Largemouth catch rate (490.00 f/h; Table 18) eclipsed last year's previous high. Recent strong year classes, 2005 and 2006, have caused a stockpiling of fish below 12.0 in (PSD=15; Table 19). Although the PSD value is low, these population parameters for largemouth bass are excellent for accomplishing the goals set in the Briggs strategic management plan (BRGSMP 2009). As the primary management plan for this lake is based around the sunfish population.

Sunfish

The sunfish population was sampled by diurnal electrofishing on the May 16 (Tables 20-25). The bluegill assessment fell to "Good" due to a decrease in fish greater than 6.0 in. This decrease in larger fish could be due to sample timing. Larger bluegill and redear sunfish were noted in earlier bass samples, but these fish were virtually absent at the time of sunfish sampling. The bluegill size structure remains good with a PSD of 45. Redear assessment and population values were much lower than previous years; again, possibly due to timing of the sample. Only 4 of the 10 goals were met in the BRGSMP 2009: length at capture of age 2 bluegill of 5.0 in, mean length at capture of age 3 redear of 8.0 in, largemouth bass CPUE of 300.00 f/h and total CPUE of greater than 6.0 in sunfish of 300.00 f/h . Contribution of warmouth (164.00 f/h) help to achieve the last goal stated (6.0 in plus sunfish CPUE > 300.00 f/h).

Spurlington Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are in Tables 26-28. The overall catch rate returned to normal levels (392.00 f/h) from last years (184.00 f/h). Catch rate (32.00 f/h) for > 15.0 in fish was the second highest in the past 7 years. The bass population remains diverse (PSD=57).

Sunfish

Results of bluegill and redear diurnal sampling on May 13 are in Tables 29-34. The overall CPUE fell from last year, due to a decrease in the catch rate of fish < 3.0 in. The bluegill assessment remained "Good" as in previous years. Otoliths were taken from the spring sample for an age and growth assessment. Bluegill reach "quality size" (6.0 in) between 3 and 4 years. No redear were noted in spring sunfish sampling or fall bass sampling despite stockings in 2007 and 2008.

Green River Lake (8,210 Acres)

Muskie

Similar to the past three years, muskellunge sampling was limited due to unsuitable sampling conditions (water clarity too high or high water levels); however, limited results are presented in Tables 35-36. Since the change to reservoir drawdown and guide curve in 2003, historical sampling conditions (stained – muddy water) have been limited (4 of 6 years) and may warrant a change in sampling strategy to improve sampling efficiency and future data comparability.

Black Bass

Nocturnal black bass sampling (Tables 37-40) was conducted on the upper and lower sites of each lake arm (Green River and Robinson Creek) on April 30. Overall largemouth CPUE (107.00 f/h) was bolstered by a better than average 2007 year-class and the persisting dominance of the strong 2004 year class.

Homes Bend area (upper Green River arm) largemouth catch rate doubled from previous year (178.00 f/h). Majority of age-1 largemouth were collected in this area. All other areas were similar to the previous year. Comparatively, spotted bass catch rates nearly doubled in all areas compared to previous years.

Overall largemouth bass size structure remains diverse (PSD = 69; RSD = 36) with the strong 2004 year class bolstering a higher than average PSD. Population assessment for largemouth bass remained "Good", similar to most years.

Fall YOY sampling (Tables 41-42) suggests a fair 2008 year class (overall CPUE = 23.67 f/h; ≥ 5.0 in = 11.50 f/h). Supplementary stocked (16,000; 2 fish/acre) 5.0 in largemouth added in the fall of 2006 have never been detected.

Crappie

Results from trap netting for white crappie are presented in Tables 43-46. The moderate year classes of 2005 and 2006 appear to be carrying the fishery. However, crappie growth in 2008 was the poorest on record for age-2+ (7.7 in) fish. This poor growth rate coupled with two years of poor recruitment (2007 and 2008) dropped the crappie population assessment for Green River Lake to its first ever "Poor" rating. YOY CPUE (0.86 f/nn) suggest another poor year class; however, age-0 CPUE has not always been a reliable indicator of year class strength. The length-weight equation for white crappie is:

$$Log_{10}\,(weight) = -3.70105 + 3.35420 \times Log\,(length)$$

Walleye/White bass

Results of the experimental gill net sampling for white bass and walleye are shown in Tables 47-51. The white bass population reached rock bottom as no white bass were collected in 2008. Older fish dominated the last year's (2007) gillnet sample, with 2005 being the last decent year class. Anglers reported having caught fish in the spring of 2008 spawning run; however, anglers also reported a white bass die off in late spring/early summer 2008 followed by very poor summer fishing success. Walleye CPUE (5.07 f/nn) fell slightly from last year (7.00 f/nn) as population continues to be carried by the 2006 year class. The walleye population assessment dropped back to a "Good" rating as the overall catch rate and age-1 fish dipped from 2007. Walleye growth rates remain very good as they achieved 19.5 in by age-2+ at capture. The recent establishment of alewives and their effect on white bass and walleye population dynamics is unclear. Alewives were first noted in this system in 2004 gill net by-catch. The length-weight equation for walleye is:

$$Log\,(weight) = -3.80759 + 3.31194 \times Log\,(length)$$

Shanty Hollow Lake (136 acres)

Black Bass

Nocturnal bass sampling results are shown in Tables 52-55. Overall CPUE of largemouth (297.50 f/h) was similar to previous years. Size structure index (PSD = 24) improved slightly from the previous year with recruitment of the stronger 2004 and 2005 year classes to the 12.0-14.0 length group. Recruitment of 2007 year class (age-1 CPUE = 30.00 f/h) appears moderate at best. The largemouth population assessment returned to "Good", similar to previous years.

Sunfish

Sunfish sampling results are shown in Tables 56-65. Bluegill CPUE (368.00 f/h) dipped from last years all-time high (614.00 f/h) due to a decrease in fish less than 6.0 in. Bluegill achieved 6.0 inches in 2.6 years, similar to 2002 age data. The bluegill assessment remains "Good" similar to previous years. The redear population remained at lower density (CPUE = 25.23 f/h) and maintained a "Fair" assessment rating. Redear achieved 8.0 in at approximately age 3 ½.

Shanty Hollow Lake experiences notable water level fluctuations due to a leak. Water level fluctuations range from 2-12 feet below normal pool within a year depending on rainfall. Erratic population shifts in sunfish and bass whether due to heightened predation, spawning interruptions, etc., may be symptoms of these frequent water level changes.

Marion County Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are shown in Tables 66-69. The largemouth population is dominated by fish less than 12.0 in (PSD=8). A strong year class in 2007 will likely keep the size structure dominated by smaller fish. However, the catch rate of ≥ 15.0 in fish continues to gain momentum as CPUE remained in double digits for the third consecutive year.

Sunfish

Diurnal electrofishing results for bluegill and redear on May 15 are presented Tables 70-75. Bluegill overall CPUE (274.00 f/h) dropped considerably from previous years due to lower numbers of the 3.0-5.0 in length group. The bluegill assessment increased to "Good" this year, due to a marked increase in the CPUE of ≥ 6.0 in fish. Redear overall CPUE (75.00 f/h) doubled from last year with solid contributions from two good year classes. Redear reclaimed an "Excellent" assessment rating.

Nolin River Lake Tailwater Creel Survey

Results of a daytime creel survey conducted on 0.5 miles of tailwater directly below Nolin River Lake dam are in Tables 76-83. Due to budget constraints, survey was conducted over a 1-hour period in either early morning, midday or end of the day (front or back of scheduled lake survey).

Anglers made an estimated 3,678 trips and fished for 18,941 hours with the average trip approximating 5.15 hours. Compared to other tailwater creels in the southwest district (Barren & Green) angler hours were nearly half that at Barren (31,522 hours), but nearly twice that of Green (9,484 hours). Additionally, average trip length was nearly three times that noted at Barren (1.72 hours) and Green (1.85 hours). Explanation for possible skewed trip length may lie with the difference in creel design, as Barren and Green tailwater surveys were conducted over 4-hour periods with random counts.

Similar to other surveys, "Anything" anglers expended the most effort (34%) followed closely by catfish anglers (30%), trout (11%), walleye (11%) and crappie (8%) anglers. Fishing success appeared strongly related to lake discharge as Nolin River Lake was essentially at base flow (100 CFS or less) from mid-June to mid-October. Trout seemingly did little to buffer the lack of fish emigration from the lake, as only approximately 700 trout were caught from July through September. Low angler use of the April trout stocking (47 fish caught) was likely due to high discharge rates and suspected flushing of trout downstream of the survey area and high angler use area. The white bass fishery was remarkably seasonal (April and May only), especially given their high abundance in the lake. The Green River Tailwater white bass fishery lasted well into July, despite a longer period of low discharge (late-May through October). Overall angler catch rate (0.65 f/h) was similar to other surveys (Barren – 0.66 f/h, Green – 1.09 f/h). However, overall harvest rate (0.22 f/h) was at least half that experienced at other tailwaters (Barren – 0.44 f/h Green – 0.50 f/h).

Table 1. Lake sampling conditions in the Southwestern Fisheries District in 2008.

Lake	Date	Species	Weather	Surface water temp.(F)	Conductivity (umhos)	Secchi (in.)	Comments
Barren River	30-Apr	Bass	Mild	65-70	150-155	54	2.5-ft above summer pool
	17-Sep	YOY bass	Calm	73-74			2-ft below summer pool & stable
	28-Oct	Crappie	Clear	50-57			6.5-ft below summer pool & falling 1/2-ft. per day
	4-Nov	Morones	Calm	54			9-ft below summer pool & falling 1/2-ft. per day
Green River	1-Feb	Muskie	Variety	41-45	80-100		3.5-ft below to 4.5-ft above summer pool
	8-May	Bass	Clear & mild	63-66	110	44	1.7-ft below summer pool & stable
	2-Oct	YOY bass	Sunny & calm	72		36-84	1.5 feet below summer pool & stable
	18-Nov	White bass & walleye	Clear & breezy	53-54			3-feet below summer pool & stable. On tailend of turnover
	3-Dec	Crappie	Clear & breezy	41-45			4-feet below summer pool & dropping 1/2-ft per day
Briggs	22-Apr	Bass	Clear	68		50	
	16-May	Bluegill & redear	Partly sunny	64		72	
	25-Sep	YOY bass	Sunny	74	150		
Marion Co.	29-Apr	Bass	Clear & cool	64	110	36	mid-size bass 10-13" thin
	13-May	Bluegill & redear	Sunny	66	110	55	
	9-Oct	YOY bass		68		72	
Spurlington	24-Apr	Bass	Clear	69	140	49	
	13-May	Bluegill	Sunny	65	140	28	
	9-Oct	YOY bass		68		72	
Shanty Hollow	23-Apr	Bass	Clear	68		59	
	19-May	Bluegill & redear		66	95	30	1-ft above normal pool
	2-Oct	YOY bass		70		25	Lake 9-foot below summer pool

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 during early May (5-7, 9) 2008.

		Inch Class																				
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std err
Peninsula	Smallmouth bass					1						1	1	1	2	2	1	1		10	6.67	5.70
	Spotted bass	5	2	2	3	10	9	3	9	13	14	19	15	6	1					111	74.00	26.41
	Largemouth bass	3	33	34	30	15	13	5	15	9	9	10	15	27	11	18	2	2	2	253	168.67	24.83
Beaver Creek	Smallmouth bass																					
	Spotted bass				1	1			1			1								4	2.67	1.76
	Largemouth bass		4	9	11	11	9	12	10	16	27	16	18	14	11	9	2	2		181	120.67	13.38
Peter Creek	Smallmouth bass			1																1	0.67	0.67
	Spotted bass					4	5	7	2	3	4	4	7	2						38	25.33	2.91
	Largemouth bass	5	4	20	16	11	6	11	10	9	6	14	18	17	24	12	10	1	2	196	130.67	13.78
Walnut Creek	Smallmouth bass																					
	Spotted bass		1			1	3	1		4	4	1	1							16	10.67	6.77
	Largemouth bass		1	5	9	8	8	7	17	25	19	14	16	20	14	16	4	5	5	193	128.67	34.97
TOTAL	Smallmouth bass			1		1						1	1	1	2	2	1	1		11	1.83	1.49
	Spotted bass	5	3	2	4	16	17	11	12	20	22	25	23	8	1					169	28.17	10.20
	Largemouth bass	8	42	68	66	45	36	35	52	59	61	54	67	78	60	55	18	10	9	823	137.17	11.48

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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Barren River Lake during April, May and early March 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	6.67	1.40	31.11	5.23	48.40	6.44	49.30	6.48	3.33	0.67	135.60	11.61
1998	17.20	4.15	11.40	2.68	23.20	3.10	32.20	2.66	1.20	0.44	83.80	8.27
1999	10.67	2.40	31.33	5.62	41.67	6.90	36.33	4.66	2.33	0.64	120.80	11.16
2000	8.29	1.67	24.14	3.45	33.00	3.19	27.29	2.42	1.43	0.51	92.70	7.29
2001	11.81	1.64	42.29	4.02	49.33	6.34	61.90	4.10	1.14	0.40	165.30	9.60
2002	12.55	2.24	22.36	2.87	30.36	4.03	37.64	4.22	1.27	0.41	102.91	9.50
2003	21.69	3.42	22.46	3.47	20.46	2.90	39.54	4.71	0.31	0.21	104.15	10.58
2004	47.66	13.97	37.66	6.25	16.67	3.96	18.44	3.25	0.67	0.47	120.22	22.15
2005	17.67	2.93	66.00	7.73	31.50	4.65	36.83	3.36	2.00	0.68	152.00	8.62
2006	22.83	4.71	46.17	6.88	57.17	9.80	44.00	5.96	1.33	0.42	170.17	21.78
2007	12.67	3.09	44.17	10.94	37.67	5.00	37.17	5.84	1.00	0.58	131.67	17.03
2008	38.17	7.78	30.33	4.57	30.33	3.08	38.33	3.84	1.50	0.56	137.17	11.48
Average	18.99		34.12		34.98		38.25		1.46		126.4	

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Table 4. PSD and RSD values obtained for each black bass species collected during 6 hours (12 runs, 0.50-hour) of spring diurnal electrofishing at each area of Barren River Lake in early-May 2008. 95% confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD (± 95% CI)	RSD[A] (± 95% CI)
Peninsula	Largemouth bass	138	70 (7)	45 (8)
	Spotted bass	99	69 (9)	22 (8)
	Smallmouth bass	10	90 (20)	80 (26)
Beaver Creek	Largemouth bass	146	68(8)	26(7)
	Spotted bass	3	33 (65)	*
	Smallmouth bass	0	*	*
Peter Creek	Largemouth bass	140	74 (7)	47 (8)
	Spotted bass	38	53 (16)	24 (10)
	Smallmouth bass	0	*	*
Walnut Creek	Largemouth bass	170	66 (8)	38 (8)
	Spotted bass	15	67 (25)	6 (13)
	Smallmouth bass	0	*	*
Total	Largemouth bass	594	69 (3)	39 (4)
	Spotted bass	155	64 (7)	21(6)
	Smallmouth bass	10	90 (20)	80 (26)

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

* No fish of sufficient size were collected during sampling.

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Table 5. Population assessment of largemouth bass based on spring sampling at Barren River Lake from 2002-2008.

	2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.40	4
Spring CPUE age-1	14.95	1	19.60	1	26.90	2	13.48	1	17.52	1	9.67	1	44.45	3
Spring CPUE 12.0-14.9 in	30.36	3	20.46	2	16.67	2	31.50	3	57..17	4	37.67	4	30.33	3
Spring CPUE ≥15.0 in	37.64	4	39.54	4	18.44	3	36.83	4	44.00	4	37.17	4	38.33	4
Spring CPUE ≥20.0 in	1.27	2	0.31	2	0.67	2	2.00	2	1.33	2	1.00	2	1.50	2
Instantaneous Mortality (z)														-0.62
Annual Mortality (A)%														46.2
Total Score		14		13		13		14		15		15		16
Assessment Rating		Good		Good		Good		Good		Good		Good		Good

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Table 6. Mean back-calculated length (in) at each annulus of largemouth bass collected by electrofishing at Barren River Lake from May 2008 , including the range in length of largemouth bass at each age and the 95% confidence interval for each age class.

		Age												
Year-Class	N	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	61	8.0												
2006	113	6.5	10.9											
2005	57	6.9	11.5	14.2										
2004	68	6.2	11.1	13.9	16.0									
2003	31	6.9	11.3	13.8	15.5	17.1								
2002	3	7.6	13.2	14.2	15.7	17.1	18.7							
2001	5	5.2	9.2	12.1	13.7	15.2	16.8	18.2						
2000	6	6.7	10.2	11.8	13.5	14.9	16.2	17.5	18.9					
1999	3	3.5	6.5	8.9	10.8	12.5	14.3	15.7	17.2	18.6				
1998	3	4.9	7.8	9.7	11.3	12.5	14.5	15.9	17.1	18.6	19.9			
1995	1	5.3	8.0	9.5	11.4	12.6	13.7	14.5	15.3	16.0	17.2	19.1	19.8	20.6
Mean	351	6.8	11.0	13.6	15.3	16.0	16.1	17.0	17.8	18.2	19.2	19.1	19.8	20.6
Smallest		1.8	3.6	5.4	7.2	9.0	12.7	14.5	15.3	16.0	17.2	19.1	19.8	20.6
Largest		12.1	15.6	17.4	19.0	20.1	20.1	20.5	21.0	20.0	20.3	19.1	19.8	20.6
Std. Error		0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.5	0.5	0.7			
Low 95% CI		6.6	10.8	13.4	15.0	15.4	15.2	16.1	16.9	17.2	17.8			
High 95% CI		7.0	11.2	13.9	15.7	16.7	17.0	17.8	18.7	19.3	20.6			

Otoliths were used to make age determinations. Intercept = 0.

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Table 7. Mean back-calculated length (in) at each annulus of spotted bass collected by electrofishing at Barren River Lake from May 2008 , including the range in length of spotted bass at each age and the 95% confidence interval for each age class.

		Age									
Year-Class	N	1	2	3	4	5	6	7	8	9	10
2007	8	7.7									
2006	42	4.5	8.5								
2005	20	5.7	9.4	11.7							
2004	49	5.1	8.7	11.3	13.0						
2003	10	5.2	8.5	10.7	12.3	13.6					
2002	4	5.0	9.3	11.5	12.9	14.0	14.6				
1998	1	6.0	6.6	7.5	9.0	9.9	10.5	11.7	12.9	13.5	15.0
Mean	134	5.2	8.7	11.3	12.8	13.4	13.8	11.7	12.9	13.5	15.0
Smallest		2.2	5.9	7.5	9.0	9.9	10.5	11.7	12.9	13.5	15.0
Largest		8.6	12.7	15.0	17.5	15.0	15.4	11.7	12.9	13.5	15.0
Std. Error		0.1	0.1	0.1	0.2	0.3	0.9				
Low 95% CI		5.0	8.5	11.0	12.5	12.7	12.1				
High 95% CI		5.3	9.0	11.6	13.2	14.1	15.4				

Otoliths were used to make age determinations. Intercept = 0.

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Table 8. Age frequency and CPUE (fish/hr) of largemouth bass collected during electrofishing at Barren River Lake during May 2008.

	Inch Class																				
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	Percent	CPUE	Std. Error
1	8	42	68	66	44	27	11	2											267	32	44.45	8.06
2					1	9	24	50	59	42	10	2	2						202	24	33.59	5.12
3										19	35	41	16	8	10				129	16	21.50	1.90
4											8	19	48	33	21	9	1		139	17	23.25	2.32
5												4	11	15	16	5	6	1	58	7	9.64	0.78
6															3	1		1	5	1	0.78	0.12
7														5		1	1	1	8	1	1.36	0.18
8															3	2		1	6	1	1.03	0.17
9															3	1		1	5	1	0.78	0.12
10																	2	1	4	0	0.58	0.19
13																		1	1	0	0.21	0.08
Total					45	36	35	52	59	61	54	66	78	60	55	18	10	9	823	100		
%					7	4	4	6	7	7	7	8	9	7	7	2	1	1	100			

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Table 9. Age frequency and CPUE (fish/hr) of spotted bass collected during electrofishing at Barren River Lake during May 2008.

	Inch Class														Std.
Age	6	7	8	9	10	11	12	13	14	15	16	Total	Percent	CPUE	Error
1	1	3	4									8	5	1.43	0.39
2	3	13	13	11	4		1					45	28	7.44	2.19
3					4	8	7		4	1		24	15	4.01	1.44
4					4	11	13	18	14	2	1	63	39	10.52	4.63
5						1		7	3	3		14	9	2.23	1.24
6									3	2		5	3	0.72	0.40
7												0	0		
8												0	0		
10										1		1	1	0.15	0.10
Total	4	16	17	11	12	20	21	25	24	9	1	160	100		
%	3	10	11	7	8	13	13	16	15	6	1	100			

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Table 10. 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 October 2008.

		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	9	6			1	1		1											18	12.00	6.00
	Spotted bass	38	11			5	14	6	5	1	1			1						82	54.67	16.59
	Largemouth bass	199	17	2	17	9	16	10	14	15	9	3	5		1	16			1	319	212.67	59.07
Beaver Creek	Smallmouth bass																					
	Spotted bass		3			1	2	5	1	2			1		1					16	10.67	1.33
	Largemouth bass	102	296	36	24	56	43	27	3	18	16	9	7	3	1	8	1	1	1	652	434.67	22.93
Peter Creek	Smallmouth bass		5					1		1										7	4.67	1.76
	Spotted bass	16	34			1	1	1	7	5	3	1	3	1						73	48.67	12.67
	Largemouth bass	80	123	10	15	19	10	4	14	14	13	3	14	6	1	1	2			329	219.33	34.26
Walnut Creek	Smallmouth bass																					
	Spotted bass					1		2	1	1		1		1						7	4.67	2.67
	Largemouth bass	234	335	55	46	46	36	7	13	36	14	5	5	6	3	6	1	1	1	850	566.67	44.76
TOTAL	Smallmouth bass	9	11			1	1	1	1	1										25	4.17	1.99
	Spotted bass	54	48			8	17	14	14	9	4	2	4	3	1					178	29.67	8.06
	Largemouth bass	615	771	103	102	130	105	48	44	83	52	20	31	15	6	16	4	2	3	2150	358.33	48.65

swdbrlyy.DO8

Table 11. 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.

	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	171.67	25.76	34.17	4.06	26.90	3.71
2003	4.4	0.04	198.00	30.81	84.00	18.74	44.90	13.25
2004	3.7	0.04	108.44	22.20	20.78	3.85	11.20	2.51
2005	3.7	0.04	160.67	25.63	25.33	4.20	17.50	3.63
2006	3.4	0.02	299.67	87.22	21.83	5.62	18.00	4.78
2007	4.2	0.06	61.50	12.80	14.00	2.47	13.79	1.49
2008	3.8	0.03	307.53	46.86	59.67	10.53		

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otolith, removed from a subsample of LMB <9.0 in, and extrapolated to the entire catch of the fall sample.

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

swdbrlbb.D02 - D08

swdbrlag. D02 - D08

swdbrlyy. D02 - D08

Table 12. Length frequency and CPUE (fish/nn) of each inch-class of white and black crappie collected by trap-net (106 net-nights) at Barren River Lake from in late-October 2008.

		Inch Class											Std.
Location	Species	3	4	5	6	7	8	9	10	11	Total	CPUE	Error
Walnut Creek													
	White Crappie		6	2		1			1		10	0.19	0.07
	Black Crappie	69	37	2	5	9	19	28	25	7	201	3.87	0.98
Beaver Creek													
	White Crappie		5	6					1	1	13	0.24	0.10
	Black Crappie	40	5			4	15	42	24	8	138	2.56	0.62
Total													
	White Crappie		11	8		1			2	1	23	0.22	0.66
	Black Crappie	109	42	2	5	13	34	70	49	15	339	3.20	0.57

swdbrltn.d08

Table 13. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white and black crappie collected by trap-nets (106 net-nights) at Barren River lake from late-October 2008. Numbers in parentheses represent 95% confidence intervals.

Location	Species	Number ≥5.0 in	PSD	RSD_{10}
Barren River Lake				
	White Crappie	12	25(25)	25(25)
	Black Crappie	188	89(5)	34(7)

swdbrltn.D08

Table 14. Black crappie assessment from trap netting at Barren River Lake from 1985-2008.

	Black crappie											
	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
1985	3.53	1	0.72	1	0.33	1	0.78	1	7.4	1	5	P
1986	10.72	2	6.94	3	3.83	2	2.80	1	8.7	2	10	F
1987	3.27	1	1.90	1	2.82	1	1.34	1	9.6	4	8	F
1988	6.18	2	5.68	2	0.10	1	0.44	1	9.3	3	9	F
1989	9.19	2	1.48	1	7.51	3	5.90	2	8.2	1	9	F
1990	29.12	4	26.11	4	0.10	1	1.92	1	8.8	2	12	F
1991	3.53	1	0.95	1	0.86	1	3.55	1	7.6	1	5	F
1992	9.20	2	3.49	2	0.07	1	4.24	2	7.7	1	8	F
1993	12.61	2	1.06	1	0.29	1	9.13	2	8.1	1	7	P
1994	0.74	1	0.10	1	0.82	1	0.70	1	8.8	2	6	P
1995	7.39	2	6.54	2	1.29	1	0.53	1	8.9	2	8	F
1996	9.03	2	0.79	1	0.48	1	4.16	2	7.8	1	7	P
1997	9.12	2	1.45	1	0.87	1	5.98	2	7.6	1	7	P
1998	1.71	1	0.12	1	1.79	1	1.56	1	8.2	1	5	P
1999	4.66	1	3.82	2	0.26	1	0.85	1	8.6	2	7	P
2000	1.81	1	0.18	1	0.22	1	0.65	1	7.8	1	5	P
2001	5.72	2	0.33	1	0.41	1	4.47	2	7.6	1	7	P
2002	4.58	1	1.02	1	3.09	2	3.34	1	8.7	2	7	P
2003	2.37	1	1.19	1	5.35	2	0.89	1	9.7	4	9	F
2004	6.90	2	4.36	2	0.65	1	2.20	1	9.2	3	9	F
2005*	6.40	2	2.30	1	2.00	1	4.40	2	9.1	3	9	F
2006*	2.70	1	1.40	1	0.60	1	1.30	1	8.9	3	7	P
2007	6.59	2	3.23	2	0.16	1	1.30	1	8.5	2	8	F
2008*	1.77	1	0.19	1	1.43	1	1.58	1	9.7	4	8	F

* Age assessment data extrapolated from previous age data

swdbrltn.D85 - D08

Table 15. White crappie assessment from trap netting at Barren River Lake from 1985 - 2008.

	White crappie											
	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
1985	30.98	4	24.40	4	0.42	1	2.20	1	9.4	3	13	G
1986	13.56	3	3.61	2	1.91	1	8.87	2	9.0	2	10	F
1987	3.99	1	1.26	1	0.41	1	2.48	1	10.8	4	8	F
1988	3.07	1	2.49	1	0.24	1	2.48	1	11.1	4	8	F
1989	4.15	1	1.69	1	3.25	2	2.56	1	11.0	4	9	F
1990	22.83	4	20.80	4	0.50	1	13.38	2	10.8	4	15	G
1991	30.98	4	0.52	1	0.98	1	8.86	2	9.8	4	12	F
1992	6.82	2	5.09	2	0.07	1	4.04	2	11.5	4	11	F
1993	5.77	2	0.59	1	0.04	1	5.22	2	10.0	4	10	F
1994	0.66	1	0.11	1	0.65	1	0.44	1	10.6	4	8	F
1995	7.95	2	7.69	3	0.64	1	5.47	2	11.5	4	12	F
1996	6.34	2	0.80	1	1.40	1	5.59	2	9.7	4	10	F
1997	6.71	2	5.12	2	1.04	1	5.16	2	10.2	4	11	F
1998	1.22	1	0.68	1	2.03	1	0.93	1	10.9	4	8	F
1999	6.48	2	5.91	2	0.54	1	2.93	1	10.9	4	10	F
2000	2.50	1	0.32	1	0.03	1	2.38	1	9.3	3	7	P
2001	1.58	1	0.51	1	0.21	1	1.34	1	10.5	4	8	F
2002	1.41	1	0.29	1	1.16	1	0.80	1	10.7	4	8	F
2003	1.37	1	1.02	1	0.43	1	1.05	1	11.5	4	8	F
2004	1.55	1	0.88	1	0.16	1	1.29	1	11.1	4	8	F
2005*	0.70	1	0.60	1	0.01	1	0.70	1	11.0	4	8	F
2006*	0.30	1	0.20	1	0.00	0	0.20	1	10.6	4	7	P
2007	0.37	1	0.32	1	0.80	1	0.29	1	11.2	4	8	F
2008	0.03	1	0.01	1	0.18	1	0.03	1	10.8	4	8	F

* Age Assessment data extrapolated from previous age data

swdbrltn.D85 - D08

Table 16. Population assessment for all crappie from Barren River trap-net data collected from 2001-2008.

	2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score
Population Density (CPUE age-1 and older crappie)	2.90	1	6.96	2	1.80	1
Recruitment (CPUE age-1)	1.60	1	3.58	2	0.20	1
Recruitment (CPUE age-0)	0.60	1	0.96	1	1.61	1
Size Structure (CPUE >8.0 in)	1.50	1	1.59	1	1.61	1
Growth (Mean length age-2 at capture)	10.2	4	8.6	2	9.8	4
Instantaneous Mortality (Z)			-1.586		-1.39	
Annual Mortality (A)%			79.9		75.3	
Total Score:		8		8		8
Assessment Rating:		Fair		Fair		Fair

swdbrltn.D06 - D08

Table 17. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.50 hours (4runs; each 0.125 hours) of nocturnal electrofishing at Briggs Lake on 22 April 2008.

	Inch Class																			
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std err
Largemouth bass	3	16	25	33	10	15	59	59	15		3	1				2	1	3	245	490.00	30.88

swdbrgbb.D08

Table 18. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Briggs Lake during late-April to early May 2000-2008.

	Length Group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		Total	
Year	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
2000	27.94	8.10	92.63	19.12	64.71	12.01	10.29	2.82	195.60	35.97
2001	120.59	21.57	73.53	10.87	41.18	9.30	5.88	4.16	241.00	24.96
2002	27.45	10.38	109.80	8.55	39.22	7.07	21.57	5.19	202.00	17.48
2003	28.85	13.82	175.00	39.02	19.23	4.97	26.92	4.97	260.00	51.07
2004	11.54	4.97	117.30	3.68	51.92	10.59	7.69	3.14	196.00	20.26
2005	46.00	6.83	194.00	21.26	28.00	5.16	26.00	5.03	294.00	27.40
2006	56.00	4.38	171.20	9.67	25.60	4.66	11.20	5.43	264.00	12.13
2007	38.00	6.83	412.00	32.41	18.00	2.00	2.00	2.00	470.00	31.39
2008	154.00	16.12	286.00	19.70	36.00	6.93	14.00	6.83	490.00	30.88

swdbrgbb.D00 - D08

Table 19. PSD and RSD_{15} values obtained for largemouth bass collected during 0.50 hours (4- 0.125-hour runs) of spring nocturnal electrofishing at Briggs Lake on April 22, 2008. 95% confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD (± 95% CI)	RSD_{15} (± 95% CI)
Largemouth bass	168	15 (5)	4 (3)

swdbrgbb.D08

Table 20. Length frequency and CPUE (fish/hr) of bluegill and redear collected by diurnal electrofishing at Briggs Lake on 16 May 2008.

	Inch Class											
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	Std. Error
Bluegill	48	96	26	10	17	10	25	8		240	384.00	96.23
Redear	1	2						1	1	5	8.00	3.58
Warmouth	2	5		1	10	39	23	2		82	164.00	17.74

swdbrgbg.D08

Table 21. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Briggs Lake from early-mid May 2005-2008. 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
2005	14.00	80.00	84.00	18.00	196.00
	(14.00)	(16.33)	(14.79)	(8.25)	(12.44)
2006	4.00	86.00	100.00	52.00	242.00
	(2.31)	(33.53)	(42.90)	(14.00)	(72.07)
2007	8.00	83.20	84.80	25.60	201.60
	(4.38)	(9.93)	(26.12)	(9.93)	(33.70)
2008	230.40	84.80	56.00	12.80	384.00
	(89.78)	(32.16)	(20.24)	(5.43)	(96.23)

swdbrgbg.D05 - D08

Table 22. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Briggs Lake durng early-mid May 2005-2008. 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
2005	0.00	14.00	2.00	4.00	0.00	20.00
		(8.87)	(2.00)	(4.00)		(6.93)
2006	4.00	2.00	70.00	22.00	2.00	98.00
	(2.31)	(2.00)	(8.25)	(6.00)	(2.00)	(10.52)
2007	0.00	8.00	62.40	12.80	1.60	83.20
		(3.60)	(13.00)	(6.50)	(1.60)	(16.90)
2008	1.60	3.20	*	3.20	*	8.00
	(1.60)	(1.96)		(1.96)		(3.58)

* No fish of sufficient size were collected during sampling.
swdbrgbg.D05 - D08

Table 23. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear collected by diurnal electrofishing at Briggs lake on 16 May 2008. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD
Bluegill	96	45 (10)	8 (6)
Redear	2	*	*

* No fish of sufficient size were collected during sampling.
swdbrgbg.D08

Table 24. Bluegill population assessment for Briggs Lake 2006 - 2008.

	2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score
Growth Mean length age-2 at capture	5.4	4	5.1	4	4.1	3
Growth Years to 6.0 in	2.3	4	2.5	4	2.5	4
Size Structure CPUE ≥6.0 in	152.00	4	110.40	4	68.80	3
Size Structure CPUE >8.0 in	52.00	4	25.60	4	12.80	3
Total Score:		16		16		13
Assessment Rating:		Excellent		Excellent		Good

swdbrgbg.D06 - D08

Table 25. Redear population assessment for Briggs Lake 2006 - 2008

	2006		2007		2008	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth Mean length age-3 at capture	6.8	4	8.8	4	8.8	4
Growth Years to 8.0 in	3.0	4	2.5	4	2.5	4
Size Structure CPUE ≥8.0 in	22.00	4	12.80	3	3.20	1
Size Structure CPUE >10.0 in	2.00	2	1.60	2	0.00	1
Total Score:		14		13		10
Assessment Rating:		Excellent		Good		Fair

swdbrgbg.D06 - D08

Table 26. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.50 hours (4- 0.125-hour runs) of nocturnal electrofishing at Spurlington Lake during 2008.

Species	Inch Class																		Total	CPUE	Std err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Largemouth bass	2	2	9	5	5	12	15	24	24	36	29	17	9	1	1	3	1	1	196	392.00	46.65

swdsplbb.D08

Table 27. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Spurlington Lake during April / early March since 2002.

	Length Group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total	
Year	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
2002	21.60	3.90	145.10	14.10	174.50	22.10	35.30	3.40	384.00	32.80
2003	61.50	14.40	233.90	29.20	123.10	11.40	12.30	3.10	448.00	47.20
2004	28.90	6.60	200.00	40.60	109.60	10.60	19.20	5.00	372.00	39.80
2005	42.00	13.20	130.00	26.20	146.00	12.40	20.00	2.30	338.00	23.20
2006	30.40	11.70	168.00	26.90	137.60	22.70	28.80	7.40	364.80	19.70
2007	12.00	5.16	92.00	6.93	66.00	6.00	14.00	3.83	184.00	3.27
2008	46.00	20.75	150.00	26.00	164.00	15.49	32.00	7.30	392.00	46.65

swdsplbb. D02 - D08

Table 28. PSD and RSD_{15} values obtained for largemouth bass collected during 0.50 hour (4- 0.125-hour runs) of spring nocturnal electrofishing at Spurlington Lake on 24 April 2008. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+ 95% CI)	RSD_{15} (+ 95% CI)
Largemouth bass	173	57 (7)	9 (5)

swdsplbb.D08

Table 29. Length frequency and CPUE (fish/hr) of bluegill collected by diurnal electrofishing at Spurlington Lake on 13 May 2008.

	Inch Class										Std.
Species	1	2	3	4	5	6	7	8	Total	CPUE	Error
Bluegill	31	68	111	104	60	35	25	7	441	882.00	236.25

swdsplbg.D08

Table 30. Diurnal spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Spurlington Lake from 2005-2008. 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
2005	66.00	216.00	50.00	16.00	348.00
	(14.38)	(45.72)	(15.79)	(8.64)	(68.90)
2006	138.00	302.00	46.00	14.00	482.00
	(47.71)	(54.69)	(8.87)	(2.00)	(100.18)
2007	496.00	606.00	50.00	4.00	1156.00
	(85.23)	(73.49)	(18.29)	(4.00)	(137.39)
2008	198.00	550.00	120.00	14.00	882.00
	(38.42)	(145.60)	(43.20)	(14.00)	(236.25)

swdsplbg.D05 - D08

Table 31. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill collected by diurnal electrofishing at Spurlington Lake on 13 May 2008. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_8
Bluegill	342	20(4)	2(2)

swdsplbg.d08

Table 32. Bluegill population assessment for Spurlington Lake from 2002-2008.

	2002	2003	2004	2005	2006	2007
Parameter	Score	Score	Score	Score	Score	Score
Mean length age-2 at capture	2	2	2	2	2	2
Years to 6.0 in	4	4	4	4	4	4
CPUE ≥6.0 in	2	3	3	3	3	3
CPUE ≥8.0 in	2	4	4	4	3	2
Instantaneous mortality (z)						
Annual Mortality (A)						
Total Score:	14	13	13	13	12	11
Assessment Rating:	Excellent	Good	Good	Good	Good	Good

swdsplbg.D02 - D08

Table 33. Mean back-calculated length (in) at each annulus of bluegill collected by diurnal electrofishing at Spurlington Lake on 13 May 2008, including the range in length of bluegill at each age and the 95% confidence interval.

		Age					
Year-Class	N	1	2	3	4	5	6
2007	1	3.1					
2006	23	2.2	3.8				
2005	37	2.3	3.8	5.6			
2004	18	2.4	3.9	5.9	7.4		
2003	5	1.9	3.6	5.3	6.9	7.8	
2002	2	1.6	2.8	4.1	5.4	6.8	7.8
Mean	86	2.2	3.8	5.6	7.1	7.5	7.8
Smallest		1.3	2.6	3.9	5.2	6.5	7.5
Largest		3.5	5.6	7.3	8.0	8.3	8.0
Std. Error		0.1	0.1	0.1	0.2	0.3	0.3
Low 95% CI		2.1	3.7	5.4	6.8	7.0	7.3
High 95% CI		2.4	3.9	5.8	7.4	8.0	8.2

Otoliths were used to make age determinations. Intercept = 0.

swdsplbg.d08 swdsplag.d08

Table 34. Age frequency and CPUE (fish/hr) of bluegill collected during diurnal electrofishing at Spurlington Lake on 13 May 2008.

	Inch Class											Std.
Age	1	2	3	4	5	6	7	8	Total	Percent	CPUE	Error
1	31	68	7						106	24.0	211.88	41.3
2			104	52					156	35.0	312.13	83.12
3				52	60	28	2		142	32.0	284.00	74.50
4						4	20	3	27	6.0	55.38	31.81
5						2	2	3	7	2.0	13.50	8.56
6							2	1	3	1.0	5.13	3.84
Total	31	68	111	104	60	34	26	7	441	100		
%	7	15	25	24	14	8	6	2	100			

swdsplbg.D08 swdsplag.D08

Table 35. Length frequency and CPUE (fish/hr) of muskellunge collected with diurnal electrofishing (11 hours; 44 runs; 0.25 hours each) during late-winter/early spring at Green River Lake in 2008.

	Inch Class																							
	13	14	15	23	24	25	26	27	28	30	31	32	33	34	35	36	37	38	39	40	42	43	Total	CPUE	StdErr
Muskellunge	1	7	2	1	4	4	8	11	5	3	2	8	2	3	5	3	4	1	2	1	2	1	80	7.27	1.03

swdgrlmy.d08

Table 36. Muskellunge population assessment for Green River Lake diurnal late-winter/early spring electrofishing from 1990-2008.

	CPUE age-1		CPUE > 20.0 in		CPUE > 30.0 in		CPUE > 36.0 in		CPUE > 40.0 in		Total	
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1990	12.68	4	7.04	3	2.11	2	1.17	3	0.00	0	12	G
1991	10.19	4	3.86	3	1.38	1	0.38	1	0.15	1	9	F
1992	2.25	2	6.13	3	1.71	2	0.65	2	0.09	1	10	F
1993	13.37	4	6.98	3	4.36	4	1.26	3	0.55	4	17	E
1994	4.11	3	8.94	3	3.9	3	2.25	4	0.93	4	17	E
1995	15.73	4	6.95	3	2.78	3	0.82	2	0.44	3	15	G
1996	5.16	3	16.01	4	3.54	3	0.84	2	0.24	2	14	G
1997	5.80	3	13.03	4	6.81	4	1.18	3	0.53	3	17	E
1998	9.24	4	9.01	3	5.05	4	1.94	4	0.47	3	18	E
1999	8.75	3	9.83	3	4.81	4	1.42	3	0.34	3	16	G
2000	2.57	2	7.64	3	4.18	4	2.03	4	0.78	3	17	E
2001	10.76	4	6.41	3	4.48	4	1.45	3	0.55	3	17	E
2002	5.83	3	10.63	4	4.46	4	2.86	4	0.91	4	19	E
2003	4.49	3	9.88	3	6.20	4	1.71	4	0.82	4	18	E
2004	6.52	3	8.26	3	5.16	4	1.81	4	0.19	1	18	E
2005	2.40	2	7.20	3	4.80	4	1.92	4	0.96	4	17	E
2006	4.74	3	5.48	3	4.30	4	2.22	4	0.74	4	18	E
2007	3.76	3	4.24	2	1.65	2	1.41	4	0.94	4	15	G
2008	0.91	1	6.36	3	3.36	3	1.27	3	0.36	3	13	G

swdgrlmy.d90 - d08

Table 37. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12 runs;each 0.50 hours) of nocturnal electrofishing at Green River Lake April 30, 2008.

		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	StdErr
Green River Arm																								
Holmes Bend	Smallmouth bass									2		1	1		1							5	3.33	0.67
	Spotted bass			11	7	1	16	19	14	8			1									77	51.33	11.85
	Largemouth bass			12	32	30	19	14	12	23	25	21	19	22	13	9	6	5	3		2	267	178.00	47.38
Ramp 1	Smallmouth bass		2	1		1	2	6	1	2	2											17	11.33	7.42
	Spotted bass	1	4	3	1	8	10	3	7	7	14	5	7	2	1							73	48.67	20.34
	Largemouth bass			1	2	1	2	2	5	7	16	7	13	23	17	21	10	4	3		2	136	90.67	3.33
Robinson Creek Arm																								
Smith Ridge	Smallmouth bass							1														1	0.67	0.67
	Spotted bass		1	5	5	7	5	20	11	9	9	2		1	1		1					77	51.33	11.68
	Largemouth bass		1		4	9	5	2	6	6	10	5	6	8	4	10	9	4	2	1		92	61.33	8.82
Lone Valley	Smallmouth bass		6	3		1	4	5	2	1	1		2			1	1					27	18.00	2.31
	Spotted bass	7	10	10	7	15	18	11	22	14	16	17	13	7	4	2						173	115.33	28.50
	Largemouth bass	1	3	3	4	4	4	6	7	5	9	12	8	23	19	14	11	11	1			145	96.67	15.76
TOTAL	Smallmouth bass		8	4		2	6	12	3	5	3	1	3		1	1	1					50	8.33	2.65
	Spotted bass	8	15	29	20	31	49	53	54	38	39	24	21	10	6	2	1					400	66.67	11.84
	Largemouth bass	1	4	16	42	44	30	24	30	41	60	45	46	76	53	54	36	24	9	1	4	640	106.67	16.97

swdgrlbb.d08

Table 38. Spring diurnal electrofishing CPUE (fish/hr) of largemouth bass by length group collected at Green River Lake during early 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	3.67	1.04	22.33	2.46	23.33	2.82	23.17	2.10	1.17	0.46	72.50	5.18
1998	33.50	7.66	9.00	1.82	8.83	2.04	17.50	1.84	2.00	0.70	68.83	8.61
1999	21.38	3.76	53.54	7.18	19.38	4.00	14.31	1.66	2.77	0.77	108.62	12.51
2000	2.50	0.89	41.00	4.37	24.17	3.41	14.67	3.37	3.17	0.97	82.33	8.59
2001	10.17	2.50	26.67	2.99	32.17	6.45	12.50	1.50	1.67	0.41	81.50	7.77
2002	5.00	1.14	9.50	1.46	20.50	2.49	13.00	2.46	1.17	0.39	48.00	4.24
2003	5.83	1.38	12.33	2.07	5.83	1.78	18.17	2.96	1.83	0.67	42.17	4.12
2004	17.33	2.74	22.80	2.10	11.60	1.81	15.60	2.55	0.93	0.27	67.33	6.41
2005	67.83	7.98	30.67	2.78	11.67	1.86	16.83	2.52	1.50	0.66	127.00	12.53
2006	15.07	2.01	44.40	3.56	23.07	2.81	18.93	2.13	0.27	0.18	96.17	5.25
2007	3.83	1.03	20.50	2.51	33.67	5.78	22.17	3.61	0.50	0.26	80.17	10.33
2008	22.83	9.49	25.83	4.71	27.83	3.97	30.17	2.74	0.83	0.39	106.66	16.97

swdgrlbb.D97-D08

Table 39. PSD and RSD values for each black bass species collected during 6 hours (12 runs; each 0.50 hours) of nocturnal electrofishing at each area of Green River Lake on April 30, 2008. 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD (± 95% CI)	RSD[A] (± 95% CI)
Green River Arm				
Holmes Bend	Largemouth bass	174	57(7)	22(6)
	Spotted bass	59	2(3)	
Ramp 1	Largemouth bass	130	77(7)	44(9)
	Spotted bass	56	52(13)	5(6)
	Smallmouth bass	13	15(20)	
Robinson Creek Arm				
Smith Ridge	Largemouth bass	73	67(11)	41(11)
	Spotted bass	59	24(11)	5(6)
Lone Valley	Largemouth bass	126	79(8)	44(9)
	Spotted bass	124	48(9)	10(5)
	Smallmouth bass	17	23(22)	12(16)
Total	Largemouth bass	503	69(4)	36(4)
	Spotted bass	297	35(5)	6(2)
	Smallmouth bass	36	28(15)	8(9)

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

swdgrlbb.d08

Table 40. Population assessment of largemouth bass based on nocturnal spring sampling at Green River Lake from 2002-2008.

	2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age-3	12.7	4	14.35	4	13.2	4	13.2	4	13.2	4	13.2	4	13.2	4
Spring CPUE age-1	5.00	1	7.30	1	13.80	1	65.30	4	14.30	1	3.83	1	22.00	2
Spring CPUE 12.0-14.9 in	20.50	2	5.83	1	11.60	1	11.67	1	23.07	2	33.67	3	27.83	2
Spring CPUE > 15.0 in	13.00	3	18.17	4	15.60	3	16.83	2	18.93	3	22.17	4	30.17	4
Spring CPUE ≥ 20.0 in	1.27	2	1.83	3	0.93	2	1.50	2	0.27	1	0.50	2	0.83	2
Instantaneous Mortality (z)			0.42											
Annual Mortality (A)%			34.45											
Total Score		12		13		11		13		11		14		14
Assessment Rating		Good		Good		Good		Good		Fair		Good		Good

swdgrlag.D03
swdgrlbb.D02-D08

Table 41. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12runs;each 0.50 hours) of diurnal electrofishing at Green River Lake on October 13, 2008.

		Inch Class																		
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	StdErr
Green River Arm																					
Homles Bend	Smallmouth bass			2							1								3	2.00	1.15
	Spotted bass	31	38	43	15	8	25	10	11	6	3				1				191	127.33	28.34
	Largemouth bass	4	3	15	13	12		9	12	1	2			1					72	48.00	9.45
Ramp 1	Smallmouth bass	6	7	1	1	3	1	1											20	13.33	3.33
	Spotted bass	13	8	1	3	3	6	6	1		1	1							43	28.67	8.67
	Largemouth bass	8	1	3	2	2	1	1				1	2	2			1		24	16.00	3.06
Robinson Creek Arm																					
Smith Ridge	Smallmouth bass																		0	0.00	
	Spotted bass	14	29	30	22	2	12	10	12			2	1	2					136	90.67	7.86
	Largemouth bass	6	11	18	21	12	5		5	2			1	1		1	2	1	86	57.33	9.33
Lone Valley	Smallmouth bass	4	8	1			1					1							15	10.00	2.00
	Spotted bass	22	16	2	15	13	5	9	3	1	1	1	1						89	59.33	12.35
	Largemouth bass	1	1	2	1								1						6	4.00	1.15
TOTAL	Smallmouth bass	10	15	4	1	3	2	1			1	1							38	6.33	1.87
	Spotted bass	80	91	76	55	26	48	35	27	7	5	4	2	2	1				459	76.50	13.10
	Largemouth bass	19	16	38	37	26	6	10	17	3	2	1	4	4		1	3	1	188	31.33	7.25

swdgrlyy.d08

Table 42. 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	3.87	0.07	32.67	9.70	5.33	1.16	7.25	1.58
2003	3.88	0.08	32.83	9.69	5.50	1.23	11.87	2.09
2004	4.96	0.07	60.83	8.97	28.00	3.62	65.33	7.66
2005	5.17	0.09	31.67	7.44	16.83	4.33	14.33	2.36
2006	4.31	0.13	13.50	3.41	3.67	1.20	3.83	1.0
2007	4.18	0.11	21.83	5.31	5.83	2.18	22.83	9.49
2008	4.78	0.11	23.67	5.75	11.5	3.56		

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by otolith 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 (April/May) nocturnal electrofishing.

swdgrlbb.D02 - D08

swdgrlag. D02 - D08

swdgrlyy. D02 - D08

Table 43. Length frequency and CPUE (fish/nn) for each inch-class of crappie collected by trap-net (70 net-nights) at Green River Lake from early December 2008.

	Inch Class														Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	Error
White Crappie	35	25	22	102	179	185	72	54	12	3		1	690	9.86	1.55
Black Crappie								1					1	0.01	0.01

swdgrltn.d08

Table 44. Proportional stock density (PSD) and relative stock density (RSD) of white crappie collected by trap-nets (70 net-nights) at Green River Lake from early December 2008. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_{10}
White Crappie	630	52(4)	11(2)

swdgrltn.D08

Table 45. Age frequency and CPUE (fish/nn) of white crappie collected during 70 net-nights at Green River Lake during early December 2008.

	Inch Class														Std.
Age	3	4	5	6	7	8	9	10	11	12	14	Total	Percent	CPUE	Error
0	35	25										60	9.0	0.86	0.22
1			22	27								49	7.0	0.70	0.18
2				34	69	67	12	5				187	27.0	2.67	0.45
3				41	110	118	46	41	7			362	52.0	5.17	0.89
4							9	7	2	2		20	3.0	0.29	0.06
5							6		1	1		8	1.0	0.11	0.02
6								2				2	0.0	0.03	0.01
7									2	1	1	4	1.0	0.06	0.02
Total	35	25	22	102	179	185	72	54	12	3	1	690	100		
%	5	4	3	15	26	27	10	8	2	0	0	100			

2008 age file includes fish taken from white bass gill nets in 2008

swdgrltn.d08; swdgrlag.d08

Table 46. White crappie assessment from trap net samples at Green River Lake from 1986 - 2008.

	White crappie													
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE > 8.0 in		Mean age-2 length at capture		Mortality			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous (z)	Annual (A)	Assessment	Rating
1986	16.87	3	3.23	2	1.23	1	3.99	2	7.92	1	-0.911053	59.8	9	F
1987	15.43	3	4.06	2	19.16	4	5.16	3	8.05	1	-1.118361	67.3	13	G
1988	15.87	3	8.87	3	18.62	4	4.52	2	8.00	1	-0.854265	57.4	13	G
1989	26.30	4	20.24	4	1.29	1	6.38	3	9.59	4	-1.022316	64	16	G
1990	12.61	2	5.87	2	0.42	1	7.57	3	9.17	3	-0.924447	60.3	11	F
1991	8.68	2	2.93	2	6.88	2	6.15	3	9.25	3	-0.565581	43.2	12	F
1992	28.34	4	24.48	4	1.84	1	8.54	3	9.96	4	-0.9219538	70.4	16	G
1993	24.81	4	6.99	3	1.22	1	15.53	4	9.00	2	-0.949191	61.3	14	G
1994	8.65	2	2.47	1	11.78	3	6.08	3	9.30	3	-0.767229	53.6	12	F
1995	16.18	3	11.12	3	13.22	3	10.74	3	9.96	4	-1.055474	65.2	16	G
1996	13.36	3	6.51	2	3.17	2	5.96	2	9.24	3	-0.895818	59.2	12	F
1997	14.08	3	3.94	2	1.89	1	8.11	3	8.65	2	-1.121453	67.4	11	F
1998	9.21	2	2.48	1	3.78	2	8.01	3	9.29	3	-0.850455	57.3	11	F
1999	7.38	2	5.21	2	0.99	1	2.86	1	9.94	4	ND		10	F
2000	6.29	2	1.45	1	0.01	1	5.17	2	9.66	4	-0.824828	56.2	10	F
2001	4.27	1	0.15	1	10.78	3	4.17	2	9.45	3	-1.09953	66.7	10	F
2002	10.87	2	9.69	3	0.53	1	4.11	2	9.80	4	-0.759078	53.2	12	F
2003	12.95	3	5.08	2	3.30	2	6.80	3	9.12	3	-1.075599	65.9	13	G
2004	17.67	3	9.60	3	3.84	2	7.93	3	8.37	1	-1.53876	78.5	12	F
2005*	13.82	3	3.00	2	1.70	1	8.00	3	8.40	1	ND		10	F
2006	16.39	3	10.21	3	1.42	0	6.46	3	9.67	4	-1.090892	66.4	13	G
2007*	15.90	3	10.45	3	4.39	2	6.66	3	9.14	3	ND		14	G
2008	9.00	2	0.70	1	0.86	1	4.67	2	7.77	1	-0.728739	51.7	7	P

* Age Assessment data extrapolated from previous years age data

swdgltn.D86 - D08

swdgrlag.d86-08

Table 47. Length frequency and CPUE (fish/nn) for white bass and walleye collected by experimental gillnets (15 net-nights) during mid-November at Green River Lake, KY 2008.

	Inch Class																			
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE	Std. Error
White Bass																		0		
Walleye	3	1	8	9			4	5	5		4	5	18	6	2	4	2	76	5.07	0.84

swdgrlgn.d08

Table 48. Age frequency and CPUE (fish/nn) of walleye collected from experimental gillnets during mid-November at Green River Lake, 2008.

	Inch Class																				Std.
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	Percent	CPUE	Error
0	3	1	8	9														21	28.0	1.40	0.27
1							4	5	5		2							16	21.0	1.07	0.29
2											1	5	11	5	1	1		24	32.0	1.60	0.40
3											1		4		1	1	1	8	11.0	0.53	0.12
4													3	1		2	1	7	9.0	0.47	0.47
Total	3	1	8	9			4	5	5		4	5	18	6	2	4	2	76	100		
%	4	1	11	12	5	7	7	5	7		5	7	24	8	3	5	3	100			

swdgrlgn.D08, swdgrlag.D08

Table 49. White bass population assessment from experimental gillnetting at Green River Lake 1996-2008.

	CPUE*		Mean length of age-2+ fish at capture		CPUE > 12.0 in		CPUE of age 1 fish					
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
1991	22.19	4	13.95	4	10.69	4	14.56	4	1.204	70.0	16	E
1992	33.75	4	13.37	4	16.75	4	10.14	4	1.542	78.6	16	E
1993	32.31	4	13.65	4	16.31	4	14.95	4	0.964	61.9	16	E
1994	22.56	4	13.43	4	15.62	4	4.49	2	0.347	29.4	14	E
1995	17.56	3	13.51	4	11.94	4	9.13	3	NA		14	E
1996	33.06	4	13.64	4	18.88	4	18.38	4	1.012	63.7	16	E
1997	17.12	3	12.94	3	10.88	4	3.81	2	0.680	49.3	12	G
1998	19.06	3	12.86	3	6.31	3	6.43	3	1.187	69.5	12	G
1999	26.60	4	13.26	4	13.40	4	16.22	4	1.117	67.3	16	E
2000	11.54	3	13.58	4	9.42	3	2.77	2	0.619	46.2	12	G
2001	8.00	2	14.00	4	4.88	2	0.07	1	0.646	47.6	9	F
2002	10.17	3	13.80	4	4.43	2	5.41	3	0.735	52	12	G
2003	18.88	3	12.52	3	1.31	1	2.29	1	0.660	48.3	8	F
2004	5.75	2	12.78	3	0.50	1	3.50	2	1.320	73.3	8	F
2005	7.38	2	12.41	3	3.50	2	5.75	3	NA		10	G
2006	5.78	2	13.80	4	4.14	2	2.07	1	0.341	28.9	9	F
2007	3.19	1	13.97	4	2.63	2	1.13	1	0.575	43.7	8	F
2008	0.00	1	0.00	1	0.00	1	0.00	1	NA		4	P

* minus age-0 fish

NA - catch data not amenable to mortality estimates

swdgrlgn. d91-d08

swdgrlag.d91-08

Table 50. Walleye population assessment from experimental gillnetting at Green River Lake 1996-2008.

	CPUE*		Mean length of age-2+ fish at capture		CPUE > 20.0 in		CPUE of age 1 fish					
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
1996	1.81	1	18.51	4	0.12	1	1.44	2	NA		8	F
1997	0.75	1	17.30	3	0.19	1	0.44	1	NA		6	F
1998	0.50	1	17.64	3	0.06	1	0.29	1	NA		6	F
1999	3.20	2	17.31	3	0.13	1	1.67	2	NA		8	F
2000	5.04	3	18.11	4	0.17	1	4.07	4	0.684	49.6	12	G
2001	5.75	3	17.79	3	0.00	1	5.03	4	NA		11	G
2002	2.57	2	17.82	3	0.39	1	0.74	1	0.778	54.1	7	F
2003	2.12	2	18.27	4	0.50	2	1.62	2	NA		10	G
2004	1.13	1	16.43	2	0.00	1	0.75	1	NA		5	P
2005	0.63	1	17.75	3	0.13	1	0.50	1	NA		6	F
2006	2.29	2	17.94	3	0.14	1	1.64	2	0.489	38.7	8	F
2007	6.75	4	18.61	4	0.75	2	3.88	4	0.689	49.8	14	E
2008	3.67	2	19.55	4	0.93	2	1.07	2	0.357	30.0	10	G

* minus age-0 fish

NA - catch data not amenable to mortality estimates

swdgrlgn.d96-08

swdgrlag.d96-08

Table 51. Relative weight (Wr) for each length group of walleye collected by gillnets (15 net-nights) at Green River Lake from mid- November 2008.

	Length Group		
	10.0-14.9 in	15.0-19.9 in	>20.0 in
Wr	95	106	100
N	17	32	14

swdgrlgn.D08

Table 52. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during 2.0 hours (8 runs;each 0.25 hours) of nocturnal electrofishing at Shanty Hollow Lake on 23 April 2008.

Species	Inch Class																		Total	CPUE	StdErr
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Largemouth bass	8	18	24	10	16	88	128	177	84	24	7	0	1	3	2	3	1		1	595	297.50	12.28

swdshlbb.D08

Table 53. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Shanty Hollow Lake during mid-late April, 2001-2007.

	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
2001	17.14	3.35	49.14	7.34	45.14	8.63	21.71	3.58	1.71	0.81	133.14	6.52
2002	20.00	4.09	52.00	7.95	69.71	6.16	16.00	2.62	1.14	0.74	157.71	11.07
2003	17.71	3.99	125.14	12.49	76.57	6.73	32.00	5.01	8.00	1.95	251.43	18.02
2004	19.43	3.64	133.71	9.67	36.57	4.97	24.00	2.76	3.43	0.57	213.71	16.99
2005	76.67	10.75	174.00	18.15	44.67	3.78	16.00	3.58	1.33	1.33	311.33	27.95
2006	86.00	15.76	214.67	11.44	30.00	3.06	11.33	3.78	5.33	1.98	342.00	26.66
2007	8.00	2.39	124.50	16.77	13.00	3.09	8.50	1.40	4.00	1.07	154.00	20.95
2008	30.00	6.89	204.50	13.45	57.50	4.72	5.50	1.50	1.00	0.65	297.50	12.28

swdshlbb.D00 - D08

Table 54. PSD and RSD values from spring nocturnal electrofishing (2.0 hours; 8 runs; 0.25 hours each) for largemouth bass at Shanty Hollow Lake on April 23, 2008. 95% confidence intervals are in parentheses.

Species	No. ≥ 8.0 in	PSD (± 95% CI)	RSD_{15} (± 95% CI)
Largemouth bass	535	24(4)	2(1)

swdshlbb.D08

Table 55. Population assessment of largemouth bass based on nocturrnal spring sampling at Shanty Hollow Lake from 2002-2008.

	Year													
	2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age-3	11.1	3	11.10	3	11.1	3	11.1	3	11.1	3	11.1	3	11.1	3
Spring CPUE age-1	20.00	2	17.71	2	19.43	2	76.67	4	86.00	4	8.00	1	25.00	2
Spring CPUE 12.0-14.9 in	69.71	4	76.57	4	36.57	3	44.67	3	30.00	2	13.00	1	57.50	4
Spring CPUE ≥ 15.0 in	16.00	2	32.00	4	24.00	3	16.00	2	11.33	2	8.50	2	5.50	2
Spring CPUE ≥ 20.0 in	1.14	2	8.00	4	3.43	3	1.33	2	5.33	4	4.00	4	1.00	2
Instantaneous Mortality (z)	0.388		ND		ND		ND		ND		ND		ND	
Annual Mortality (A)%	32.2													
Total Score		13		17		14		14		15		11		13
Assessment Rating		Good		Good		Good		Good		Good		Fair		Good

ND = no age data collected

swdshlag.d02

swdshlbb.D02-D08

Table 56. Length frequency and CPUE (fish/hr) of each inch-class of bluegill and redear collected by diurnal electrofishing (1.625 hours; 13 runs; 450 seconds each) at Shanty Hollow Lake on 19 May 2008 .

	Inch Class										Std.
Species	1	2	3	4	5	6	7	8	Total	CPUE	Error
Bluegill	74	113	66	90	76	136	41		596	366.77	31.45
Redear		2	1		4	2	13	19	41	25.23	9.19

swdshlbg.D08

Table 57. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Shanty Hollow Lake from 2001 -2008. Standard errors are in parentheses.

Year	Length Group				Total
	< 3.0 in	3.0 - 5.9 in	6.0 - 7.9 in	> 8.0 in	
2001	99.89	224.68	239.39	4.41	573.30
	(28.18)	(57.47)	(67.81)	(3.53)	(153.34)
2002	78.00	391.33	121.33	10.67	601.33
	(15.16)	(55.17)	(14.99)	(2.84)	(67.13)
2003	43.33	346.67	106.00	5.33	501.33
	(10.35)	(34.58)	(17.00)	(2.84)	(47.55)
2004	85.71	285.16	157.14		590.77
	(26.67)	(52.96)	(27.58)		(100.08)
2005	76.31	194.46	124.31	1.23	396.31
	(16.52)	(23.22)	(15.34)	(0.83)	(43.33)
2006	134.00	78.67	98.67	12.67	324.00
	(45.28)	(8.91)	(13.87)	(4.67)	(50.15)
2007	197.09	321.45	94.55	0.73	613.82
	(32.99)	(38.23)	(18.21)	(0.73)	(64.23)
2008	115.08	142.77	108.92	0.00	366.77
	(23.94)	(11.52)	(18.44)		(31.45)

swdshlbg.D01 - D08

Table 58. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Shanty Hollow Lake from 2001 - 2008. Standard errors are in parentheses.

Year	Length Group					Total
	< 3.0 in	3.0 - 5.9 in	6.0 - 7.9 in	> 8.0 in	> 10.0 in	
2001	0	0.84	13.76	42.12	0	60
		(0.84)	(5.31)	(8.69)		(8.29)
2002	0	3.33	6.67	6.67	0	16.67
		(1.19)	(2.16)	(3.09)		(5.07)
2003	0	2.67	1.33	10.67	0	14.67
		(1.14)	(0.90)	(6.02)		(5.89)
2004	1.23	8	8	9.85	0	27.08
	(0.83)	(2.56)	(2.22)	(3.16)		(4.84)
2005	1.23	3.69	9.23	3.69	0	17.85
	(1.23)	(1.46)	(2.69)	(1.46)		(3.75)
2006	0.00	8.00	6.00	8.67	0	22.67
		(3.27)	(2.23)	(2.86)		(5.64)
2007	1.45	9.45	34.18	2.91	0	48.00
	(0.98)	(2.82)	(6.39)	(1.22)		(7.32)
2008	1.23	3.08	9.23	11.69	0	25.23
	(0.83)	(1.93)	(2.98)	(6.18)		(9.19)

swdshlbg.D01 - D08

Table 59. Mean back-calculated length (in) at each annulus of bluegill collected by diurnal electrofishing at Shanty Hollow Lake on 19 May 2008, including the range in length at each age and the 95% confidence interval.

Year-Class	N	Age				
		1	2	3	4	5
2007	11	2.6				
2006	41	1.8	3.8			
2005	31	2.4	4.7	6.4		
2004	8	2.1	4.4	6.2	6.9	
2003	3	1.9	4.4	6.1	6.8	7.3
Mean	94	2.1	4.2	6.3	6.9	7.3
Smallest		1.0	2.3	5.6	6.5	7.0
Largest		4.0	5.9	7.4	7.3	7.5
Std. Error		0.1	0.1	0.1	0.2	0.1
Low 95% CI		2.0	4.0	6.2	6.7	7.0
High 95% CI		2.2	4.4	6.5	7.0	7.6

[A] Otoliths were used to make age determinations. Intercept = 0.

swdshlbg.D08 swdshlag.D08

Table 60. Mean back-calculated length (in) at each annulus of redear collected by diurnal electrofishing at Shanty Hollow Lake on 19 May 2008, including the range in length at each age and the 95% confidence interval.

		Age				
Year-Class	N	1	2	3	4	5
2007	3	2.8				
2006	5	2.9	5.7			
2005	13	3.4	6.0	7.5		
2004	12	3.1	6.0	7.4	8.0	
2003	1	1.7	3.9	6.4	7.4	8.1
Mean	34	3.1	5.9	7.4	8.0	8.1
Smallest		1.7	3.9	6.4	7.0	8.1
Largest		3.9	6.6	8.0	8.6	8.1
Std. Error		0.1	0.1	0.1	0.1	
Low 95% CI		2.9	5.7	7.3	7.8	
High 95% CI		3.3	6.1	7.6	8.2	

[A] Otoliths were used to make age determinations. Intercept = 0.

swdshlbg.d08 swdshlag.d08

Table 61. Age frequency and CPUE (fish/hr) of bluegill collected during diurnal electrofishing at Shanty Hollow Lake 19 May 2008.

	Inch Class										Std.
Age	1	2	3	4	5	6	7	Total	Percent	CPUE	Error
1	74	60	4	8				145	24%	89.22	17.49
2		53	62	83	29			227	38%	139.84	15.47
3					47	107	22	176	30%	108.31	15.31
4						29	11	40	7%	24.35	4.37
5							8	8	1%	5.05	1.86
Total	74	113	66	90	76	136	41	596	100%		
%	12	19	11	15	13	23	7	100			

swdshlbg.D08 swdshlag.D08

Table 62. Age frequency and CPUE (fish/hr) of redear collected during diurnal electrofishing at Shanty Hollow Lake on 19 May 2008.

	Inch Class										Std.
Age	2	3	4	5	6	7	8	Total	Percent	CPUE	Error
1	2	1						3	7	1.85	1.33
2				4	2			6	15	22.50	5.78
3						10	2	12	29	3.33	1.53
4						3	15	18	44	5.17	2.41
5							2	2	4	3.00	1.65
Total	2	1		4	2	13	19	41	100		
%	5	2		10	5	32	46	100			

swdshlbg.D08 swdshlag.D08

Table 63. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear collected by diurnal electrofishing at Shanty Hollow Lake on 19 May 2008. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD
Bluegill	409	43(5)	0
Redear	38	84(10)	0

swdshlbg.D08

Table 64. Bluegill population assessments from 2002 - 2008 at Shanty Hollow Lake.

Parameter	2002	2003	2004	2005	2006	2007	2008
Mean Length age-2 at capture	3	3	3	3	3	3	2
Years to 6.0 in	4	3	3	3	3	3	4
CPUE ≥ 6.0 in	4	4	4	4	4	4	4
CPUE ≥ 8.0 in	3	2	1	2	3	2	1
Instantaneous mortality (z)	1.014	ND	ND	ND	ND	ND	0.753065
Annual mortality (A)	63.8						52.9
Total Score:	13	12	11	12	13	12	11
Assessment rating	Good	Good	Good	Good	Good	Good	Good

ND - no age data collected
swdshlag.d02 & 08
swdshlbg.D02 - D08

Table 65. Redear population assessments from 2002 - 2008 at Shanty Hollow Lake.

Parameter	2002	2003	2004	2005	2006	2007	2008
Mean Length age-3 at capture	4	4	4	4	4	4	4
Years to 8.0 in	4	4	4	4	4	4	4
CPUE ≥ 8.0 in	2	3	2	1	2	1	1
CPUE ≥ 10.0 in	0	0	0	0	0	0	0
Instantaneous mortality (z)	ND	ND	ND	ND	ND	ND	ND
Annual mortality (A)							
Total Score:	10	11	10	9	10	9	9
Assessment rating	Fair	Good	Fair	Fair	Fair	Fair	Fair

ND = no age data or age data not applicable

swdshlag.d02 & 08

swdshlbg.D02 - D08

Table 66. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.875 hours (7 runs;each 0.125 hours) of nocturnal electrofishing at Marion Co. Lake during 2008.

	Inch Class																					
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	StdErr
Largemouth bass	1	45	90	40	7	30	131	138	38	7	4	3	3		3	2	3	2	1	548	626.29	49.98

swdmclbb.d08

Table 67. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Marion Co. Lake during April / early March since 1999.

	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
1999	106.70	29.30	46.20	15.00	39.50	10.60	1.70	1.10	0.00		194.10	42.00
2000	88.20	14.90	177.50	22.40	6.90	3.20	9.80	2.00	0.00		282.40	25.40
2001	170.60	17.60	173.50	15.90	1.00	1.00	1.00	2.90	1.00	1.00	384.00	31.30
2002	104.90	23.90	152.90	13.20	15.70	3.60	3.90	1.20	1.00	1.00	277.50	39.40
2003	42.90	10.60	226.40	18.10	40.70	7.30	7.70	3.40	3.43	2.38	317.60	13.30
2004	110.30	16.90	197.40	25.80	62.80	9.80	7.70	3.40	5.33	2.67	378.20	36.60
2005	101.70	17.70	123.40	13.40	133.70	20.20	9.10	2.70	1.14	1.14	368.00	44.80
2006	112.00	20.80	170.30	30.60	59.40	5.50	38.90	4.07	0.00		380.60	53.83
2007	221.00	23.90	371.00	32.18	28.00	6.93	12.00	3.02	1.00	1.00	632.00	47.69
2008	209.14	28.50	385.14	30.41	16.00	3.90	16.00	3.49	3.43	1.62	626.29	49.98

swdmclbb.D99 - D08

Table 68. PSD and RSD values obtained for each black bass species collected during 0.875 hours (7 runs; each 0.125 hours) of spring nocturnal electrofishing at Marion Co. Lake on 29 April 2008. 95% confidence intervals are in parentheses.

Species	No. ≥ 8.0 in	PSD (± 95% CI)	RSD_{15} (± 95% CI)
Largemouth bass	365	8(3)	4(2)

swdmclbb.D08

Table 69. Population assessment of largemouth bass based on nocturnal spring sampling at Marion County Lake from 2002-2008.

	Year													
	2002		2003		2004		2005		2006		2007		2008	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age-3	11.9	4	11.9	3	11.9	4	11.9	4	11.9	4	11.9	4	11.9	4
Spring CPUE age-1	102.00	4	32.00	2	117.33	4	101.71	4	19.43	2	7.00	1	201.14	4
Spring CPUE 12.0-14.9 in	20.00	2	42.29	3	65.33	4	133.71	4	59.43	4	28.00	2	16.00	1
Spring CPUE > 15.0 in	3.00	1	8.00	2	8.00	2	9.14	2	38.86	4	12.00	2	16.00	2
Spring CPUE ≥ 20.0 in	0.00	1	3.43	3	5.33	4	1.14	1	0.00	1	1.00	1	3.43	3
Instantaneous Mortality (z)	0.388		ND		ND		ND		ND		ND		ND	
Annual Mortality (A)%	32.2													
Total Score		12		13		18		15		15		10		14
Assessment Rating		Good		Good		Excellent		Good		Good		Fair		Good

ND = no age data collected

swdmclag.d04

swdmclbb.D02-D08

Table 70. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by diurnal electrofishing at Marion Co. Lake on 13 May 2008 .

	Inch Class													Std.
Species	1	2	3	4	5	6	7	8	9	10	11	Total	CPUE	Error
Bluegill	33	27	18	17	38	64	66	10		1		274	274.00	45.12
Redear		1	4	22	11	4	5	5	17	5	1	75	75.00	16.12

swdmclbg.D08

Table 71. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Marion Co. Lake. 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
2002	57.14	152.00	78.86	16.00	304.00
	(30.26)	(40.49)	(6.40)	(3.49)	(67.16)
2003	164.00	212.00	118.67	5.33	500.00
	(33.86)	(34.05)	(23.86)	(3.96)	(60.43)
2004	303.00	255.00	35.00	1.00	594.00
	(58.99)	(38.68)	(10.02)	(1.00)	(85.91)
2005	102.00	210.00	63.00	3.00	378.00
	(18.56)	(31.88)	(16.66)	(2.10)	(53.08)
2006	77.33	501.33	25.33	4.00	608.00
	(15.13)	(25.52)	(7.57)	(2.73)	(34.07)
2007	73.00	291.00	39.00	3.00	406.00
	(22.75)	(39.54)	(7.47)	(1.46)	(50.05)
2008	60.00	73.00	130.00	11.00	274.00
	(31.57)	(13.56)	(14.64)	(3.98)	(45.12)

swdmclbg.D02 - D08

Table 72. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Marion Co. Lake. 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
2002	1.14	51.43	11.43	57.14	0.00	121.14
	(1.14)	(11.29)	(4.22)	(13.00)		(19.16)
2003	5.33	46.67	9.33	28.00	2.67	89.33
	(2.67)	(9.33)	(4.81)	(10.68)	(2.67)	(15.38)
2004	2.00	40.00	18.00	7.00	1.00	67.00
	(2.00)	(15.12)	(7.05)	(3.84)	(1.00)	(16.28)
2005	0.00	34.00	30.00	25.00	3.00	89.00
		(5.81)	(9.77)	(7.32)	(1.46)	(16.45)
2006	0.00	17.33	17.33	24.00	2.67	58.67
		(6.67)	(6.98)	(6.20)	(1.69)	(12.84)
2007	0.00	21.00	7.00	11.00	1.00	39.00
		(6.22)	(2.36)	(6.58)	(1.00)	(11.85)
2008	1.00	37.00	9.00	28.00	6.00	75.00
	(1.00)	(15.63)	(3.18)	(9.07)	(3.30)	(16.12)

swdmclbg.D02 - D08

Table 73. Proportional stock density (PSD) and relative stock density (RSD) of bluegill and redear collected by diurnal electrofishing at Marion Co. Lake on 13 May 2008. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD
Bluegill	214	66(6)	5(3)
Redear	70	47(8)	33(11)

swdmclbg.D08

Table 74. Bluegill population assessment for Marion County Lake in 2002 and 2008.

	Year						
Parameter	2002	2003	2004	2005	2006	2007	2008
Growth Mean length age-2 at capture	2	2	2	2	2	2	2
Growth Years to 6.0 in	4	4	4	4	4	2	2
Size Structure CPUE > 6.0 in	4	4	2	3	2	2	4
Size Structure CPUE ≥ 8.0 in	4	2	2	2	2	2	3
Instantaneous Mortality (z) Annual Mortality (A)%	0.673712 49	ND	ND	ND	ND	1.02706 64.2	ND
Total Score: Assessment Rating:	14 Excellent	12 Good	10 Fair	11 Good	10 Fair	8 Fair	11 Good

ND = no age data or age data not applicable
swdmclbg.D02 - D08

Table 75. Redear population assessment for Marion County Lake in 2002 and 2008.

Parameter	Year						
	2002	2003	2004	2005	2006	2007	2008
Growth Mean length age-3 at capture	4	4	4	4	4	4	4
Growth Years to 8.0 in	4	4	4	4	4	4	4
Size Structure CPUE > 8.0 in	4	4	2	4	4	3	4
Size Structure CPUE ≥ 10.0 in	1	3	2	3	3	2	4
Instantaneous Mortality (z) Annual Mortality (A)%	ND	ND	ND	ND	ND	ND	ND
Total Score:	13	15	12	15	15	13	16
Assessment Rating:	Good	Excellent	Good	Excellent	Excellent	Good	Excellent

ND = no age data or age data not applicable

swdmclbg.D02 - D08

Table 76. Fish harvest statistics derived from a creel survey at Nolin River Lake Tailwater from 1 April through 31 October 2008.

	Number	Std. error
Fishing trips		
Number of fishing trips	3,678	
Average trip length (hours)	5.15	
Fishing pressure		
Total man-hours	18,941	657
Catch/harvest		
Number of fish caught	1,474	869
Number of fish harvested	3,889	566
Pounds of fish harvested	4,691	
Harvest rates		
Fish/hour	0.22	
Catch rates		
Fish/hour	0.65	
Miscellaneous characteristics (%)		
Male	84	
Female	16	
Resident	99.6	
Non-resident	0.4	
Method (%)		
Still fishing	73.7	
Casting	25.2	
Fly	0.9	
Trolling	0.1	
Mode (%)		
Boat	4.2	
Bank	93.8	
Other	2	

Table 77. Fish harvest statistics derived from a creel survey at Nolin River Lake Tailwater from 1 April to 31 October 2008.

	Channel catfish	Flathead catfish	White bass	Rock bass	Bluegill	Smallmouth bass	Spotted bass	Largemouth bass	White crappie	Black Crappie	Walleye	Drum	Rainbow Trout
No. caught	1697	187	228	107	3756	14	202	272	787	639	1305	203	1959
No. Harvested	878	166	169	16	468	0	16	34	519	360	431	0	764
% total harvest	22.6	4.3	4.4	0.4	12	0	0.4	0.9	13.3	9.3	11.1	0	19.6
Lb harvested	1930.3	606.1	159.4	5.3	126.9	0	17.6	107.1	255	188.9	802.1	0	439.5
% of total lb harvested	41.2	12.9	3.4	0.1	2.7	0	0.4	2.3	5.4	4	17.1	0	9.4
Mean length (in)	19.2	19.1	11.8	8	8.1	0	14	17.5	9.8	9.6	17.4	0	10.2
Mean weight (lb)	3.76	2.24	3.03	0.72	0.34	0	1.13	2.99	0.44	0.47	1.7	0	0.39

	Catfish group	W. bass	Panfish group	Crappie group	Trout group	Walleye	Drum	Anything
No. of fishing trips for that species	1088	39	191	286	405	402	43	1224
% of all trips	29.8	1.1	5.2	7.8	11.1	11	0.2	33.5
Hours fishing for that species	5602.3	201.9	982	1471.6	2084.5	2070.9	43.1	6301.9
No. harvested fishing for that species	995	109	307	609	679	348		
Lb harvested fishing for that species	2,360.30	108.8	75.9	330.2	374.1	695.4		
No./hour harvested for that species	0.15	0.48	0.44	0.44	0.5	0.16		
% success fishing for that species	13.5	44.4	5.6	28.6	16	13.5		

Table 78. Length distribution and species composition (released fish lengths were estimates) for each species of fish harvested at Nolin River Lake Tailwater from 1 April to 31 October 2008.

		Inch Class																										
Species	Status	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	29	30
Channel catfish	Harvest											17	50	17	116	116	132	50	166	66	33	33	17		33	32		
	Released										71	53	71		143	53	160	36	89	53	18	18	18					19
																3				3								
Flathead catfish	Harvest										18				18			18	18		37	37	20					
	Released																				21							
White bass	Harvest								15	15	15	46	31	47														
	Released								15		15		15	14														
Rock bass	Harvest						16																					
	Released		18		18		18		38																			
Bluegill	Harvest				43	184	213		28																			
	Released		134	168	839	1292	705	150																				
Smallmouth bass	Released						14																					
Spotted bass	Harvest												16															
	Released						56	19	37	56	19																	
Largemouth bass	Harvest										74			17					17									
	Released						50	17	50	16		30																
White crappie	Harvest						31	183	137	46	61	46	15															
	Released				89	36	18	107	13	3		18																
Black crappie	Harvest						30	105	105	105	15																	
	Released				37	56	74	93	19																			
Walleye	Harvest													62	77	46	138	15	31	31			31					
	Released						32	16	130	49	373	32	178	16	16	16	17											
Drum	Released										17						51	34	101									
Rainbow Trout	Harvest							15	76	107	107	168	291															
	Released					16	33	278	491	131	180	49	17															

Table 79. Monthly rainbow trout angling success at Nolin River Lake tailwater during the 2008 creel survey period.

Month	Total number of rainbow trout caught	Total number of rainbow trout harvested	Number of rainbow trout fishing trips	Hours fished by rainbow trout anglers	Number caught by rainbow trout anglers	Number caught/hour by rainbow trout anglers	Number harvested by rainbow trout anglers	Number harvested/hour by rainbow trout anglers
April	47	47	16	81	31	1.25	31	1.25
May	808	516	63	322	446	1.89	446	1.89
June	427	128	123	633	342	0.91	128	0.34
July	207	57	88	454	170	0.61	57	0.2
August	270	17	42	216	203	0.94	17	0.08
September	80		39	200	80	0.75		
October	119		35	179	119	0.57		
Total	1959	764	405	2085	1391		679	
Mean						0.98		0.5

Table 80. Monthly crappie angling success at Nolin River Lake tailwater during the 2008 creel survey period.

Month	Total number of crappie caught	Total number of crappie harvested	Number of crappie fishing trips	Hours fished by crappie anglers	Number caught by crappie anglers	Number caught/hour by crappie anglers	Number harvested by crappie anglers	Number harvested/hour by crappie anglers
April	761	590	188	969.2	683	0.72	543	0.58
May	279	251	45	230.3	28	0.14	28	0.14
June	235		26	133.2	107	0.77		
July	151	38	23	120.9	76	0.83	38	0.42
August								
September								
October								
Total	1426	879	282	1471.6	894		609	
Mean						0.61		0.44

Table 81. Monthly catfish angling success at Nolin River Lake tailwater during the 2008 creel survey period.

Month	Total number of catfish caught	Total number of catfish harvested	Number of catfish fishing trips	Hours fished by catfish anglers	Number caught by catfish anglers	Number caught/hour by catfish anglers	Number harvested by catfish anglers	Number harvested/hour by catfish anglers
April	373	373	102	525	373	0.68	373	0.68
May	418	265	188	967.4	376	0.47	237	0.29
June	619	406	285	1465.6	513	0.26	385	0.19
July	340		305	1572.3	264	0.13		
August	135		142	732.9	135	0.16		
September			35	177.8				
October			31	161.4				
Total	1885	1043	1088	5602.3	1661		995	
Mean						0.25		0.15

Table 82. Monthly walleye angling success at Nolin River Lake tailwater during the 2008 creel survey period.

Month	Total number of walleye caught	Total number of walleye harvested	Number of walleye fishing trips	Hours fished by walleye anglers	Number caught by walleye anglers	Number caught/hour by walleye anglers	Number harvested by walleye anglers	Number harvested/hour by walleye anglers
April	326	155	12	61	248	2.29	124	1.14
May	321	195	179	921.3	265	0.23	181	0.16
June	192	43	78	399.7	86	0.11	43	0.11
July	358	38	112	574.5	302	0.57		
August			8	43.1				
September								
October	108		14	71.8	76	1.17		
Total	1,305	431	402	2,070.9	977		348	
Mean						0.44		0.16

Table 83. Monthly white bass angling success at Nolin River Lake tailwater during the 2008 creel survey period.

Month	Total number of white bass caught	Total number of white bass harvested	Number of white bass fishing trips	Hours fished by white bass anglers	Number caught by white bass anglers	Number caught/hour by white bass anglers	Number harvested by white bass anglers	Number harvested/hour by white bass anglers
April	186	155	39	201.9	109	0.48	109	0.48
May	42	14						
Total	228	169	39	201.9	109		109	
Mean						0.48		0.48

CENTRAL FISHERIES DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions for 2008 are summarized in Table 1.

Taylorsville Lake

Spring diurnal electrofishing was completed in May to monitor the black bass population. Upper, middle, and lower sections of the lake were sampled for 7.5 hours. Length distribution and CPUE for largemouth bass are presented in Tables 2 and 3. Numbers of bass collected were nearly identical to the last 2 years. Catch rate of 8.0–11.9 in largemouth bass (30.10 f/h) was lower than last year (35.50 f/h) and the 15-year average (39.00 f/h). Catch rate for bass 12.0–14.9 in (33.60 f/h) was consistent with last year catch rate (33.70 f/h) and a little higher than the 15-year average (30.72 f/h). Catch rate for bass ≥15.0 in was 22.50 f/h, which was higher than last year's catch rate (14.40 f/h) and the 15-year average (19.93 f/h) for these harvestable-size fish. The middle section (Big Beech Creek and Little Beech Creek area) continues to be the area with the highest catch rate for largemouth bass. The PSD for largemouth bass continues to increase from 48 in 2006 and 58 in 2007 to 65 in 2008 (Table 4). The RSD_{15} value increased from 17 in 2007 to 26 in 2008. Largemouth bass age frequency (Table 5) showed high numbers of age 2 and 3 bass (mostly 11.0 to 14.0 in), with a distinct decline beginning at age 6 (≥14.0 in). Very few bass were present beyond age 6. There still appears to be significantly lower numbers of bass ≥18.0 in, or bass older than age 5, but numbers have slightly increased from last year (Table 6). The largemouth bass population assessment score, based on spring electrofishing data, decreased from 13 to 12 (both "Good", Table 7). Length frequency, relative weight (Wr), and age 0 and age 1 year class strength of largemouth bass based on September electrofishing are presented in Tables 8–10. Average body weights for largemouth bass were acceptable, with bass 12.0-14.9 in having the highest weight ratio. The year class strength model indicated largemouth bass fingerlings should be stocked. Fingerlings (4.0 to 4.5 in) largemouth bass were stocked in September at a rate of 5 f/a, totaling 15,308 fish (right pelvic clip). Catch rates of age 0 largemouth bass decreased from 2007; however the mean length of age 0 and the catch rate of age 0 largemouth bass greater than 5.0 in increased from 2007. Largemouth bass fingerlings have been stocked annually since 2000 at rates ranging from 5 f/a to 10 f/a. 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 next spring.

Trap netting efforts for crappie (Table 11) resulted in the collection of only 7 white crappie and 47 black crappie. Crappie were sampled with trapnets during 48 net-nights. PSD and RSD values are shown in Table 12. Age and growth determinations were completed using otoliths removed from 3 white crappie and 27 black crappie (Tables 13–16). Age studies indicate white crappie reach 9.0 in between age 2 and 3. Black crappie, on average reached 9.0 in between age 3 and 4 in 2008, compared to age 2 and 3 in 2007. The crappie population assessment score (Table 17) was 8 ("Fair") compared to 7 ("Poor") in 2007. By species, the assessment ratings for white crappie was 4 ("Poor") and black crappie was 8 ("Fair"). The cause for the continued decrease in crappie population catch rates in recent years is not entirely known. The crappie population is very cyclic at Taylorsville Lake with peaks occurring every 7 to 9 years. The latest peak appears to have been in 2004.

Fall gill netting for hybrid striped bass and white bass was conducted during the last week of October 2008 (Tables 19–27). A total of 63 hybrid striped bass were collected compared to 144 in 2007. Hybrid striped bass were captured in 16 net-nights (4 nets for 4 nights) for a CPUE of 3.94 (± 1.85) f/nn. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorsville Lake appears to be negatively related to 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. Annual stocking rates for hybrid striped bass have been about 20 f/a (1.4 to 2.0 in) for the last 12 years. Age and growth studies were completed for hybrid striped bass using otoliths. Additionally, hybrid striped bass were differentiated from white bass due to being marked with oxytetracycline (OTC) at the fish hatchery. Studies indicate hybrid striped bass reach harvestable size (15.0 in) between age 2 and 3, typical growth at Taylorsville Lake.

The relative weight (Wr) index for hybrid striped bass shows below average body weight, especially for hybrid striped bass ≥15.0 inches. . The population assessment for hybrid striped bass was rated at "Fair" compared to "Good " in 2007. A total of 63,058 (20 f/a) hybrid striped bass (1.6 in) were stocked in Taylorsville Lake in 2008.

Data for white bass collected during fall 2008 gillnetting studies are presented in Tables 19 and 24-27. White bass comprised about 69% of the *Morones* sampled, compared to 39% in 2007. No white bass older than age 4+ were collected and only five exceeded 12.0 in. Of those collected, 77% were age 0, and 18% were age 1 (Table 25). Relative weight values revealed fair to good body weights for all sizes (Table 26). The white bass population assessment gave a rating of "Fair" (Table 27).

See the Black Bass Investigation (F-40) Annual Performance Report for channel catfish and blue catfish sampling data. A total of 19,190 (6.3 f/a) blue catfish (8-16 in) were stocked in Taylorsville Lake in 2008.

Herrington Lake

Diurnal electrofishing studies were completed in April to monitor the black bass population. Upper, middle, and lower sections were sampled for a total of 7.5 hours. Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 28. Largemouth bass dominated the black bass fishery, with spotted bass and smallmouth bass comprising 14% and 0.1% and of the bass sampled. Catch rate of <8.0 in largemouth bass (31.30 f/h) was dramatically lower than last year (78.10 f/h), but a little higher than the 15-year average (29.80 f/h). Additionally, numbers of bass 8.0 to 11.9 in (39.70 f/h) greatly decreased from last year (68.8 f/h), and was a little lower than the 15-year average (41.90 f/h). Numbers of 12.0–14.9 in (29.50 f/h) and ≥15.0 in (22.10 f/h) largemouth bass slightly increased from last year, but were on line with the 15-year averages of (28.80 f/h) and (20.50 f/h) (Table 29). The PSD for largemouth bass was 56 compared to 35 in 2007 and 61 in 2006. The RSD_{15} was 24 compared to 16 in 2007 and 20 in 2006 (Table 30). Age frequency and CPUE (f/h) is presented in Tables 31and 32. Largemouth bass show fast growth at Herrington Lake. Bass reach harvestable size (12.0 in) between age 2 and 3, one year faster than the state average. They reached 15.0 in, on average between ages 3 and 4. The population assessment based on spring electrofishing data indicated a "Good" population (Table 33), as was seen last year. Fall electrofishing evaluated largemouth bass relative weight index and index of year class strength (Tables 34-36). Average body weights for largemouth bass were acceptable, with bass ≥15.0 in having the highest weight ratio. Bass of all sizes in the lower lake area had the lowest relative weights. Year class strength at age 0 and age 1 are shown in Table 36. CPUE of age 0 bass increased from last year, though their mean length stayed the same. Indices showed bass did not need to be stocked. Kentucky Utilities made a concerted effort to keep the lake level stable during the largemouth bass spawn (mid-April through mid-May).

Diurnal electrofishing studies were completed in March to monitor the crappie population (Table 37). Upper, middle, and lower lake sections were sampled for a total of 4.5 hours (six 15-min runs per section). This year a total of 108 crappie were collected, compared to 81 in 2007, 84 in 2006, and 367 in 2005. Catch was dominated by white crappie in the middle and upper sections. PSD values are shown in Table 38. Age and growth studies of white crappie indicated they reach 9.0 in by age 2, and 11.0 in by age 3 (Table 39). Age frequency of white crappie shows that excellent year classes were produced in 2006 (Table 40). Black crappie also reach 9.0 in by age 2 and 11.0 in by age 3 (Table 41). Age 2 and 3 fish dominated the black crappie sample (Table 42) indicating good spawns in 2005 and 2006. A population assessment method for crappie using electrofishing data has not been established.

Gill netting for hybrid striped bass and white bass was completed in October 2008. During the 16 net-night sampling period 177 hybrid striped bass and 129 white bass were collected (Table 43). Otoliths were taken from both species for age and growth determinations. Results of these studies indicate excellent growth rates (Tables 44-45 and 47-48). Hybrid striped bass reach 15.0 in between age 1 and 2, as they have historically. Hybrid striped bass may reach 20.0 in between age 2 and 3. Of the hybrid striped bass sampled, 75% were age 1+ or younger (Table 45). The population assessment for hybrid striped bass indicates a "Good" population, as it was last year (Table 46). White bass age and growth determinations show they reach 9.0 in by age 1 and 12.0 in by age 2 (Table 47). Good year classes were produced in 2006, 2005 and 2004 (Table 48). The white bass population assessment indicated a "Good" population, the same as it rated last year (Table 49). Herrington Lake was stocked with 50,714 (20 f/a; 1.6-2.3 inch) hybrid striped bass in June 2008.

Guist Creek Lake

Spring electrofishing studies were completed for length frequency, CPUE, age frequency and population assessment for largemouth bass in April 2008 (Table 50). Total largemouth bass catch rate (of all sizes) continued to decrease from the last several years (Table 51), except for the number of bass ≥ 15.0 in that showed a significant increase to the highest catch rate in last 17 years. The PSD for largemouth bass was 85 compared to 63 in 2007 and 59 in 2006 (Table 52). The RSD_{15} increased to 54 from 36 in 2007 and 41 in 2006. Age frequency indicated 70% of the largemouth bass were age 5 or younger (Tables 53 and 54). Over 65% of the bass collected were ≥13.0 in, whereas 33% were ≥16.0 in, and 14% were ≥18.0 in. The population assessment gave a rating of "Excellent", compared to "Good" as seen in 2007 (Table 55). Fall sampling was conducted for relative weight and index for year class strength at age 0 and age 1 (Tables 56–58). Relative weights indicated excellent body condition for bass, particularly larger fish. Mean length of age 0 fish decreased from last year, but their catch rate significantly increased from 2007. However, the catch rate of age 0 bass ≥5.0 in decreased from last year.

Gill netting was completed in November for hybrid striped bass (Table 59). Four nets were fished for two nights (8 net-nights) in similar sites as in past years. A total of 7 hybrid striped bass were captured compared to 70 in 2007. Age and growth studies were completed using otoliths. Calculations indicate hybrid striped bass continued to reach 15.0 in between age 2 and 3, and 20.0 in between age 3 and 4 (Table 60). Age frequency of hybrid striped bass collected is presented in Table 61. Relative weights of these fish indicated they were average in weight for their size (Table 62). The population assessment indicated a rating of "Poor", compared to "Good" in 2007 (Table 63). Guist Creek Lake was stocked with 19,524 (60 f/a; 1.5 inch) hybrid striped bass in June 2008.

Results of the third year of channel catfish sampling at Guist Creek Lake with baited tandem hoop nets by the Black Bass Research Project are presented in their Annual Performance Report.

Beaver Lake

The sport fish population continues to improve following gizzard shad removal in 1998. Beaver Lake was sampled for largemouth bass in April 2008 (Tables 64 and 65). The CPUE for all sizes was 317.50 f/h compared to 259.50 f/h in 2007 and 382.50 f/h in 2006. Catch rates for bass <8.0 in increased from last year. Numbers of bass between 8.0 and 11.9 in and 12.0 and 14.9 in increased from last year, while bass ≥15.0 in decreased slightly from last year. Thick aquatic vegetation continues to hamper sampling in the spring (Table 1). The PSD and RSD_{15} for largemouth bass respectively were 25 and 3, compared to 62 and 3 in 2007 and 19 and 4 in 2006 (Table 66). Most bass collected (76%) were between age 3 and 5 (Table 67). Spring electrofishing catch rates by age from 1999 through 2008 are shown in Table 68. The population assessment score indicated a "Good" bass population (Table 69), compared to "Fair" in 2007. Fall electrofishing results for relative weight and the index of largemouth bass year class strength are presented in Tables 70-72. The relative weight index reflected below-average weights for all three length groups, possibly due to crowding and dense aquatic vegetation. Mean length of age 0 bass decreased in 2008 (Table 72). No shad were observed at Beaver Lake in 2008, therefore, Beaver Lake is expected not to contain gizzard shad.

Bluegill and redear sunfish were sampled in May 2008 for CPUE, PSD, age and growth, and age frequency (Tables 73–84). Length frequency results showed many bluegill continue to remain in the 7.0 in range, with most redear sunfish between 7.0 and 8.0 in (Table 73). The PSD for bluegill was 37 compared to 62 in 2007 and 51 in 2006. The RSD_8 was 3 compared to 3 in 2007 and 7 in 2006. Redear sunfish PSD and RSD_9 respectively were 85 and 9 (Table 74). CPUE for bluegill ≥8.0 in was 4.00 f/h, higher than last year, while the catch rate for 6.0–7.9 in bluegill decreased from last year. No bluegill 10.0 in or larger were captured (Table 75). Age and growth studies indicated bluegill reached 6.0 in between age 3 and 4 (one year later than last year), and 8.0 in between age 8 and 9 (Table 76). Age frequency of bluegill is shown in Table 77. Catch rate at each age of bluegill shows an increasing number of older and larger bluegill present since the gizzard shad removal in 1998 (Table 78). The population assessment for bluegill indicated a "Fair" population rating, the same as in 2007 (Table 79). The high density of bluegill may be attributed to thick aquatic vascular plant growth. Catch rate of redear sunfish ≥8.0 in was 90.40 f/h compared to 32.40 f/h in 2007 (Table 80). Overall, catch rates for all sizes were lower than last year, except catch rates for ≥ 8.0 inches which tripled. Age and growth studies continue to show redear sunfish reaching 6.0 in between age 2 and 3, and 8.0 in between age 4 and 5 (Table 81). No fish ≥10.0 in were collected. Age frequency (Table 82) indicates a good number of redear sunfish up to age 6 (6.0-8.0 in) in the fishery.

Redear sunfish numbers have increased since the shad removal as a result of increased aquatic vegetation (Table 83). The population assessment indicated a "Fair" redear sunfish fishery (Table 84), the same as in 2007. Relative weight data for bluegill and redear sunfish is shown in Table 85, with both species continue to show slightly below-average weights for all length groups. Bluegill and redear sunfish were tagged in the spring of 2008 to determine the exploitation of these panfish. For additional information and results of this exploitation study, see the Lake Fisheries Research Investigation (F-40) Annual Performance Report.

A daytime roving creel survey was conducted at Beaver Lake in 2008. The last creel survey was completed in 1997. In 2008, fishing trips totaled 4,574 (Table 86), which was a little less than in 1997 (4,946 trips). Catch and harvest rates for all fish were 3 times higher than in 1997, while miscellaneous characteristics, methods and mode basically remained about the same. Largemouth bass harvest was over 7 times less than in 1997 (Table 87). Crappie harvest decreased by one half to 939 fish, whereas catfish and panfish harvest significantly increased in 2008. Length distribution of harvested and released fish is shown in Table 88. Black bass harvest, release, and monthly angling success are shown in Tables 89 and 90. Crappie harvest, release and monthly angling success are shown in Tables 91 and 92. Channel catfish harvest, release and monthly angling success are presented in Tables 93 and 94. Panfish catfish harvest, release and monthly angling success are presented in Tables 95 and 96. An angler attitude survey was conducted and was based on 94 surveys. According to this survey, bluegill were sought after the most (72.3%), and the majority of angler's time was spent fishing for them (70.1%). Most anglers were satisfied with bass, crappie, catfish, and panfish fishing on Beaver Lake in 2008.

Aquatic vegetation was prevalent in shallow areas of the lake during spring and summer. Three applications of an aquatic herbicide (45 gal, diquat dibromide) were made to submerged aquatic vascular plants around the fishing pier and embayments to maintain fishing and boating access on May 13 and 21; and June 2. No liquid fertilizer applications have been made since 2001. An additional 95 (0.6 f/a; 3-8 lbs) triploid grass carp were stocked in October in addition to the (475 – 3 f/a) stocked in 2007 to help reduce, but not eliminate, aquatic plant growth.

Boltz Lake

Spring electrofishing for largemouth bass length frequency, CPUE, PSD, age frequency and population assessment was done in April 2008 (Tables 97–102). Results indicate a slight decrease in bass numbers from last year. Bass fingerlings were stocked for three years (21.7 f/a in 2003, 22 f/a in 2004, and 10.8 f/a in 2005). Most bass (79%) were age 4 or younger (≤15.0 in, Table 100), same as last year. The population assessment indicated a "Fair" bass population as it did in 2006 and 2007 (Table 102). Electrofishing for largemouth bass relative weight and YOY data was conducted in September (Tables 103–105). Relative weights indicated below average condition for bass. An increase in numbers of age 0 and age 0 ≥5.0 in bass was seen from 2007. Fingerlings (4.5 in) largemouth bass were stocked in September at a rate of 15 f/a, totaling 1,386 fish (right pelvic clip). Currently, Boltz Lake does not contain a population of gizzard shad.

Spring electrofishing for bluegill and redear sunfish was conducted in May 2008 (Tables 106–112). Catch rates for all sizes of bluegill, except < 3.0 inches, increased, while redear sunfish were absent (Table 99). Age and growth data indicated bluegill reached 6.0 in at age 3, better than last year. The majority (97%) of bluegill collected were age 1 through age 3. The population assessment for bluegill indicated a "Fair" population present—same as last year (Table 112). Bluegill relative weights indicated below average body weight for all sizes of fish in September (Table 113).

Common carp were removed from Boltz Lake during June and August. A total of 263 carp were removed; 230 in June and 33 in August.

Boltz Lake has been a blue catfish study lake (Black Bass Research Project) since 1998. Boltz Lake was stocked with 1,840 (20 f/a; 8-14 inch) blue catfish in September 2008.

Bullock Pen Lake

Bullock Pen Lake was electrofished in April 2008 for largemouth bass length frequency, CPUE, age frequency and population assessment (Tables 114–119). Overall, catch rates were higher than last year's values, except catch rates of bass <8.0 in decreased (Table 115). Numbers and year class strength are widely distributed and numerous through age 13 (Table 117), with most (63%) being age 5 or younger. The population assessment for largemouth bass indicated a "Good" population present, compared to "fair" last year (Table 119). Electrofishing was conducted in September to determine the relative weights and YOY year class strength for largemouth bass (Tables 120–122). CPUE for Age 0 and Age 0 ≥5.0 in increased from last year (Table 122). Bullock Pen Lake has hosted a population of gizzard shad for decades.

Bullock Pen Lake has been a blue catfish study lake (Black Bass Research Project, F-40) since 1998. Bullock Pen Lake was stocked with 2,680 (20 f/a; 8-14 inch) blue catfish in September 2008.

Corinth Lake

Corinth Lake was electrofished in April 2008 to collect largemouth bass length frequency, CPUE, PSD, age frequency and population assessment information (Tables 123–128). Catch rate for largemouth bass ≥15.0 in increased from 2007, as did all length groups except <8.0 in, which decreased (Table 124). Bass stocking in 2004 was reflected in the catch rates of 12.0 -14.9 in fish (primarily age 4). The PSD for largemouth bass was 35, higher than in 2007 (Table 125). The RSD_{15} decreased from 15 in 2007 to 13 in 2008. Age frequency and CPUE are shown in Table 126 and indicate 55% of the bass collected were age 2 or younger. The population assessment for largemouth bass was rated "Excellent", compared to "Good" in 2007 (Table 128). Fall electrofishing for largemouth bass was conducted to determine year class strength and relative weight (Tables 129–131). Relative weights of largemouth bass are still below average (Table 130). Largemouth bass mean length at age 0 remained the same, with catch rates of all age 0 sizes decreasing from last year (Table 131).

Electrofishing for bluegill and redear sunfish was done in May 2008 to obtain length frequency, CPUE, age and growth, age frequency and population assessment data (Tables 132–143). Most bluegill were 4.0 to 7.0 in (Table 132). The bluegill PSD was 37 compared to 40 in 2007 (Table 133). Collection of larger bluegill (6.0 to 8.0 in) showed another year of increase (Table 134). Age and growth studies showed that bluegill reach 6.0 in between age 3 and 4 (Table 135). The population assessment indicated a "Fair" population (Table 138). Redear sunfish numbers and quality continue to decline, with most found to be between 7.0 and 8.0 in. Redear sunfish PSD was 48 compared to 90 in 2007. Catch rate for redear sunfish ≥8.0 in increased from 21.20 f/h in 2007 to 27.60 f/h in 2008 (Table 139). No fish ≥10.0 in redear sunfish were collected for a second straight year. Age and growth studies show redear sunfish reaching 6.0 in between age 2 and 3 (Table 140). The population assessment for redear sunfish continued to be rated "Good" (Table 143). Relative weights for bluegill and redear sunfish were collected in the fall (Table 144). Relative weights indicated below average body condition for all bluegill, however relative weights for all sizes of redear sunfish were very good.

Elmer Davis Lake

Elmer Davis Lake was sampled for largemouth bass in April 2008. Length frequency, CPUE, PSD, age and growth, age frequency and population assessment data were collected (Tables 145-151). Catch rates of largemouth bass of all sizes increased (Table 146). Numbers of bass in the protected slot (12.0 to 15.0 in) were similar to last year, but bass ≥15.0 in almost doubled (Table 146). The PSD remained almost unchanged at 24 (Table 147). The RSD_{15} slightly increased to 6. Age and growth studies showed that largemouth bass reached 12.0 in between age 3 and 4, and 15.0 in around 7 years (Table 148). Age frequency and CPUE are shown in Table 149 indicated 71% of the bass collected were age 3 or younger. Population assessment data indicated a "Good" population, up from "Fair" last year (Table 151). Fall electrofishing for relative weights and year class strength of largemouth bass was done in September 2008 (Tables 152-154). Relative weights continue to indicate below average body condition (Table 153) as would be expected in a bass-crowded population. Studies indicate a decline in the numbers of age 0 bass (Table 154).

Due to this decline, fingerlings (4.5 in) largemouth bass were stocked in September at a rate of 10 f/a, totaling 1,500 fish (right pelvic clip) as part of the largemouth bass stocking initiative. This data may reflect the effect of the presence and increasing numbers of gizzard shad.

Electrofishing for length frequency, CPUE, age and growth, age frequency and population assessment was conducted for bluegill and redear sunfish in May 2008 (Tables 155–166). Bluegill catch rates increased for all sizes, except ≥ 8.0 inch bluegill that decreased (Tables 157). The PSD value for bluegill was 33, compared to 39 in 2007 (Table 156). The RSD_8 decreased to 3, compared to 7 in 2007. Age and growth studies on bluegill showed that they reach 6.0 in between age 2 and 3, and 8.0 in around age 6 (Table 158). Most bluegill (90%) were age 3 and less (Table 159). The population assessment for bluegill was found to be "Good", unchanged from 2007 (Table 161). CPUE for all redear sunfish length groups increased from 2007 (Table 162). The numbers of redear sunfish ≥8.0 in increased, as did the numbers of redear sunfish ≥10.0 in. The PSD for redear sunfish was 49 compared to 86 last year. The RSD_9 was 12 compared to 34 in 2007 (Table 156). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in between age 1 and 2, 8.0 in between age 2 and 3, and 10.0 in between age 4 and 5 (Table 163). The redear sunfish population assessment indicated an "Excellent" population present as it did in 2007 (Table 166). Relative weight results for bluegill indicated declining body condition with increasing size, while the index for redear sunfish indicated excellent body condition (Table 167). Growth of aquatic vegetation may have helped this species at Elmer Davis Lake. Gizzard shad removal efforts were done in 1994 and 1997 with success. The source for gizzard shad invasions is attributed to the city of Owenton's water supply reservoir, Lower Thomas Lake, located in the drainage of Elmer Davis Lake. Gizzard shad have again become established due to overflow from Lower Thomas Lake during spring high water events.

Kincaid Lake

Spring electrofishing studies were conducted in April 2008 for PSD, length frequency, age frequency and CPUE for largemouth bass (Tables 168–173). Catch rate of all sizes remained about the same or a little higher. Total catch rate increased from 215.50 f/h in 2007 to 268.50 f/h in 2008 (Table 169). Numbers of bass ≥15.0 in increased from 2007. The largemouth bass PSD and RSD_{15} respectively were 63 (74 in 2007) and 44 (49 in 2007) in 2008 (Table 170). Age frequency studies indicate good numbers of all age classes (through age 12) (Table 171). The population assessment indicated a "Good" bass population, the same as in 2007 (Table 173). Fall electrofishing for relative weight and index of year class strength at age 0 was done in September (Tables 174-176). Relative weight of all largemouth bass length groups was about average except for fish less than 12.0 in (Table 175). Catch rates of age 0 largemouth bass increased slightly from 2007 (Table 176).

McNeely Lake

McNeely Lake was electrofished for largemouth bass population analysis in April 2008. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Tables 177–183). Overall catch rates for all sizes of largemouth bass continued to increase, except for fish ≥15.0 in which decreased by half (Table 178). Largemouth bass PSD was 39, which was lower than last year, and the RSD_{15} decreased from 22 last year to 10 (Table 179). Age and growth data for largemouth bass indicate that bass reach 12.0 in between age 3 and 4 and 15.0 in between age 5 and 6. Age frequency studies indicated good numbers of age 1 through age 4 bass, ranging from 4.0-14.0 in (Table 181). The population assessment continued to be "Good" in 2008 (Table 183). Electrofishing for largemouth bass in September 2008 was done to collect relative weight and the index of year class strength at age 0 (Table 184-186). All values decreased from last year, except for catch rates of age 0 largemouth bass that increased by over 100 f/h. The relative weights continued to indicate below-average body condition for largemouth bass, probably a reflection of dense aquatic vegetation growth in spring and summer (Table 185).

Bluegill and redear sunfish were sampled in May 2008 for length frequency, CPUE, age and growth, age frequency and population assessment (Tables 187–198). Catch rates for all sizes of bluegill increased from 2007 (Table 189). The bluegill PSD was 53 compared to 51 in 2007 (Table 188). RSD_8 was 0 for both years. Age and growth data for bluegill indicate they reach 6.0 in between age 2 and 3; same as last year (Table 190). No 8.0 in bluegill were collected. The population assessment for bluegill continues to be "Good" (Table 193). Catch rates for redear sunfish significantly increased from 2007 to 2008 (Table 194).

The PSD for redear sunfish was 64 compared to 54 last year, and the RSD_9 increased to 9 from 0. Age and growth studies showed redear reaching 8.0 in between age 2 and 3 (Table 195). The redear sunfish fishery was rated "Good", up from "Fair" in 2007 (Table 198). Relative weight data for bluegill and redear sunfish were collected in the fall (Table 199). Good body condition was exhibited by redear sunfish. However, bluegill exhibited below average body condition during the fall of 2008.

A.J. Jolly

Spring electrofishing for largemouth bass length frequency, CPUE, PSD, age analysis, age frequency, and population assessment was done in April 2008 (Tables 200-206). Results demonstrated that the majority of largemouth bass collected were in an intermediate size range (8.0-15.0 in) (Tables 200-201). Catch rates of largemouth bass were lower in 2008 compared to 2007 at all length groups, but there were more fish caught in the 12.0+ inch range in 2008 compared to 2005 and 2006. Overall catch rate of spring largemouth bass was the lowest that it has been since the lake has been monitored (Table 201). PSD values have increased from the 2007 value of 44 and RSD values have stayed the same since 2007 (Table 202). A subsample of sixty largemouth bass was brought back to the lab to extract otoliths for aging purposes. Fish grew on average 2.0 in from years 1-4, and growth slowed from ages 5-7 (Table 203). Age 2 and 3 year were the most frequently encountered age groups during spring sampling. Three year old largemouth bass also exhibited the highest variation in inch classes (Table 204). Three-year-old fish produced the highest catch for spring 2008 sampling (Table 205). Excluding largemouth bass ages six and seven, catch for spring largemouth bass decreased (Tables 200 and 205). A.J. Jolly earned a population assessment score of "Poor" for largemouth bass (Table 206), which was worse than the 2007 rating of "Fair". Reasons for this finding are not completely clear, but it is noteworthy that greater numbers of older fish were captured in 2008 (Tables 200, 201, 205). It will be important to follow this trend and see what results take place in subsequent years.

Fall electrofishing for largemouth bass at A.J. Jolly sampled more smaller-sized largemouth bass in 2008 than 2007 (Table 207). Similar to 2007, relative weight values of fall sampled largemouth bass increased as fish size increased (Table 208). Mean length of age 0 largemouth bass have gradually increased since 2004, with catch rates of these fish at their highest values in four years (Table 209). Greater numbers and lengths of largemouth bass were present in 2008 at A.J. Jolly Lake. These trends will need to be followed to see if increased recruitment translates into increased numbers and sizes for largemouth bass.

Bluegill were sampled in June 2008 to quantify length frequency, CPUE, PSD, age frequency, and population assessment (Tables 210-216). Eight bluegill in the 6.0 in inch class were sampled in A.J. Jolly (Table 210). PSD and catch rates greatly increased compared to the same metric from 2007 (Tables 210-211). There were fewer 4.0 and 5.0 in bluegill sampled in 2008 compared to 2009, but the increase in smaller fish made up for the catch differences (Table 212). Age and growth analysis revealed bluegill reach a maximum age of 5 years, with growth reaching a plateau at 6.0 in (Table 213). One year old fish dominated the catch for spring bluegill in 2008, with two and three year old fish making up the greatest portion of the remaining catch (Table 214). Bluegill ages 2 and 3 have historically shown the highest catch rate at A.J. Jolly (Table 215). These indicators, as well as low catch rates of larger fish and an annual mortality of 50%, resulted in a poor rating for bluegill populations at A.J. Jolly (Table 216). Condition of bluegill, based on 106 fish, was higher in 2008 (83) compared to the 2007 value of 75 (Table 217). Overall, the bluegill population at A.J. Jolly was showing cause for concern due to poor length frequencies, catch rates, and population assessment. However, improvements such as higher condition and greater numbers of older fish caught show that the population is showing some success.

Channel catfish were sampled once in A.J. Jolly for 2008 in October using tandem hoop nets. Length frequency results for channel catfish showed the vast majority of channel catfish caught were between the 8.0-11.0 in inch classes (Table 218). The largest channel catfish sampled was 21.0 in (Table 218). Low PSD values (Table 219) and highly variable age frequencies (Table 220) for channel catfish showed that growth of these fish were density dependent in this system. Condition of channel catfish increased from 86 in 2007 to 91 in 2008 (Table 221). However, there remains a bottleneck between the 8-11 inch size classes, which was consistent with historical data for this lake.

Many attempts to improve the sportfish population at A.J. Jolly have been implemented over the years. Techniques such as stocking intermediate-sized largemouth bass to improve recruitment and stocking blue catfish to consume stunted bluegill have proven to be unsuccessful. In the summer of 2007, KDFWR stocked flathead catfish, hypothesizing that an additional top predator would reduce stunted bluegill and channel catfish populations in the lake. Four hundred and seventeen flathead catfish were obtained from the Georgia Department of Natural Resources and stocked into A.J. Jolly on June 29, 2007. The stocked fish ranged in length from 8.4 to 36.0 in with weights ranging from 0.5 to 20.0 pounds. Flathead catfish obtained from Georgia were given an adipose clip to separate the Georgia fish from the ones already in A.J. Jolly. Flathead catfish were stocked at a rate of 2.0 fish per acre and 6.5 pounds per acre. Five separate sampling trips from April through October 2008 were executed to collect data on the stocked flathead catfish. Sampling gear used to sample flathead catfish included low pulse daytime electrofishing, nighttime low pulse electrofishing, trot lines, and noodles. The greatest success catching the most flathead catfish was in April using daytime low pulse electrofishing. A total of nine flathead catfish were captured, yet only one of these was a Georgia fish. The greatest success catching Georgia flathead catfish was using noodles in October, where two Georgia fish were collected. Based on the low recapture numbers of Georgia flathead catfish, two scenarios were possible. High delayed mortality might have affected the Georgia flatheads, or we have not discovered the most efficient way to sample flathead catfish in small impoundments. Based on an extensive literature review conducted in 2007, the second scenario is more plausible as there were no manuscripts describing the methodology of sampling flathead catfish in small impoundments. KDFWR will attempt to sample these fish, along with sampling largemouth bass, sunfish, and channel catfish, on a regular basis to determine if flathead catfish can improve sportfish populations at A.J. Jolly.

Williamstown Lake

Williamstown Lake was electrofished for largemouth bass population analysis in April 2008. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Tables 222-227). Overall catch rates for all sizes of largemouth bass continued to increase from 2007, except for fish ≥15.0 in which slightly decreased (Table 223). Largemouth bass PSD was 46 and the RSD_{15} was 9 (Table 224). Age and growth data for largemouth bass indicate that bass reach 12.0 in between age 3 and 4 and 15.0 in between age 4 and 5 (Table 225). Age frequency studies indicated good numbers of age 1 through age 3 bass, ranging from 3.0-14.0 in (Table 226). The population assessment was "Fair" in 2008 (Table 227). Electrofishing for largemouth bass in September 2008 was done to collect relative weight and the index of year class strength at age 0 (Table 228-230). Year class strength indices increased from last year (Table 230). Fingerlings (4.1 in) largemouth bass were stocked in September at a rate of 11.2 f/a, totaling 3,373 fish. The relative weights indicated average body condition for largemouth bass (Table 229).

Lincoln Homestead Lake

Relative abundance and CPUE of largemouth bass, redear sunfish, and bluegill collected in the spring are shown in Table 231. All sizes of largemouth bass were represented with fair numbers of bass up to 20.0 in. All sizes of bluegill and redear sunfish were represented with good number of bluegill up to 8.0 in. and redear sunfish up to 11.0 in. Fall electrofishing for length frequency and CPUE of largemouth bass bluegill, and redear sunfish was completed (Table 232).

Sympson Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 233. All sizes of largemouth bass were represented with good numbers of bass above the 15.0-in size limit. Largemouth bass up to 21.0 in were collected. Catch rate of largemouth bass increased from 123.50 f/h in 2007 to 148.00 f/h in 2008. Fall sampling for bass spawning success could not be completed due to extremely low water level due to drought conditions during summer of 2008.

Lake Jericho

Largemouth bass were sampled for relative abundance and CPUE in May (Table 234). Good numbers of bass of all sizes were collected. However, catch rates of largemouth bass decreased from 196.7 f/h in 2007 to 117.3 f/h in 2008.

Electrofishing was done at Lake Jericho in September for length frequency and CPUE for largemouth bass and bluegill (Table 235). Largemouth bass were collected up to 18.0 in, with good numbers of fish between 12.0 and 16.0 in. Gizzard shad are not present in this lake but bluegill size and quality are considered fair at best for unknown reasons.

Doe Run Lake

Length frequency, relative abundance and CPUE of fish collected by electrofishing at Doe Run Lake (Kenton Co.) in May 2008 are shown in Table 236. A successful gizzard shad removal was done in January 2006. Fall electrofishing for length frequency and CPUE of largemouth bass and bluegill was done (Table 237). Studies indicate an excellent largemouth bass spawn following the shad removal. Supplemental bass stocking has been needed in years past. Bluegill quality is expected to improve.

Jacobson Park Lake

Length frequency and CPUE of largemouth bass collected in April 2008 at Jacobson Park Lake are presented in Table 238. Largemouth bass were present in fair numbers. Advanced fingerling largemouth bass were stocked annually (20 f/a to 30 f/a) between 1995 and 2004. Fall sampling was done to evaluate largemouth bass spawning success (Table 239). Surplus largemouth bass (4,727; 105 f/a) were stocked in September. Stocking of bass may need to be done on an annual basis to maintain the fishery. Gizzard shad is the primary forage fish for bass in this the only public fishing lake in Lexington.

General Butler State Park Lake

Length frequency, relative abundance and CPUE of largemouth bass were collected in April and May 2008 at General Butler State Park Lake. Results are shown in Table 240. Largemouth bass ranging from 3.0 to 19.0 in were collected. Fall sampling was done to evaluate largemouth bass spawning success (Table 241). Largemouth bass fingerlings were not stocked in 2008 due to an average largemouth bass spawn. Gizzard shad remained absent from sampling after their removal which was completed in December 2005 using liquid 5% rotenone at 0.15 ppm. This lake has the potential for development of a controlled access trophy largemouth bass fishery.

Kleber Pond

Length frequency, relative abundance, and CPUE of fishes collected in May, 2008 at Kleber WMA Pond are presented in Table 242. Largemouth bass ranging from 4.0 to 18.0 in were present in low numbers in the heavily fished pond. Excess fish from Pfeiffer Fish Hatchery are occasionally brought here to supplement public fishing.

Lower Sportsman's (Game Farm) Lake

Species composition, relative abundance, and CPUE of the fish sampled in the Lower Game Farm Lake in 2008 are presented in Table 243. The most numerous species in the lake were bluegill. Largemouth bass were present up to 19.0 in. Rainbow trout and channel catfish are stocked as maintenance stockings and periodically for kid's fishing events. This lake in 2008, by regulation, is for children 12 years of age and younger. There are no size limits on any species, just a three-fish (any species) creel limit.

In the spring of 2009, the age limit restriction will be removed. Minimum size and creel limits will match Upper Sportsman's Lake (Channel catfish 4 fish daily creel limit, 8 fish possession limit, Largemouth bass 15-inch size limit, 3 fish daily creel limit, 6 fish possession limit).

Leary Lake

Species composition, length frequency, and CPUE of fishes collected from Leary Lake in April 2008 are presented in Table 244. This Lloyd WMA lake (3a) receives heavy fishing pressure. Studies show largemouth bass from 7.0 to 17.0 inches in fair numbers. This is similar to previous year's results. Bluegill up to 11.0 in were collected.

Willisburg Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 245. All sizes of largemouth bass were represented with good numbers of bass above the 12.0-in size limit. Largemouth bass up to 20.0 in were collected. Catch rate of largemouth bass decreased from 170.00 f/h in 2006 to 92.00 f/h in 2008.

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
Herrington	Crappie	4/1 4/2	1000	shock	partly cloudy	53		36	good	Upper lake was sampled (CFD-B); middle sampled (CFD-A); Lower lake sampled (CFD-A) (4/2) (2 dipper per crew); murky, high water in trees.
Leary	ALL	4/7	1000	shock	sunny	60	normal	84	good	good sample
Lincoln Homestead	LMB	4/8	1100	shock	mostly sunny, breezy	61	normal	15	fair	Post frontal conditions; murky turbid water from rain
Kleber	ALL	4/9	1100	shock	Cloudy	64	normal	12	fair	fair sample; muddy water conditions
Willisburg	LMB	4/16	1100	shock	Sunny	52	normal	18	fair	fair sample; turbid water conditions
General Butler	LMB	4/17	1000	shock	Mostly sunny	59	normal	24	good	good sample
Jacobson	LMB	4/17	1200	shock	Sunny	58	normal	30	good	good sample; lake a little turbid
Beaver	LMB	4/21	1000	shock	Sunny	61	normal	54	good	good sample
Elmer Davis	LMB	4/21	1000	shock	Mostly sunny	67	normal	36	good	good sample
Corinth	LMB	4/21	2000	shock	Clear	66	normal	42	good	good sample; full moon; filamentous algae @ shoreline
Boltz	LMB	4/21	2000	shock	Clear	66	normal	34	good	good sample;
Williamstown	LMB	4/22	1200	shock	Partly sunny	69	normal	36	good	good sample
Jericho	LMB	4/22	1000	shock	Sunny	68	normal	24	good	good sample
Kincaid	LMB	4/22	2000	shock	Clear	67	normal	34	good	good sample
Bullock Pen	LMB	4/22	2000	shock	Clear, calm	68	normal	30	good	good sample
Guist Creek	LMB	4/23	1000	shock	Sunny	71	normal	24	good	good sample; green algae bloom
McNeely	LMB	4/29	1030	shock	Cloudy	63	normal	56	good	good sample
Sympson	LMB	4/28	1100	shock	Partly sunny	67	≥ 1 ft pool	38	good	good sample; lake above normal pool; few areas hard to sample due to water in trees.
Herrington	LMB	4/30 5/1	1000	shock	Sunny Mostly sunny	63 M 66 U	2 ft above summer pool	36 M 36 U	good	Mid lake was sampled (CFD-A); upper sampled (CFD-A); Lower lake sampled (BBR) (2 dipper per crew)
Taylorsville	LMB	5/5	1000	shock	Partly cloudy	68 A 67 V	3 ft above pool	28 A 12 V	good	good sample; Van Buren was a little muddy
		5/6	1000		Sunny	67 B		28 B		
Lower Sportsman's	ALL	5/6	1000	shock	sunny	69	normal	26	good	good sample
Boltz	BG	5/13	1000	shock	Sunny	63	normal	18	good	good sample
McNeely	BG/RESF	5/19	1000	shock	Sunny	67	above normal	42	good	good sample
Lincoln Homestead	BG/RESF	5/19	1100	shock	Sunny	67	normal		good	good sample
Doe Run	LMB/BG	5/20	1100	shock		64	normal	8	fair	fair sample; murky water conditions
General Butler S.P.	BG	5/21	1000	shock	Mostly sunny	66	normal	18	good	good sample
Jericho	BG	5/23	1000	shock	Clear/sunny		normal		good	good sample
Beaver	BG/RESF	5/27	1000	shock	Overcast, calm	72	normal		good	good sample
Elmer Davis	BG/RESF	5/28	1000	shock		70	normal		good	good sample
Corinth	BG/RESF	5/29	1000	shock	mostly sunny		normal		fair	fair sample; aquatic vegetation problamtic in areas; fish not responding well to electrofishing; many getting away

Table 1 (cont).

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Guist Creek	LMB	9/10	1000	shock	Sunny	75	below normal	24	good	good sample; lake level down 5 ft.
Herrington	LMB	9/11	1000	shock	Sunny	76	725.9	72	good	good sample
		9/15	1000		Cloudy	77		28		9/11 – lower and mid section; 9/15 – upper section
Beaver	LMB/BG/RESF	9/16	0930	shock	Cloudy	75	below normal	18	good	good sample; lake level down 1 ft.
Elmer Davis	LMB/BG/RESF	9/17	1100	shock	Sunny	73	below normal	24	good	good sample; lake level down 1 ft.
Kincaid	LMB	9/18	1100	shock	Sunny	75	1.56	35	good	good sample; lake level down 6 inches
Taylorsville	LMB	9/22	1000	shock	Sunny	81 L	544	54 L	good	good sample; hot water; lake level down 3 ft.
		9/23	1000		Sunny	74 U		10 U		U = Van Buren Area; L = Big Beech and Ashes Creeks
McNeely	LMB/BG/RESF	9/24	0930	shock	Sunny	77	below normal	28	good	good sample; lake level down 1 inch
Boltz	LMB/BG	9/25	1000	shock	Sunny	72	below normal	26	good	good sample; lake level down 6 inches.
Corinth	LMB/BG/RESF	9/26	1030	shock	Partly cloudy		below normal	40	good	good sample; lake level down 1 ft.
Jericho	LMB/BG	9/29	1030	shock	Partly cloudy	72	below normal	24	good	good sample
Williamstown	LMB	9/30	1000	shock	Cloudy	72	below normal	30	good	good sample; lake level down 2 ft.
Lincoln Homestead	LMB/BG/RESF	10/1	1300	shock	Cloudy	69	below normal	20	good	good sample; lake level down @ 2 ft
Bullock Pen	LMB	10/2	1030	shock	Sunny	69	below normal	18	good	good sample; lake level down 1 ft.
Jacobson	LMB	10/3	0930	shock	Sunny	64	below normal	16	good	good sample
General Butler	LMB/BG	10/6	1000	shcok	Sunny	67	below normal	24	good	good sample
Doe Run	LMB/BG	10/10	1030	shock	Sunny	67	normal	48	good	good sample
Herrington	Morones	10/21	1000	gillnet	Sunny		below		good	good sample
		10/22	1000		Mostly Sunny		normal			
		10/23	1000		Sunny					
Taylorsville	Morones/ Crappie	10/28	1000	gillnet trapnet	Mostly Sunny		below		good	good sample
		10/29	1000		Sunny		normal			
		10/30	1000		Sunny					
		10/31	1000		Sunny					
Guist Creek	Morones	11/6	1000	gillnet	Sunny		below		good	good sample; lake level was low due to drought conditions
		11/7	1000		Cloudy		normal			

Table 2. Length distribution and CPUE (fish/hr) of largemouth bass collected in 7.5 hours of 30-minute electrofishing runs for black bass in Taylorsville Lake in April 2008; 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	5	10	15	18	10	10	21	19	18	16	28	20	24	6	5	4	2	231	92.40 (16.56)
Ashes Creek																			
Largemouth bass	4	4	2	8	3	16	10	24	15	20	40	33	22	16	5		1	223	89.20 (8.06)
Big Beech Creek																			
Largemouth bass	1	7	4	7	6	11	22	37	23	27	36	32	36	22	15	7	4	297	118.80 (19.00)
Total																			
Largemouth bass	10	21	21	33	19	37	53	80	56	63	104	85	82	44	25	11	7	751	100.13 (8.90)

Dataset = cfdpstvl.d08

Table 3. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Taylorsville Lake from 1984-2008; 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	Total
1984	50.40 (1.80)	88.00 (6.00)	6.00 (2.20)	0.00 (0.00)	144.40 (5.60)
1985	0.80 (0.60)	43.80 (5.40)	74.80 (9.20)	3.40 (1.00)	122.20 (14.40)
1986	1.80 (0.20)	11.20 (1.40)	21.00 (1.80)	24.40 (3.00)	59.00 (5.40)
1987	3.60 (0.60)	5.40 (0.60)	9.20 (1.00)	29.20 (2.60)	48.00 (3.80)
1988	3.20 (0.80)	8.40 (1.20)	6.00 (1.00)	19.60 (3.00)	37.20 (4.80)
1989	58.60 (15.60)	33.40 (5.80)	22.20 (3.40)	13.80 (3.00)	128.20 (24.00)
1990	57.00 (8.40)	54.20 (6.80)	22.80 (2.60)	21.80 (3.40)	154.40 (15.00)
1991	26.00 (2.80)	37.20 (2.80)	22.80 (2.10)	11.80 (1.40)	98.60 (5.20)
1992	58.50 (5.50)	42.60 (2.50)	36.90 (2.90)	17.60 (1.60)	155.60 (7.30)
1993	21.00 (3.60)	53.20 (4.80)	36.40 (13.80)	14.80 (1.90)	128.30 (8.60)
1994	25.10 (3.00)	39.90 (3.60)	40.70 (5.10)	15.00 (1.50)	122.30 (9.80)
1995	28.20 (3.50)	69.60 (3.90)	20.30 (1.30)	11.60 (1.40)	129.60 (6.80)
1996	16.20 (2.40)	41.00 (3.90)	49.80 (3.20)	16.00 (3.20)	122.60 (9.80)
1997	33.20 (6.30)	43.40 (4.00)	46.40 (1.80)	15.20 (1.80)	138.30 (7.70)
1998	20.00 (3.00)	26.40 (2.70)	30.50 (2.60)	21.70 (2.60)	98.70 (7.20)
1999	19.10 (2.80)	38.70 (3.20)	20.90 (3.00)	22.70 (2.60)	101.30 (7.10)
2000	17.70 (3.30)	33.10 (3.90)	16.10 (2.60)	10.50 (1.50)	77.50 (6.10)
2001	32.40 (4.10)	44.10 (3.70)	27.60 (3.60)	15.50 (2.70)	119.60 (8.30)
2002	33.70 (4.40)	22.30 (2.20)	12.80 (2.20)	9.60 (1.80)	78.40 (7.00)
2003	19.50 (2.90)	58.50 (4.80)	24.90 (2.20)	15.20 (2.10)	118.10 (9.20)
2004	14.10 (2.50)	26.70 (2.70)	42.90 (3.40)	13.20 (1.60)	96.90 (5.20)
2005	35.50 (5.90)	35.70 (4.90)	40.30 (4.30)	34.30 (3.40)	145.70 (12.70)
2006	20.30 (4.00)	39.60 (3.70)	20.30 (3.70)	16.50 (2.70)	96.70 (11.00)
2007	13.50 (2.50)	35.50 (4.10)	33.70 (3.60)	14.40 (2.40)	97.10 (9.10)
2008	13.90 (2.90)	30.10 (2.80)	33.60 (3.10)	22.50 (3.20)	100.13 (8.90)

Dataset = cfdpstvl.d08

Table 4. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2008 confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD_{15}
Big Beech	Largemouth bass	272	65 (± 6)	30 (± 6)
Ashes Creek	Largemouth bass	202	68 (± 6)	22 (± 6)
Van Buren	Largemouth bass	173	61 (± 7)	24 (± 6)
Total	Largemouth bass	647	65 (± 4)	26 (± 3)

Dataset = cfdpstvl.d08

Table 5. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Taylorsville Lake during April 2008. Fish were collected in 30-minute runs.

	Inch class																				STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	ERR
1	10	21	21	33	6													91	12	12.18	2.61
2					13	37	53	53	25	7								188	25	25.05	2.38
3								27	31	49	81	35	25					248	33	33.02	2.67
4										7	23	21	33					84	11	11.22	1.05
5												7	16	44	25	7		100	13	13.31	2.11
6												21	8				7	36	5	4.86	0.76
7																4		4	0	0.49	0.17
Total	10	21	21	33	19	37	53	80	56	63	104	85	82	44	25	11	7	751	100	100.13	8.90
%	1	3	3	4	3	5	7	11	7	8	14	11	11	6	3	1	1	100			

Dataset = cfdagtvl.d06 and cfdpstvl.d08

Table 6 Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Taylorsville Lake from 1998-2008.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	12.00	17.80	14.10	20.50	34.80	21.20	14.90	38.30	17.50	10.30	12.18
2	18.80	27.40	12.40	26.70	16.70	46.10	19.80	27.80	36.70	27.70	25.05
3	28.50	14.30	17.70	24.80	13.10	26.30	33.40	27.30	21.30	37.20	33.02
4	10.80	17.80	10.80	12.50	6.20	12.60	16.60	29.00	6.70	8.40	11.22
5	9.10	6.70	7.70	16.60	3.60	5.90	6.10	13.00	10.60	9.50	13.31
6	11.90	6.50	6.90	9.70	1.40	2.90	3.50	4.30	3.30	3.30	4.86
7	5.20	6.80	4.50	4.80	0.70	0.70	0.80	1.90	0.40	0.40	0.49
8	1.20	1.00	1.50	1.70	0.40	0.50	0.60	1.00	0.00	0.00	
9	0.40	2.30	0.90	1.50	1.60	1.30	1.30	3.10	0.10	0.30	
10	0.50	0.60	0.20	0.30							
11			0.50	0.20							
12			0.30	0.30							

Table 7. Population assessment for largemouth bass collected from Taylorsville Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture	12.9 ± 0.3*	4
Spring CPUE age 1	12.18 ± 2.61	1
Spring CPUE 12.0-14.9 in	33.60 ± 3.07	3
Spring CPUE ≥15.0 in	22.53 ± 3.19	4
Spring CPUE ≥20.0 in	0.00	0
Instantaneous mortality (z)	0.494	
Annual mortality (A)	39.0%	
Total Score		12
Assessment Rating		Good

* 2006 Age and growth dataset was used

Table 8. 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 2008: numbers in parentheses are standard errors.

	Inch class																
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE
Van Buren																	
Largemouth bass	2	3	9		7	16	19	12	6	1	3	2	4		1	85	56.67 (9.87)
Ashes Creek																	
Largemouth bass	8	32	7	3	10	36	8	15	5	4	3	6	1	2		140	93.33 (12.68)
Big Beech Creek																	
Largemouth bass	9	17	6		5	15	6	9	9	4	5	4	3			92	61.33 (12.72)
Total																	
Largemouth bass	19	52	22	3	22	67	33	36	20	9	11	12	8	2	1	317	70.44 (7.54)

Dataset = cfdwrtvl.d08

Table 9. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Taylorsville Lake on 23 September 2008. 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	Van Buren	54	92 (1)	10	98 (3)	7	95 (3)	71	94 (1)
	Ashes	57	87 (1)	11	90 (4)	9	86 (3)	77	87 (1)
	Big Beech	35	89 (1)	18	98 (3)	7	101 (4)	60	93 (1)
	Total	146	89 (1)	39	96 (2)	23	93 (2)	208	91 (1)

Dataset = cfdwrtvl.d08

Table 10. 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 Taylorsville 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
2001	Total	4.6	1.3	63.60	11.70	13.30	1.00	34.80	4.30
2002	Total	5.3	0.1	29.10	4.80	18.70	3.50	21.20	2.80
2003	Total	5.4	0.1	32.20	5.40	19.10	3.40	14.90	2.50
2004	Total	4.4	0.1	50.00	6.20	15.10	3.60	38.30	6.20
2005	Total	4.9	0.1	31.80	4.20	15.30	2.50	17.50	3.80
2006	Total	4.9	0.1	54.70	4.90	25.80	2.90	10.30	2.00
2007	Total	4.4	0.1	22.40	3.20	6.70	1.80	12.18	2.61
2008	Total	5.5	0.1	20.89	3.91	16.67	3.46		

Dataset = cfdwrtvl.d08

Table 11. Length distribution and CPUE (fish/nn) of each species of crappie collected at Taylorsville Lake in 48 net-nights during October and November 2008.

Species	Inch class									Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11			
White crappie	2	1					1	3		7	0.15	0.06
Black crappie	15	5			1	4	14	7	1	47	0.98	0.22

Dataset = cfdtntvl.d08

Table 12. PSD and RSD_{10} values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2008.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	4	100	75 (± 49)
Black crappie	27	96 (± 7)	30 (± 18)

Dataset = cfdtntvl.d08

Table 13. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie trap netted at Taylorsville Lake in 2008.

		Age					
Year class	No.	1	2	3	4	5	6
2007	2	6.8					
2002	1	4.4	7.6	9.5	10.4	11.1	11.6
Mean	3	6.0	7.6	9.5	10.4	11.1	11.6
Smallest		4.4	7.6	9.5	10.4	11.1	11.6
Largest		6.8	7.6	9.5	10.4	11.1	11.6
Std Error		0.8					
95% ConLo		4.5					
95% ConHi		7.6					

Intercept value = 0.00
Dataset = cfdagtvl.d08

Table 14. Age frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 48 net-nights at Taylorsville Lake in 2008.

	Inch class							STD
Age	3	4	9	10	Total	%	CPUE	ERR
0+	2	1			3	43	0.06	0.04
1+			1	3	4	57	0.08	0.05
Total	2	1	1	3	7	100	0.15	0.06
(%)	29	14	14	43	100			

Dataset = cfdtntvl.d08 and cfdagtvl.d08
CPUE of ≥8.0 in white crappie = 0.08 ± 0.05 fish/nn; ≥10.0 in = 0.06 ± 0.05 fish/nn

Table 15. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2008.

		Age				
Year class	No.	1	2	3	4	5
2007	7	5.0				
2006	17	4.7	8.2			
2004	1	4.9	7.6	9.0	9.7	
2003	2	4.2	7.0	8.0	8.9	9.5
Mean	27	4.8	8.1	8.3	9.1	9.5
Smallest		3.5	6.6	7.5	8.4	9.1
Largest		6.6	9.1	9.0	9.7	10.0
Std Error		0.1	0.2	0.4	0.4	0.4
95% ConLo		4.5	7.8	7.4	8.4	8.7
95% ConHi		5.0	8.4	9.2	9.9	10.4

Intercept value = 0.00
Dataset = cfdagtvl.d08

Table 16. Age frequency and CPUE (fish/nn) per inch class of black crappie trap netted for 48 net-nights at Taylorsville Lake in 2008.

	Inch class											STD
Age	3	4	5	6	7	8	9	10	Total	%	CPUE	ERR
0+	15	5							20	43	0.42	0.18
1+					1	4	2	1	8	17	0.16	0.05
2+							11	5	16	34	0.33	0.08
3+									0	0	0.00	0.00
4+								1	1	2	0.02	0.01
5+							1	1	2	4	0.04	0.01
Total	15	5	0	0	1	4	14	7	46	100	0.98	0.22
%	33	11	0	0	2	9	30	15	100			

Dataset = cfdtntvl.d08 and cfdagtvl.d08

CPUE of ≥8.0 in black crappie = 0.54 ± 0.13 fish/nn; ≥10.0 in = 0.17 ± 0.06 fish/nn

Table 17. Population assessment for crappie trap netted at Taylorsville Lake in October 2008.

	White Crappie Only		Black Crappie Only		White and Black Crappie Combined	
Parameter	Actual Value	Assessment Value	Actual Value	Assessment Value	Actual Value	Assessment Value
CPUE of crappie (excluding age 0)	0.08 ± 0.05	1	0.56 ± 0.13	1	0.65 ± 0.16	1
CPUE age 1	0.08 ± 0.05	1	0.16 ± 0.05	1	0.24 ± 0.06	1
CPUE age 0	0.06 ± 0.04	1	0.42 ± 0.18	1	0.48 ± 0.21	1
CPUE ≥8.0 in	0.08 ± 0.05	1	0.54 ± 0.13	1	0.63 ± 0.16	1
Mean length age-2+ at capture	NS	0	9.80 ± 0.12	4	9.80 ± 0.12	4
Assessment Total		4		8		8
Assessment Rating		Poor		Fair		Fair

Table 18. Number of fish and the relative weight (Wr) for each length group of crappie at Taylorsville Lake in October 2008.

		Length group						Total	
Species	Area	5.0–7.9 in		8.0–9.9 in		≥10.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White crappie	Total		94 (1)	1	87	3	92 (5)	4	91 (4)
Black crappie	Total	1	89	18	93 (2)	5	86 (4)	27	91 (2)

Dataset = cfdtntvl.d08

Table 19. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 16 net-nights of gill netting in Taylorsville Lake in October 2008: numbers in parentheses are standard errors.

	Inch class																			
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
White bass	8	10	65	23		19	8	3	1	1									138	8.63 (2.33)
Hybrid striped bass	1	2	20	23	8				3		1		1	1	1	1		1	63	3.94 (1.85)

Dataset = cfdgntvl.d08

Table 20. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2008.

		Age			
Year class	No.	1	2	3	4
2007	3	7.1			
2006	3	7.9	13.7		
2005	2	10.5	15.9	18.6	
2004	1	7.4	15.3	18.9	21.0
Mean	9	8.1	14.7	18.7	21.0
Smallest		6.6	11.6	18.0	21.0
Largest		12.1	16.4	19.3	21.0
Std Error		0.6	0.7	0.4	
95% ConLo		7.0	13.3	18.0	
95% ConHi		9.3	16.0	19.5	

Intercept Value = 0.00
Dataset = cfdagtvl.d08

Table 21. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 8 net-nights at Taylorsville Lake in 2008.

	Inch class																				STD
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
0+	1	2	20	23	8														54	86	3.38	1.80
1+									3										3	5	0.19	0.10
2+											1		1	1					3	5	0.19	0.10
3+															1	1			2	3	0.13	0.09
4+																		1	1	2	0.06	0.06
Total	1	2	20	23	8				3		1		1	1	1	1		1	63	100	3.94	1.85
%	2	3	32	37	13				5		2		2	2	2	2		2	100			

Dataset = cfdagtvl.d08 and cfdgntvl.d08

Table 22. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Taylorsville Lake in October 2008.

		Length group						Total	
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	31	93 (1)	3	87 (2)	6	81 (3)	40	91 (1)

Dataset = cfdgntvl.d08

Table 23. Population assessment for hybrid striped bass gill netted at Taylorsville Lake in October 2008.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	0.56 ± 0.20	1
Mean length age-2+ at capture	17.1 ± 0.8	3
CPUE ≥15.0 in	0.38 ± 0.18	1
CPUE age 1+	0.19 ± 0.10	1
Assessment Total		7
Assessment Rating		Fair

Table 24. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2008.

		Age			
Year class	No.	1	2	3	4
2007	25	6.7			
2006	5	8.1	11.1		
2004	1	9.2	12.5	13.2	14.2
Mean	31	7.0	11.4	13.2	14.2
Smallest		4.0	10.0	13.2	14.2
Largest		9.6	12.5	13.2	14.2
Std Error		0.3	0.4		
95% ConLo		6.5	10.6		
95% ConHi		7.5	12.1		

Intercept Value = 0.00
Dataset = cfdagtvl.d08

Table 25. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 16 net-nights at Taylorsville Lake in 2008

	Inch class													STD
Age	5	6	7	8	9	10	11	12	13	14	Total	%	CPUE	ERR
0+	8	10	65	23							106	77	6.63	1.81
1+						19	5	1			25	18	1.56	0.46
2+							3	2	1		6	4	0.38	0.20
3+											0	0	0.00	0.00
4+										1	1	1	0.06	0.08
Total	8	10	65	23		19	8	3	1	1	138	100	8.63	2.33
%	6	7	47	17		14	6	2	1	1	100			

Dataset = cfdagtvl.d08 and cfdgntvl.d08

Table 26. Number of fish and the relative weight (Wr) for each length group of white bass collected at Taylorsville Lake in October 2008.

Species	Area	Length group						Total	
		6.0–8.9 in		9.0–11.9 in		≥12.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
White bass	Total	98	94 (1)	27	91 (1)	5	90 (1)	90	93 (1)

Dataset = cfdgntvl.d08

Table 27. Population assessment for white bass gill netted at Taylorsville Lake in October 2008.

Parameter	Actual Value	Assessment Value
CPUE of white bass (excluding age 0)	2.00 ± 0.63	1
Mean length age-2+ at capture	12.1 ± 0.3	3
CPUE ≥12.0 in	0.31 ± 0.15	1
CPUE age 1	1.56 ± 0.46	1
Assessment Total		6
Assessment Rating		Fair

Table 28. 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 2008; numbers in parentheses are standard errors.

	Inch class																						
Location/Species	2	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			13	21	12	16	7	26	47	54	29	28	10	5	6	8	4	3	3			292	116.80 (9.04)
Spotted bass							2		1													3	1.20 (0.85)
Smallmouth bass										1												1	0.40 (0.40)
Middle																							
Largemouth bass	3	6	23	25	15	18	15	12	37	66	49	24	20	24	22	22	7	11	5			404	161.60 (15.12)
Spotted bass	2		2	2	17	13	3	6	1	11	3	1										60	24.00 (4.34)
Lower																							
Largemouth bass	1	3	4	13	41	21	5	6	11	12	27	23	11	12	14	11	5	1	1	1	1	224	89.60 (10.57)
Spotted bass	10	1	3	7	10	14	13	3	14	7	6	2										90	36.00 (4.00)
Total																							
Largemouth bass	4	9	40	59	68	55	27	44	95	132	105	72	41	41	42	41	16	15	9	1	1	920	122..67 (8.61)
Spotted bass	12	1	5	9	27	27	18	9	16	18	8	3										153	20.40 (3.30)
Smallmouth bass										1												1	0.13 (0.13)

dataset = cfdpsher.d08

Table 29. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Herrington Lake from 1994-2008; 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	Total
1994	4.90 (0.90)	30.10 (4.40)	21.50 (2.60)	17.90 (1.80)	74.40 (5.40)
1995	8.80 (2.30)	20.00 (4.40)	25.60 (4.00)	20.40 (1.40)	74.80 (9.60)
1996	9.50 (2.40)	24.40 (3.90)	20.30 (2.80)	26.50 (2.60)	80.90 (6.70)
1997	15.60 (2.30)	19.90 (3.40)	27.30 (2.60)	22.00 (1.70)	84.80 (6.10)
1998	37.20 (3.80)	45.30 (4.10)	30.90 (2.50)	21.30 (2.20)	134.80 (7.20)
1999	43.20 (5.20)	69.10 (6.70)	40.40 (3.90)	21.60 (2.40)	174.30 (14.20)
2000	15.60 (3.90)	53.50 (6.60)	26.90 (2.20)	12.20 (1.40)	108.30 (10.80)
2001	37.10 (6.70)	40.10 (6.30)	34.10 (4.50)	12.50 (1.50)	123.90 (15.30)
2002	19.50 (2.60)	32.10 (4.70)	25.50 (3.50)	24.00 (2.20)	101.10 (9.70)
2003	20.80 (4.40)	23.90 (2.40)	30.10 (2.80)	17.90 (1.70)	92.70 (4.20)
2004	29.60 (5.50)	64.80 (12.20)	38.70 (5.70)	29.70 (3.40)	162.80 (23.90)
2005	70.90 (9.70)	59.60 (7.10)	23.50 (3.00)	22.30 (3.40)	176.30 (15.40)
2006	24.70 (4.80)	36.70 (4.80)	38.40 (3.80)	19.30 (1.80)	119.10 (9.20)
2007	78.10 (10.40)	68.80 (7.30)	20.00 (2.50)	17.30 (2.30)	184.30 (17.10)
2008	31.33 (2.90)	39.73 (4.57)	29.47 (3.00)	22.13 (3.05)	122.67 (8.61)

Dataset = cfdpsher.d08

Table 30. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2008; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD_{15}
Lower	Largemouth bass	141	76 (± 7)	33 (± 8)
Middle	Largemouth bass	314	59 (± 5)	29 (± 5)
Upper	Largemouth bass	230	42 (± 6)	13 (± 4)
Total	Largemouth bass	685	56 (± 4)	24 (± 3)

Dataset = cfdpsher.d08

Table 31. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Herrington Lake during April 2008 Fish were collected in 15-minute runs.

	Inch class																							STD
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1	4	9	40	59	68	46	20	13														259	28	34.57	3.00
2						9	7	31	95	132	76	13										363	39	48.34	4.51
3											29	31	23	3								86	9	11.48	1.16
4												31	14	31	21							97	11	12.89	1.27
5																31						31	3	4.10	0.79
6														3			11	4				18	2	2.38	0.51
7													5	3	21	10	5	4				48	5	6.44	0.91
8																			9			9	1	1.20	0.39
9																		8				8	1	1.00	0.30
10																						0	0	0.00	0.00
11																						0	0	0.00	0.00
12																				1	1	2	0	0.27	0.27
Total	4	9	40	59	68	55	27	44	95	132	105	75	41	41	42	41	16	15	9	1	1	920	100	122.67	8.61
%	0	1	4	6	7	6	3	5	10	14	11	8	4	4	5	4	2	2	1	0	0	100			

Dataset = cfdagher.d07 and cfdpsher.d08

Table 32. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Herrington Lake from 1998-2008.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	38.50	17.80	13.10	28.20	16.70	20.90	33.50	72.10	25.10	96.50	34.57
2	33.40	27.40	24.90	41.40	27.90	28.00	65.20	60.70	43.20	57.70	48.34
3	26.30	14.30	24.20	15.10	11.90	26.90	37.00	23.80	31.40	8.40	11.48
4	11.60	17.80	28.40	17.40	13.30	6.00	10.00	6.40	6.40	10.80	12.89
5	9.30	6.70	9.10	9.80	12.50	4.10	7.10	5.80	6.00	2.30	4.10
6	6.30	6.50	4.30	4.40	6.20	2.90	4.70	3.40	2.80	2.00	2.38
7	2.90	6.80	1.20	2.60	5.40	1.60	2.40	1.90	2.10	5.70	6.44
8	2.90	1.00	1.70	2.30	3.20	0.50	0.40	0.20	0.40	0.40	1.20
9	2.00	2.30	1.30	1.60	1.80	0.50	0.80	0.80	1.00	0.40	1.00
10	1.20	0.60	0.10	1.00	2.20	0.30	0.30	0.20	0.30	0.00	0.00
11	0.50					0.90	1.33	0.80	0.30	0.00	0.00
12										0.10	0.27

Table 33. Population assessment for largemouth bass collected from Herrington Lake during May 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	13.7 ± 0.3	4
Spring CPUE age 1	34.57 ± 3.00	2
Spring CPUE 12.0-14.9 in	29.47 ± 3.00	3
Spring CPUE ≥15.0 in	22.13 ± 3.05	4
Spring CPUE ≥20.0 in	1.47 ± 0.45	2
Instantaneous mortality (z)	-0.381	
Annual mortality (A)	31.7%	
Total Score		15
Assessment Rating		Good

* 2007 Age and growth dataset was used

Table 34. Length distribution and CPUE (fish/hr) of black bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Herrington Lake in September 2008: 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	3	7	10	3		3			1	2	2	4	2	1			1		39	26.00 (9.34)
Spotted bass	9	3	4	5	2	2	3	3			1								32	21.33 (5.23)
Middle																				
Largemouth bass	2	3	8	8		1	3	11	4	7	4	3	2	1					57	38.00 (9.51)
Spotted bass		1	2	2	6	2	10	8	2	5	1								39	26.00 (4.93)
Upper																				
Largemouth bass		6	15	25	17	3		11	15	27	21	10	2		3			3	158	105.33 (9.39)
Spotted bass							1	1			1								3	2.00 (1.37)
Total																				
Largemouth bass	5	16	33	36	17	7	3	22	20	36	27	17	6	2	3	0	1	3	254	56.44 (9.89)
Spotted bass	9	4	6	7	8	4	14	12	2	5	3								74	16.44 (3.41)

Dataset = cfdwrher.d08

Table 35. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Herrington Lake on 11 and 15 September 2008. 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	Lower	3	82 (2)	8	87 (5)	2	98 (2)	13	88 (3)
	Middle	25	92 (2)	9	90 (3)	1	88 (-)	35	92 (1)
	Upper	53	93 (1)	33	90 (1)	6	97 (2)	92	92 (1)
	Total	81	93 (1)	50	90 (1)	9	97 (2)	140	92 (1)

Dataset = cfdwrher.d08

Table 36. 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 Herrington 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
2001	Total	4.5	0.1	18.30	2.90	5.90	0.90	16.70	2.20
2002	Total	4.6	0.2	9.80	2.00	4.90	1.20	20.90	4.30
2003	Total	4.6	0.1	51.10	6.00	27.30	5.30	33.50	6.00
2004	Total	4.9	0.1	15.60	3.00	9.00	2.10	72.10	9.50
2005	Total	5.3	0.1	24.20	5.10	16.90	4.50	25.10	4.90
2006	Total	4.8	0.1	40.90	5.80	20.40	4.30	96.50	11.60
2007	Total	5.1	0.1	8.00	2.50	5.30	1.90	34.57	3.00
2008	Total	5.1	0.1	25.78	4.94	13.78	3.69		

Table 37. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake, March 2008; numbers in parentheses are standard errors.

	Inch class									
Location/Species	7	8	9	10	11	12	13	14	Total	CPUE
Upper										
White crappie	1	10	16	5	5	3			40	26.67 (10.41)
Black crappie		3	2	1	1				7	4.67 (1.61)
Middle										
White crappie		8	12	2	4	3	2		31	20.67 (7.83)
Black crappie		1	5	2		2			10	6.67 (3.21)
Lower										
White crappie									0	0.00 (0.00)
Black crappie		2	6	2	1	7		2	20	13.33 (3.37)
Total										
White crappie	1	18	28	7	9	6	2		71	15.78 (4.93)
Black crappie		6	13	5	2	9		2	37	8.22 (1.79)

Dataset = cfdpsher.d08

Table 38. PSD and RSD_{10} values calculated for crappie collected at Herrington Lake in electrofished during April 2008.

Species	No. ≥5.0 in	PSD	RSD_{10}
White crappie	70	99 (± 3)	33 (± 11)
Black crappie	37	100 (± -)	49 (± 16)

Dataset = cfdpsher.d08

Table 39. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie electrofished at Herrington Lake in 2008.

		Age					
Year class	No.	1	2	3	4	5	6
2006	48	4.5	9.3				
2005	6	4.4	9.5	11.7			
2004	1	4.4	9.6	11.2	12.4		
2003	6	5.0	8.7	10.2	11.4	12.5	
2002	2	4.7	9.8	11.2	12.0	12.6	13.1
Mean	63	4.6	9.3	11.0	11.7	12.5	13.1
Smallest		2.8	7.2	9.6	10.7	11.6	12.6
Largest		6.7	11.1	12.2	12.8	13.3	13.6
Std Error		0.1	0.1	0.2	0.2	0.2	0.5
95% ConLo		4.4	9.1	10.6	11.2	12.0	12.1
95% ConHi		4.8	9.5	11.4	12.2	12.9	14.1

Intercept value = 0.00
Dataset = cfdagher.d08

Table 40. Age frequency and CPUE (fish/hr) per inch class of white crappie electrofished at Herrington Lake in 2008.

	Inch class										STD
Age	7	8	9	10	11	12	13	Total	%	CPUE	ERR
2	1	18	28	7	2			56	79	12.50	4.22
3					5	2		7	9	1.44	0.57
4						1		1	1	0.22	0.09
5					2	2	1	6	8	1.24	0.49
6						1	1	2	2	0.37	0.16
Total	1	18	28	7	9	6	2	71	100	15.78	4.93
(%)	3	3	3	19	26	13	10	100			

Dataset = cfdpsher.d08 and cfdagher.d08
CPUE of ≥8.0 in crappie = 15.56 ± 4.97 fish/hr; ≥10.0 in = 5.33 ± 1.83 fish/hr

Table 41. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie electrofished at Herrington Lake in 2008.

		Age				
Year class	No.	1	2	3	4	5
2006	22	4.6	9.5			
2005	12	5.0	9.6	11.6		
2003	3	5.4	10.3	11.9	12.8	13.5
Mean	37	4.8	9.6	11.6	12.8	13.5
Smallest		3.9	6.9	8.7	12.6	13.1
Largest		5.9	11.0	13.0	13.0	13.9
Std Error		0.1	0.1	0.3	0.1	0.2
95% ConLo		4.6	9.3	11.1	12.6	13.1
95% ConHi		4.9	9.9	12.2	13.0	14.0

Intercept value = 0.00
Dataset = cfdagher.d08

Table 42. Age frequency and CPUE (fish/hr) per inch class of black crappie collected during 4.5 hours of electrofishing at Herrington Lake in 2008.

	Inch class										STD
Age	8	9	10	11	12	13	14	Total	%	CPUE	ERR
2	5	12	5	1				23	61	5.02	1.39
3	1	1		1	9			12	34	2.76	0.75
4								0	0	0.00	0.00
5							2	2	5	0.44	0.44
Total	6	13	5	2	9		2	37	100	8.22	1.79
%	16	35	14	5	24		5	100			

Dataset = cfdpsher.d08 and cfdagher.d08
CPUE of ≥8.0 in crappie = 8.22 ± 1.79 fish/hr; ≥10.0 in = 4.00 ± 1.12 fish/hr

Table 43. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 16 net-nights of gill netting in Herrington Lake in October 2008: 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	Total	CPUE
White bass	1	3	5		2	13	36	33	24	8	4									129	7.17 (2.01)
Hybrid striped bass		4	10	12	21	22				12	38	15	6	6	13	11	3	2	2	177	9.83 (2.45)

Dataset = cfdgnher.d08

Table 44. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2008.

		Age						
Year class	No.	1	2	3	4	5	6	7
2007	63	12.3						
2006	34	12.0	17.8					
2005	7	14.2	18.5	21.2				
2004	1	13.8	19.6	22.2	23.6			
2001	1	13.1	17.1	19.2	20.8	21.7	22.3	23.0
Mean	106	12.4	18.0	21.1	22.2	21.7	22.3	23.0
Smallest		6.3	13.4	19.2	20.8	21.7	22.3	23.0
Largest		15.5	20.1	23.1	23.6	21.7	22.3	23.0
Std Error		0.2	0.2	0.4	1.4			
95% ConLo		12.0	17.6	20.3	19.4			
95% ConHi		12.7	18.3	21.9	25.0			

Intercept Value = 0.00
Dataset = cfdagher.d08

Table 45. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 16 net-nights at Herrington Lake in 2008.

	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+	4	10	12	21	22														69	39	3.83	1.18
1+									12	38	14								64	36	3.56	0.99
2+											1	6	6	13	7	2			35	20	1.94	0.55
3+															4	1	1	1	7	4	0.39	0.20
4+																		1	1	1	0.06	0.06
5+																			0	0	0.00	0.00
6+																			0	0	0.00	0.00
7+																	1		1	1	0.06	0.04
Total	4	10	12	21	22	0	0	0	12	38	15	6	6	13	11	3	2	2	177	100	9.83	2.45
%	2	6	7	12	12	0	0	0	7	21	8	3	3	7	6	2	1	1	100			

Dataset = cfdagher.d08 and cfdgnher.d08

Table 46. Population assessment for hybrid striped bass gill netted at Herrington Lake in October 2008.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	6.00 ± 1.51	2
Mean length age-2+ at capture	20.2 ± 0.2	4
CPUE ≥15.0 in	6.00 ± 1.51	3
CPUE age 1+	3.56 ± 0.99	2
Instantaneous mortality (z)	-0.291	
Annual mortality (A)	25.3% (Weighted)	
Assessment Total		11
Assessment Rating		Good

Table 47. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2008.

		Age					
Year class	No.	1	2	3	4	5	6
2007	35	9.5					
2006	45	9.2	12.3				
2005	23	9.7	12.4	13.8			
2004	4	9.1	12.4	13.7	14.6		
2003	8	9.8	12.7	13.6	14.3	14.9	
2002	1	10.7	13.3	14.6	15.2	15.7	16.2
Mean	116	9.4	12.4	13.8	14.4	15.0	16.2
Smallest		7.7	11.1	12.6	13.4	13.9	16.2
Largest		10.9	13.7	15.0	15.2	15.7	16.2
Std Error		0.1	0.1	0.1	0.2	0.2	
95% ConLo		9.3	12.3	13.5	14.1	14.5	
95% ConHi		9.6	12.5	14.0	14.8	15.5	

Intercept Value = 0.00
Dataset = cfdagher.d08

Table 48. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 16 net-nights at Herrington Lake in 2008.

	Inch class														STD
Age	6	7	8	9	10	11	12	13	14	15	16	Total	%	CPUE	ERR
0+	1	3	5									9	7	0.50	0.20
1+					2	13	21	1				37	29	2.06	0.75
2+							14	25	7			46	35	2.54	0.66
3+							1	7	12	4		24	19	1.35	0.40
4+									2	1	1	4	3	0.22	0.08
5+									3	3	2	8	6	0.44	0.17
6+											1	1	1	0.06	0.03
Total	1	3	5	0	2	13	36	33	24	8	4	90	100	7.17	2.01
%	1	2	4	0	2	10	28	26	19	6	3	100			

Dataset = cfdagher.d08 and cfdgnher.d08

Table 49. Population assessment for white bass gill netted at Herrington Lake in October 2008.

Parameter	Actual Value	Assessment Value
CPUE of white bass (excluding age 0)	6.67 ± 1.90	2
Mean length age-2+ at capture	13.3 ± 0.1	4
CPUE ≥12.0 in	5.83 ± 1.70	3
CPUE age 1+	2.06 ± 0.75	1
Assessment Total		10
Assessment Rating		Good

Table 50. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 3.0 hours of 15-minute electrofishing runs in Guist Creek Lake, April 2008; 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
Largemouth bass	3	11	8	6	21	23	10	14	13	22	31	46	47	58	51	39	36	21	10	2	2	474	158.00 (12.89)

Dataset = cfdpsgcl.d08

Table 51. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Guist Creek Lake from 1992-2008; 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	Total
1992	12.00 (2.10)	16.80 (2.70)	38.40 (5.20)	41.20 (4.70)	108.40 (7.20)
1993	22.70 (2.60)	25.50 (2.70)	23.80 (2.70)	51.60 (5.00)	123.60 (9.10)
1994	19.20 (2.70)	29.80 (3.70)	19.60 (2.60)	40.20 (3.90)	108.80 (8.60)
1995	18.20 (3.00)	40.60 (3.80)	23.20 (2.40)	47.20 (5.50)	129.20 (9.20)
1996	32.60 (5.50)	28.80 (3.60)	44.80 (2.80)	58.20 (5.20)	164.40 (10.60)
1997			NS		
1998	20.30 (3.10)	45.30 (4.90)	18.70 (3.50)	72.70 (12.30)	157.00 (14.50)
1999	53.50 (6.90)	56.80 (10.20)	41.70 (6.30)	51.30 (3.40)	203.30 (19.40)
2000	26.70 (6.10)	19.30 (2.40)	23.00 (2.90)	41.30 (5.40)	110.30 (7.60)
2001	39.00 (5.30)	42.00 (3.60)	17.30 (2.70)	46.30 (5.20)	144.70 (10.10)
2002	43.30 (9.90)	32.30 (7.70)	23.30 (3.10)	41.30 (7.80)	134.30 (18.60)
2003	27.70 (6.70)	96.70 (9.90)	31.00 (4.60)	49.70 (4.00)	205.00 (19.70)
2004	30.70 (6.00)	62.70 (6.50)	58.00 (7.00)	54.30 (5.90)	205.70 (17.00)
2005	84.30 (12.20)	67.00 (6.30)	63.00 (5.60)	70.30 (7.50)	284.70 (25.60)
2006	30.00 (6.60)	69.30 (8.20)	30.30 (3.30)	68.70 (6.40)	198.30 (19.00)
2007	23.30 (3.00)	59.30 (6.30)	42.00 (4.30)	58.00 (5.50)	182.70 (11.60)
2008	24.00 (3.62)	19.67 (2.28)	41.33 (5.56)	73.00 (10.31)	158.00 (12.89)

Dataset = cfdpsgcl.d08

Table 52. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Guist Creek Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	402	85 (± 3)	54 (± 5)

Dataset = cfdpsgcl.d08

Table 53. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Guist Creek Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																						STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	ERR
1	11	8	5																	24	5	8.13	1.99
2			1	21	23	10	13	3												70	15	23.36	2.69
3							1	10	15	23	6									54	12	18.16	2.21
4									7	3	23	38	39	10						120	26	39.87	5.73
5										6	17	9	19	31						82	18	27.41	3.55
6														10	29					39	8	13.15	2.50
7															10	18				28	6	9.25	1.86
8																				0	0	0.00	0.00
9																18	21			39	6	13.00	2.87
10																		10		10	8	3.33	1.08
11																				0	0	0.00	0.00
12																			2	2	2	0.67	0.45
Total	11	8	6	21	23	10	14	13	22	31	46	47	58	51	39	36	21	10	2	469	100		
%	2	2	1	4	5	2	3	3	5	7	10	10	12	11	8	8	4	2	0	100			

Dataset = cfdaggcl.d05 and cfdpsgcl.d08

Table 54. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Guist Creek Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	50.80	16.80	25.70	23.80	16.30	22.10	21.40	15.20	15.50	8.13
2	31.30	19.80	32.90	30.10	58.30	33.80	106.50	49.30	35.20	23.36
3	12.90	4.50	7.50	6.30	18.30	9.90	36.70	36.60	39.50	18.16
4	32.90	11.40	11.20	12.00	29.90	32.10	54.50	34.80	35.10	39.87
5	17.10	17.10	20.30	19.70	33.70	47.30	32.90	22.30	23.00	27.41
6	11.00	13.80	15.40	11.60	16.90	21.60	11.30	17.50	11.70	13.15
7	14.60	6.10	10.30	8.90	10.60	10.80	7.30	9.10	8.70	9.25
8	8.80	10.00	8.30	8.60	8.80	10.60	0.00	0.00	0.00	0.00
9	9.40	4.70	6.40	7.30	6.90	9.10	9.30	10.30	10.80	13.00
10	9.80	2.20	3.70	3.40	4.60	4.10	2.70	2.30	2.70	3.33
11	1.90	3.90	1.80	1.60	2.00	2.70	0.00	0.00	0.00	0.00
12	1.30		0.60	1.10	1.60	1.70	2.00	1.00	1.00	0.67

Table 55. Population assessment for largemouth bass collected from Guist Creek Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	11.5 ± 0.2	4
Spring CPUE age 1	8.13 ± 1.99	1
Spring CPUE 12.0-14.9 in	41.33 ± 5.56	4
Spring CPUE ≥15.0 in	73.00 ± 10.31	4
Spring CPUE ≥20.0 in	4.67 ± 1.46	4
Instantaneous mortality (z)	0.257	
Annual mortality (A)	22.7%	
Total Score		17
Assessment Rating		Excellent

* 2005 age and growth dataset was used

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 2008: 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	72	113	23	1	11	26	16	22	13	9	3	7	8	5	7	3	4	2	2	347	231.33 (21.75)

Dataset = cfdwrgcl.d08

Table 57. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Guist Creek Lake on 10 September 2008. 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	60	89 (1)	18	92 (1)	23	99 (2)	101	92 (1)

Dataset = cfdwrgcl.d08

Table 58. 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	19.50	4.00	0.00		25.70	5.30
2001	Total	3.9	0.1	65.30	14.00	1.00	0.50	23.80	6.70
2002	Total	4.7	0.1	47.30	7.60	19.30	2.80	16.30	3.30
2003	Total	4.0	0.1	30.70	8.20	6.00	2.00	22.10	4.80
2004	Total	4.0	0.1	40.70	6.00	0.70	0.70	21.40	4.20
2005	Total	4.5	0.1	24.50	4.40	5.00	2.00	15.20	4.50
2006	Total	3.9	0.1	50.70	8.50	10.00	4.20	15.50	2.20
2007	Total	3.8	0.2	12.70	4.20	2.70	1.70	8.13	1.99
2008	Total	3.2	0.1	139.33	23.58	0.67	0.67		

Table 59. Length distribution and CPUE (fish/nn) of hybrid striped bass collected during 8 net-nights of gill netting in Guist Creek Lake in November 2008: numbers in parentheses are standard errors.

	Inch class														
Species	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	CPUE
Hybrid striped bass	1			1			1	1				2	1	7	0.88 (0.40)

Dataset = cfdgngcl.d08

Table 60. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Guist Creek Lake in 2008.

		Age						
Year class	No.	1	2	3	4	5	6	7
2007	1	7.0						
2006	1	7.7	13.1					
2005	2	8.1	14.1	18.5				
2003	1	6.7	14.4	19.9	22.5	24.0		
2001	2	9.1	15.6	19.5	22.2	23.4	24.2	24.7
Mean	7	8.0	14.5	19.2	22.3	23.6	24.2	24.7
Smallest		6.7	13.1	17.9	21.3	22.7	23.7	24.1
Largest		9.1	15.9	20.1	23.0	24.1	24.7	25.3
Std Error		0.4	0.5	0.4	0.5	0.4	0.5	0.6
95% ConLo		7.2	13.6	18.4	21.3	22.7	23.2	23.6
95% ConHi		8.8	15.4	20.0	23.2	24.5	25.2	25.8

Intercept Value = 0.00
Dataset = cfdaggcl.d08

Table 61. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 8 net-nights at Guist Creek Lake in 2008.

	Inch class																STD
Age	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	%	CPUE	ERR
1+	1													1	14	0.13	0.13
2+				1										1	14	0.13	0.13
3+							1	1						2	28	0.25	0.25
4+														0	0	0.00	
5+												1		1	14	0.13	0.08
6+														0	0	0.00	
7+												1	1	2	29	0.25	0.13
Total	1			1			1	1				2	1	7	100	0.88	0.40
%	14			14			14	14				29	14	100			

Dataset = cfdaggcl.d08 and cfdgngcl.d08

Table 62. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Guist Creek Lake in November 2008.

		Length group						Total	
Species	Area	8.0–11.9 in		12.0–14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	0		1	80	6	90 (4)	7	89 (3)

Dataset = cfdgngcl.d08

Table 63. Population assessment for hybrid striped bass gill netted at Guist Creek Lake in October 2008.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	0.88 ± 0.40	1
Mean length age-2+ at capture	16.8	2
CPUE ≥15.0 in	0.75 ± 0.37	1
CPUE age 1+	0.13 ± 0.13	1
Assessment Total		5
Assessment Rating		Poor

Table 64. 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 2008; 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	1	22	24	32	10	9	56	152	190	92	19	11	4	1	3	4	1	3	0	1	635	317.50 (29.37)

Dataset = cfdpsbvr.d08

Table 65. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Beaver Lake from 1992-2008; 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	Total
1992	7.10 (2.10)	105.30 (8.60)	4.90 (1.10)	19.10 (4.80)	136.40 (5.60)
1993	22.50 (3.90)	59.50 (5.30)	76.00 (7.90)	13.00 (4.30)	171.00 (12.20)
1994	22.50 (2.80)	5.50 (2.50)	41.50 (3.30)	28.50 (4.50)	96.50 (6.90)
1995	73.00 (8.40)	37.50 (5.90)	10.00 (3.80)	34.00 (7.00)	154.50 (9.90)
1996	81.00 (11.60)	47.00 (6.30)	8.00 (2.00)	37.50 (2.90)	173.50 (17.80)
1997	84.50 (12.20)	99.50 (16.70)	8.50 (2.10)	42.50 (9.60)	235.00 (34.10)
1998	36.00 (4.20)	206.50 (17.60)	14.50 (4.80)	30.50 (6.60)	287.50 (22.80)
1999	42.00 (11.00)	71.50 (7.30)	17.00 (2.60)	22.00 (3.50)	152.50 (18.10)
2000	56.00 (7.70)	26.50 (5.60)	28.50 (2.20)	24.50 (2.90)	137.00 (9.80)
2001	142.50 (8.60)	66.50 (8.60)	25.50 (1.50)	39.00 (6.10)	273.50 (17.10)
2002	55.50 (10.80)	97.00 (13.60)	16.00 (2.10)	32.00 (4.90)	200.50 (26.80)
2003	142.50 (9.10)	131.50 (12.90)	20.00 (3.00)	18.00 (2.40)	312.00 (20.40)
2004	154.50 (5.50)	198.00 (15.10)	48.00 (7.50)	17.00 (3.70)	417.50 (20.30)
2005	68.50 (11.40)	298.00 (22.70)	42.00 (7.70)	15.00 (3.50)	423.50 (21.60)
2006	115.00 (11.30)	217.50 (36.50)	40.00 (3.70)	10.00 (2.30)	382.50 (34.90)
2007	30.50 (4.80)	176.50 (31.10)	42.50 (9.60)	10.00 (2.70)	259.50 (40.40)
2008	44.50 (6.61)	203.50 (22.40)	61.00 (5.99)	8.50 (1.76)	317.50 (29.37)

Dataset = cfdpsbvr.d08

Table 66. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Beaver Lake in 2008; confidence intervals are in parentheses.

Species	No. >8.0 in	PSD	RSD_{15}
Largemouth bass	546	25 (± 4)	3 (± 1)

Dataset = cfdpsbvr.d08

Table 67. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Beaver Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																						STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1	1	22	24																		47	7	23.50	4.37
2				32	10	8	9														58	9	29.25	4.05
3						1	22	61	32	23											138	22	69.07	7.57
4							22	76	127	23		1	1								249	39	124.61	13.11
5							4	15	16	35	14	7	2		3						96	15	48.01	4.64
6									16		5	2	1	1		1					26	4	13.08	1.30
7										12						3					14	2	7.08	0.68
8													1					3			4	1	2.07	0.76
9																	1				1	0	0.33	0.33
10																					0	0	0.00	0.00
11																				1	1	0	0.50	0.50
Total	1	22	24	32	10	9	56	152	190	92	19	11	4	1	3	4	1	3	0	1	635	100	317.50	29.37
%	0	3	4	5	2	1	9	24	30	14	3	2	1	0	0	1	0	0	0	0	100			

Dataset = cfdagbvr.d07 and cfdpsbvr.d08

Table 68. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Beaver Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	25.50	33.10	47.80	35.40	133.20	97.60	38.70	108.30	2.00	23.50
2	25.40	36.80	149.00	96.80	68.80	160.90	160.70	74.60	58.40	29.25
3	27.70	7.50	14.40	19.90	29.80	44.80	68.30	58.30	55.20	69.07
4	50.40	29.40	14.30	11.50	64.40	97.00	141.20	131.90	90.60	124.61
5	3.40	13.30	15.30	9.50	5.60	5.60	4.10	2.50	33.90	48.01
6	0.40	6.20	15.60	9.40	0.00	0.00	0.00	0.00	9.30	13.08
7	5.30	1.90	4.80	4.60	3.50	4.60	3.00	2.30	5.10	7.08
8	3.50	1.30	2.60	2.50	5.30	5.00	3.00	2.10	3.60	2.07
9	2.60	1.20	5.70	7.10	0.50	0.00	0.00	0.00	1.00	0.33
10	0.70	0.30	1.40	1.90	0.00	0.00	0.00	0.00	0.00	0.00
11	5.80	1.40	0.50	0.80	0.50	2.00	4.50	2.50	0.00	0.50
12	1.80	0.70	2.20	1.20	0.50	0.00	0.00	0.00	0.00	0.00

Table 69. Population assessment for largemouth bass collected from Beaver Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	10.3 ± 0.31	2
Spring CPUE age 1	23.50 ± 4.37	2
Spring CPUE 12.0-14.9 in	61.00 ± 5.99	4
Spring CPUE ≥15.0 in	8.50 ± 1.76	2
Spring CPUE ≥20.0 in	2.00 ± 0.76	3
Instantaneous mortality (z)	0.432	
Annual Mortality (A)	35.1%	
Total Score		13
Assessment Rating		Good

* 2007 age and growth dataset was used

Table 70. 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 2008: 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	Total	CPUE
Largemouth bass	6	19	7		2	44	98	61	54	58	83	31	7	3			1	474	316.00 (27.79)

Dataset = cfdwrbvr.d08

Table 71. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Beaver Lake on 16 September 2008. 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	99	86 (1)	57	85 (1)	4	87 (4)	160	85 (1)

Dataset = cfdwrbvr.d08

Table 72. 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 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	127.30	32.90	6.70	2.20	47.80	5.70
2001	Total	4.6	0.1	139.30	28.10	40.70	13.90	35.40	8.90
2002	Total	4.4	0.1	104.00	7.50	19.30	4.60	133.20	9.30
2003	Total	3.7	0.1	117.30	22.00	0.00		97.60	5.00
2004	Total	3.7	0.1	86.70	17.10	3.30	1.60	38.70	10.70
2005	Total	4.0	0.03	199.30	26.30	18.70	4.10	108.30	10.20
2006	Total	4.3	0.1	8.00	2.70	0.00		2.00	1.10
2007	Total	4.6	0.1	175.30	31.20	46.70	4.60	23.50	4.37
2008	Total	3.4	0.1	21.33	11.94	0.00			

Table 73. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Beaver Lake, May 2008; numbers in parentheses are standard errors.

Species	Inch class								Total	CPUE
	2	3	4	5	6	7	8	9		
Bluegill	174	206	60	15	22	73	10		560	224.00 (24.60)
Redear sunfish	25	9	14	15	31	115	191	35	435	174.00 (26.78)

Dataset = cfdpsbvr.d08

Table 74. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Beaver Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. fish ≥stock size	PSD	RSD
Bluegill	386	37 (± 4)	3 (± 2)
Redear sunfish	401	85 (± 3)	9 (± 3)

Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpsbvr.d08

Table 75. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Beaver Lake from 1992-2008; numbers in parentheses are standard errors.

Year	Length group					Total
	<3.0 in	3.0–5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	
1992	1.30 (0.90)	54.20 (10.20)	80.90 (15.10)	0.00	0.00	136.40 (24.00)
1993	2.50 (1.10)	47.00 (6.20)	79.50 (10.00)	0.00	0.00	129.00 (12.60)
1994	2.50 (1.10)	130.00 (21.00)	20.00 (4.00)	0.00	0.00	152.50 (24.20)
1995	2.00 (1.10)	174.00 (18.40)	16.50 (4.70)	0.00	0.00	192.50 (17.30)
1996	0.50 (0.50)	184.50 (27.30)	65.50 (11.50)	0.00	0.00	250.50 (34.50)
1997	2.50 (1.10)	58.00 (12.60)	86.50 (14.40)	0.50 (0.50)	0.00	147.50 (27.40)
1998	0.50 (0.50)	28.00 (4.30)	88.00 (15.00)	0.50 (0.50)	0.00	117.00 (19.00)
1999	14.00 (4.50)	13.00 (5.50)	10.50 (3.00)	0.00	0.00	37.50 (8.30)
2000	50.00 (12.70)	322.00 (23.10)	32.00 (13.60)	7.50 (3.80)	0.00	411.50 (41.20)
2001	19.00 (5.10)	211.50 (16.00)	122.00 (15.20)	0.00	0.00	352.50 (20.20)
2002	5.60 (1.70)	175.20 (22.90)	152.80 (27.70)	0.00	0.00	333.60 (44.70)
2003	33.60 (6.40)	141.60 (17.50)	128.80 (21.90)	0.00	0.00	304.00 (30.10)
2004	36.00 (16.00)	118.40 (32.40)	143.20 (29.30)	0.00	0.00	297.60 (56.40)
2005	21.60 (4.50)	109.60 (14.60)	97.60 (19.30)	4.00 (2.20)	0.00	232.80 (19.70)
2006	20.10 (4.90)	60.90 (8.60)	55.70 (13.50)	8.30 (2.90)	0.00	145.10 (24.70)
2007	12.00 (2.60)	34.40 (4.60)	53.60 (9.50)	2.40 (1.70)	0.00	102.40 (10.40)
2008	69.60 (11.14)	112.40 (13.25)	38.00 (6.25)	4.00 (1.36)	0.00	224.00 (24.60)

Dataset = cfdpvr.d08

Table 76. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Beaver Lake in 2008.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	9
2007	12	2.3								
2006	25	1.8	4.0							
2005	10	1.9	3.8	5.7						
2004	8	2.3	4.3	6.3	7.4					
2003	6	1.9	3.7	5.3	6.2	6.7				
2002	4	2.0	3.7	5.5	6.5	7.2	7.8			
2001	3	2.1	4.1	5.4	6.6	7.2	7.6	8.0		
2000	1	2.0	3.6	5.5	5.8	6.4	7.0	7.4	7.7	
1999	4	2.3	4.1	5.2	5.8	6.3	6.9	7.3	7.6	8.0
Mean	73	2.0	4.0	5.7	6.6	6.8	7.4	7.5	7.6	8.0
Smallest		0.9	2.3	3.5	4.0	4.4	6.6	7.1	7.4	7.8
Largest		3.2	5.5	7.3	8.7	7.9	7.8	8.1	7.7	8.0
Std Error		0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
95% ConLo		1.9	3.8	5.4	6.2	6.4	7.1	7.3	7.5	7.9
95% ConHi		2.2	4.2	5.9	6.9	7.2	7.6	7.8	7.8	8.0

Intercept value = 0.00
Dataset = cfdagbvr.d08

Table 77. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Beaver Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class										STD
Age	2	3	4	5	6	7	8	Total	%	CPUE	ERR
1	160							160	28	63.80	10.21
2	15	185	50	8				258	46	103.29	11.93
3		21	5	5	16			46	8	18.53	2.76
4					6	19	3	29	5	11.44	1.83
5			5	2		19		26	5	10.45	1.59
6						19		19	3	7.79	1.41
7						5	3	8	1	3.09	0.59
8						5		5	1	1.95	0.35
9						5	4	9	2	3.66	0.75
Total	174	206	60	15	22	73	10	560	100	224.00	24.60
%	31	37	11	3	4	13	2	100			

Dataset = cfdagbvr.d08 and cfdpsbvr.d08

Table 78. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Beaver Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	12.70	62.00	44.80	10.20	31.10	31.70	13.60	6.90	10.70	63.80
2	11.90	243.20	167.70	70.40	100.10	102.20	63.20	45.10	22.40	103.29
3	3.90	52.10	140.00	201.70	26.40	17.90	62.00	33.80	29.30	18.53
4	6.30	43.50		49.50	119.60	50.60	37.80	36.20	27.50	11.44
5	0.70	3.20		1.80	26.80	79.90	32.30	11.90	3.70	10.45
6						15.30	15.80	0.90	7.40	7.79
7								10.30	0.30	3.09
8									1.10	1.95
9										3.66

Table 79. Population assessment for bluegill collected from Beaver Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.2 ± 0.2	2
Years to 6.0 in	3 - 3+	3
CPUE ≥6.0 in	42.00 ± 6.72	2
CPUE ≥8.0 in	4.00 ± 1.36	1
Instantaneous mortality (z)	0.455	
Annual Mortality (A)	36.6%	
Assessment Total		8
Assessment Rating		Fair

Table 80. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Beaver Lake from 1992-2008; 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	0.40 (0.40)	10.20 (2.80)	90.20 (12.90)	1.80 (1.00)	0.40 (0.40)	102.70 (13.20)
1993	0.00	2.00 (1.50)	57.00 (10.70)	5.00 (2.00)	0.00	64.00 (12.20)
1994	0.00	6.50 (1.80)	8.00 (2.60)	2.50 (1.30)	0.00	17.00 (4.10)
1995	0.00	2.00 (1.10)	12.50 (3.60)	7.00 (2.70)	0.00	21.50 (5.20)
1996	0.00	6.00 (2.00)	5.50 (2.50)	8.00 (2.60)	0.00	19.50 (5.10)
1997	0.00	13.00 (1.80)	9.00 (2.10)	8.00 (1.70)	0.00	30.00 (1.50)
1998	0.00	3.50 (1.20)	9.00 (2.00)	9.50 (4.60)	0.00	22.00 (5.70)
1999	0.00	0.00	0.50 (0.50)	7.50 (1.80)	2.00 (1.10)	8.00 (2.00)
2000	1.00 (0.70)	5.50 (2.00)	3.50 (1.80)	6.00 (2.00)	1.50 (1.10)	16.00 (3.70)
2001	0.50 (0.50)	34.50 (6.90)	30.00 (6.80)	8.50 (2.90)	0.50 (0.50)	73.50 (10.50)
2002	0.00	49.60 (11.10)	77.60 (18.10)	7.20 (3.90)	0.80 (0.80)	134.40 (27.80)
2003	0.80 (0.80)	21.60 (6.10)	87.20 (15.00)	7.20 (3.30)	0.00	116.80 (20.00)
2004	0.00	38.40 (9.00)	44.00 (8.70)	26.40 (7.40)	0.00	108.80 (17.10)
2005	1.60 (1.10)	46.40 (7.00)	80.80 (12.40)	62.40 (10.80)	0.00	191.20 (22.60)
2006	0.40 (0.40)	46.10 (6.20)	82.20 (6.20)	35.70 (5.70)	0.00	164.40 (13.80)
2007	0.00	25.20 (6.10)	74.00 (13.50)	32.40 (6.60)	0.00	125.30 (23.20)
2008	10.00 (2.71)	15.20 (2.46)	58.40 (12.15)	90.40 (16.50)	0.00	174.00 (26.78)

Dataset = cfdpsbvr.d08

Table 81. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Beaver Lake in 2008.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	12	2.5							
2006	23	2.2	4.5						
2005	14	2.5	4.4	6.3					
2004	5	2.6	4.4	6.3	7.4				
2003	8	2.4	4.4	6.1	7.3	8.4			
2002	16	2.7	4.6	6.5	7.4	8.1	8.8		
2001	1	2.6	5.3	6.5	7.6	8.4	9.0	9.3	
2000	1	2.1	3.8	5.0	5.8	6.8	7.3	7.9	8.5
Mean	80	2.4	4.5	6.3	7.3	8.2	8.8	8.6	8.5
Smallest		1.4	3.1	4.8	5.8	6.8	7.3	7.9	8.5
Largest		3.7	6.0	7.3	8.1	9.0	9.9	9.3	8.5
Std Error		0.0	0.1	0.1	0.1	0.1	0.2	0.7	
95% ConLo		2.4	4.4	6.1	7.1	8.0	8.5	7.2	
95% ConHi		2.5	4.6	6.5	7.5	8.4	9.1	10.0	

Intercept value = 0.00
Dataset = cfdagbvr.d08

able 82. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Beaver Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class											STD
Age	2	3	4	5	6	7	8	9	Total	%	CPUE	ERR
1	25	4							29	7	11.54	2.86
2		5	14	10					30	7	11.86	1.95
3				5	28	26			58	13	23.18	4.79
4					3	51			54	12	21.68	4.57
5						26	64	4	94	22	37.44	6.20
6						13	115	26	154	35	61.45	10.95
7								4	4	1	1.75	0.44
8							13		13	3	5.09	0.89
Total	25	9	14	15	31	115	191	35	435	100	174.00	26.78
%	6	2	3	3	7	26	44	8	100			

Dataset = cfdagbvr.d08 and cfdpsbvr.d08

Table 83. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Beaver Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	0.00	2.00	11.40	0.30	2.40	8.80	0.00	0.40	16.30	11.54
2	0.00	3.70	48.60	37.90	18.30	28.50	23.60	27.30	44.20	11.86
3	1.00	2.80	4.50	61.70	37.80	14.00	97.10	41.10	48.40	23.18
4	1.20	5.20	4.50	30.80	58.30	57.50	9.90	71.80	21.80	21.68
5	1.40	0.70	4.00	2.90			54.10	0.00	0.70	37.44
6	4.50	1.80		0.80			5.00	14.00	0.20	61.45
7								9.90		1.75
8										5.09

Table 84. Population assessment for redear sunfish collected from Beaver Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	6.3 ± 0.1	3
Years to 8.0 in	4 -4+	3
CPUE ≥8.0 in	90.40 ± 16.50	4
CPUE ≥10.0 in	0.00	0
Instantaneous mortality (z)	0.141	
Annual Mortality (A)	13.1%	
Assessment Total		10
Assessment Rating		Fair

Table 85. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Beaver Lake on 16 September 2008. Standard errors are in parentheses.

Species	Length group								Total	
	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	69	85 (2)	21	81 (2)	1	67			91	83 (2)
	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		Total	
Redear sunfish	22	76 (6)	35	89 (2)	28	90 (1)	1	96	86	86 (2)

Dataset = cfdwrbvr.d08

Table 86. Fishery statistics derived from a daytime creel survey at Beaver Lake (158 acres) during 08 April through 30 October 2008.

Fishing Trips		
No. of fishing trips (per acre)	4,574	(48.9)
Fishing Pressure		
Total man-hours (S.E.)[a]	25,785	(625.036)
Man-hours/acre	163.20	
Catch / Harvest		
No. of fish caught (S.E.)	46,749	(3,598.02)
No. of fish harvested (S.E.)	31,841	(3,004.93)
Lb of fish harvested	7,650	
Harvest Rates		
Fish/hour	1.22	
Lb/hour	0.89	
Fish/acre	201.53	
Lb/acre	48.42	
Catch Rates		
Fish/hour	1.81	
Fish/acre	295.88	
Miscellaneous Characteristics		
Male	87.49	
Female	12.51	
Resident	98.86	
Non-resident	1.14	
Method (%)		
Still fishing	71.48	
Casting	27.56	
Fly	0.96	
Mode (%)		
Boat	80.58	
Bank	7.79	
Dock	11.64	

[a] S.E. = Standard Error

Table 87. Fish harvest derived from a creel survey on Beaver Lake (158 acres) from 08 April to 30 October 2008.

	Black bass group	Largemouth bass	Crappie group	White crappie	Catfish group	Channel catfish	Panfish group	Bluegill	Redear sunfish	Longear sunfish	Green sunfish	Anything
No. caught	12,596.15	12,596.15	992.93	992.93	2,366.82	2,366.82	30,793.33	24,297.78	6,474.69	14.29	6.56	
(per acre)	(79.72)	(79.72)	(6.28)	(6.28)	(14.98)	(14.98)	(194.89)	(153.78)	(40.98)	(0.09)	(0.04)	
No. harvested	41.51	41.51	939.25	939.25	1,971.60	1,971.60	28,888.84	22,826.92	6,047.62	14.29		
(per acre)	(0.26)	(0.26)	(5.95)	(5.95)	(12.48)	(12.48)	(182.84)	(144.47)	(38.28)	(0.09)		
% of total no. harvested	0.13	0.13	2.95	2.95	6.19	6.19	90.73	71.69	18.99	0.04		
Lb harvested	116.3	116.3	466.0	466.0	2,112.8	2,112.8	4,954.6	3,468.9	1,483.0	2.7		
(per acre)	(0.74)	(0.74)	(2.95)	(2.95)	(13.37)	(13.37)	(31.36)	(21.96)	(9.39)	(0.02)		
% of total lb harvested	1.52	1.52	2.95	2.95	27.62	27.62	64.77	45.35	19.39	0.04		
Mean length (in)		17.1		10.4		15.5		6.4	7.2	7.0		
Mean weight (lb)		2.64		0.54		1.21		0.16	0.26	0.19		
No. of fishing trips for that species	1,652.78		332.16		325.19		4,337.34					589.54
% of all trips	22.84		4.59		4.49		59.93					8.15
Hours fished for that species (per acre)	5,888.73 (37.27)		1,183.47 (7.49)		1,158.64 (7.33)		15,453.58 (97.81)					2,100.48 (13.29)
No. harvested fishing for that species	20		559		720		27,427					
Lb harvested fishing for that species	64.8		263.4		712.4		4,678.0					
No./hour harvested fishing for that species	0.004		0.492		0.631		1.769					
% success fishing for that species	1.16		51.06		61.54		64.17					55.21

Table 88. Length distribution (length of released fish are estimated) for each species of fish harvested at Beaver Lake (158 acres) from 08 April to 30 October 2008.

	Inch class																				
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Largemouth bass																					
Harvested													25	8						9	
Released					466	136	4,908	220	3,475	1,729	1,238	104	104	130	35					9	
White crappie																					
Harvested					54	250	340	125	125	36	9										
Released				23		31															
Bluegill																					
Harvested	263	4,154	9,196	8,721	413	80															
Released	48	358	771	294																	
Redear sunfish																					
Harvested	27	277	1,302	2,542	1,391	348	152	9													
Released			109	272	46																
Longear sunfish																					
Harvested				14																	
Green sunfish																					
Released			7																		
Channel catfish																					
Harvested									17	419	672	236	270	209	52	17	26		35		19
Released				63	110	63	102	6		36				15							

Table 89. Black bass catch and harvest statistics derived from a creel survey at Beaver Lake (158 acres) for black bass caught and released by all anglers from 08 April to 30 October 2008.

		Largemouth bass Catch and Release		
	Harvest	12.0–14.9 in	≥15.0 in	Total
Total no of bass	41.5	6,442.4	382.3	12,596.2
% of black bass harvested by no.	100.0			
Total weight of fish (lbs)	116.3	4,679.3	884.4	9,843.3
% of black bass harvest by weight	100.0			
Mean length	17.1			
Mean weight	2.64			
Rate (fish/h)	0.002			

Table 90. Monthly black bass angling success at Beaver Lake during the 2008 creel survey.

Month	Total no. of black bass caught by all anglers	Total no. of black bass harvested by anglers	No. of fishing trips for black bass	Hours fished by black bass anglers	Black bass caught by black bass anglers	Black bass caught/hr by black bass anglers	Black bass harvested by black bass anglers	Black bass harvested/hr by black bass anglers
April	1,057.81	14.29	290.48	1,034.97	915	1.09		
May	1,258.06		249.95	890.54	1,250	1.16		
June	2,014.90		199.38	710.38	1,921	2.78		
July	2,991.07		265.66	946.53	2,933	2.75		
August	2,190.96	7.53	239.45	853.14	2,010	2.23		
September	1,463.65	19.69	191.78	683.31	1,306	2.04	20	0.031
October	1,619.70		216.07	769.85	1,561	1.88		
Total	12,596.15	41.51	1,652.78	5,888.73	11,896		20	0.004
Mean						1.99		

t = < 0.01

Table 91. Crappie catch and harvest statistics derived from a creel survey at Beaver Lake (158 acres) for crappie caught and released by all anglers from 08 April to 30 October 2008.

		White crappie Catch and Release		
	Harvest	<9.0 in	≥9.0 in	Total
Total no of crappie	939.25	23.0	30.7	992.93
% of crappie harvested by no.	100.0			
Total weight of fish (lbs)	466	5.0	6.5	477.5
% of crappie harvest by weight	100.0			
Mean length	10.4			
Mean weight	0.54			
Rate (fish/h)	0.035			

Table 92. Monthly crappie angling success at Beaver Lake during the 2008 creel survey.

Month	Total no. of crappie caught by all anglers	Total no. of crappie harvested by all anglers	No. of fishing trips for crappie	Hours fished by crappie anglers	Crappie caught by crappie anglers	Crappie caught/hr by crappie anglers	Crappie harvested by crappie anglers	Crappie harvested/hr by crappie anglers
April	371.66	357.37	140.23	499.64	114	0.20	100	0.17
May	88.71	88.71	54.87	195.49	65	0.41	65	0.41
June	9.46	9.46						
July	9.71	9.71						
August	67.76	67.76	19.90	67.35	30	0.33	30	0.33
September	210.03	170.65	37.29	132.87	171	1.21	158	1.12
October	235.59	235.59	68.51	244.10	206	0.55	206	0.55
Total	992.93	939.25	332.16	1,183.47	586		559	
Mean						0.51		0.49

Table 93. Channel catfish catch and harvest statistics derived from a creel survey at Beaver Lake (158 acres) for catfish caught and released by all anglers from 08 April to 30 October 2008.

		Channel Catfish Catch and Release		
	Harvest	12.0–14.9 in	≥15.0 in	Total
Total no of channel catfish	1,971.60	36.0	15.0	2,366.82
% of channel catfish harvested by no.	100.0			
Total weight of fish (lbs)	2,112.8	33.0	13.0	2,233.9
% of channel catfish harvest by weight	100.0			
Mean length	15.5			
Mean weight	1.22			
Rate (fish/h)	0.076			

Table 94. Monthly catfish angling success at Beaver Lake during the 2008 creel survey.

Month	Total no. of catfish caught by all anglers	Total no. of catfish harvested by all anglers	No. of fishing trips for catfish	Hours fished by catfish anglers	Catfish caught by catfish anglers	Catfish caught/hr by catfish anglers	Catfish harvested by catfish anglers	Catfish harvested/hr by catfish anglers
April	42.88	42.88						
May	153.22	153.22	48.77	173.76	153	0.81	153	0.81
June	652.71	652.71	90.04	320.82	284	0.94	284	0.94
July	738.06	602.10	92.67	330.18	214	0.67	214	0.67
August	308.69	180.70	25.21	89.80	23	0.23	15	0.15
September	301.92	170.65	47.95	170.83	111	0.97	39	0.34
October	169.33	169.33	10.541	37.55	15	0.29	15	0.29
Total	2,366.82	1,971.60	325.19	1,158.64	800		720	
Mean						0.72		0.63

Table 95. Panfish catch and harvest statistics derived from a creel survey at Beaver Lake (158 acres) for catfish caught and released by all anglers from 08 April to 30 October 2008.

	Bluegill				Redear sunfish				Longear sunfish				Green Sunfish			
		Catch and Release				Catch and Release				Catch and Release				Catch and Release		
	Harvest	6.0–9.9 in	≥10.0 in	Total	Harvest	6.0–9.9 in	≥10.0 in	Total	Harvest	6.0–9.9 in	≥10.0 in	Total	Harvest	6.0–9.9 in	≥10.0 in	Total
Total no	22,826.92	1,064.85	0.0	24,297.78	6,047.62	427.08	0.0	6,474.69	14.29	0.0	0.0	14.29	0.00	6.56	0.0	6.56
% of panfish harvested by no.	79.0				20.9				0.1							
Total weight of fish (lbs)	3,468.9	138.8	0.0	3,660.7	1,483.0	95.1	0.0	1,578.1	2.7	0.0	0.0	2.7	0.0	0.9	0.0	0.9
% of panfish harvest by weight	70.0				29.9				0.1							
Mean length	6.4				7.2				7.0							
Mean weight	0.16				0.26				0.19							
Rate (fish/h)	0.875				0.228				0.0003							

Table 96. Monthly panfish angling success at Beaver Lake during the 2008 creel survey.

Month	Total no. of panfish caught by all anglers	Total no. of panfish harvested by all anglers	No. of fishing trips for panfish	Hours fished by panfish anglers	Panfish caught by panfish anglers	Panfish caught/hr by panfish anglers	Panfish harvested by panfish anglers	Panfish harvested/hr by panfish anglers
April	1,558.13	1,543.83	380.63	1,356.17	1,486	1.10	1,472	1.09
May	3,024.18	2,838.69	707.17	2,519.59	3,000	1.24	2,815	1.17
June	12,761.03	12,543.46	1,260.60	4,491.43	12,648	2.77	12,430	2.72
July	5,516.00	5,117.84	685.77	2,443.36	4,894	2.04	4,603	1.92
August	3,719.37	3,101.98	655.34	2,334.92	3,434	1.54	2,906	1.30
September	3,117.65	2,697.59	452.82	1,613.37	2,935	1.70	2,567	1.48
October	1,096.98	1,045.44	194.99	694.74	634	1.23	634	1.23
Total	30,793.33	28,888.84	4,337.34	15,453.58	29,031		27,427	
Mean						1.88		1.77

BEAVER LAKE ANGLER ATTITUDE SURVEY 2008

(Based on 94 surveys)

1. Which species of fish do you fish for at Beaver Lake (**check all that apply**)?
   Bass **10.6%** Crappie **22.3%** Bluegill **72.3%** Redear sunfish **42.6%** Channel catfish **7.4%**

2. Which one species do you fish for most at Beaver Lake (**check only one**)?
   Bass **7.5%** Crappie **14.9%** Bluegill **70.1%** Redear sunfish **6.0%** Channel catfish **1.5%**

Bass Anglers

3. What level of satisfaction do you have with bass fishing at Beaver Lake?
   Very satisfied **11.8%** Somewhat satisfied **52.9%** Neutral **11.8%** Somewhat dissatisfied **23.5%** Very dissatisfied **0.0%** No opinion **0.0%**

3a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction?

All fish are undersized; to few fish; too many weeds

Crappie Anglers

4. What level of satisfaction do you have with the crappie fishing at Beaver Lake?
   Very satisfied **20.0%** Somewhat satisfied **35.0%** Neutral **35.0%** Somewhat dissatisfied **10.0%** Very dissatisfied **0.0%** No opinion **0.0%**

4a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

To few fish; Too many weeds

Bluegill Anglers

5. What level of satisfaction do you have with the bluegill fishing at Beaver Lake?
   Very satisfied **34.7%** Somewhat satisfied **50.0%** Neutral **9.7%** Somewhat dissatisfied **5.6%** Very dissatisfied **0.0%** No opinion **0.0%**

5a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?

Too many weeds

Redear sunfish Anglers

6. What level of satisfaction do you have with the redear sunfish fishing at Beaver Lake?
   Very satisfied **46.3%** Somewhat satisfied **48.8%** Neutral **4.9%** Somewhat dissatisfied **0.0%** Very dissatisfied **0.0%** No opinion **0.0%**

6a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?

None

Catfish Anglers

7. What level of satisfaction do you have with the catfish fishing at Beaver Lake?
   Very satisfied **42.9%** Somewhat satisfied **57.1%** Neutral **0.0%** Somewhat dissatisfied **0.0%** Very dissatisfied **0.0%** No opinion **0.0%**

7a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction?

None

8. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?

Support **74.2%** Oppose **7.9%** No Opinion **18.0%**

9. How many times do you fish Beaver Lake a year?

First Time **24.7%** 1 to 4 **42.7%** 5 to 10 **19.1%** More than 10 **13.5%**

10. Are you satisfied with the current size and creel limits on all sport fish at Beaver Lake?

Yes **98.8%** No **1.2%**

Table 97. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Boltz Lake, April 2008; 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	4	30	42	18	13	14	18	9	10	7	5	7	2	6	2	5	1	197	98.50 (7.09)

Dataset = cfdpsbol.d08

Table 98. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Boltz Lake from 1991-2008; 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	Total
1991		43.60 (4.90)	10.80 (2.00)	6.50 (1.20)	60.80 (6.60)
1993	25.20 (6.40)	70.00 (4.80)	12.00 (2.30)	7.30 (2.20)	114.80 (8.90)
1994	48.40 (9.50)	45.00 (5.70)	32.40 (6.50)	3.60 (1.40)	129.60 (9.60)
1995	155.20 (10.80)	50.00 (3.30)	31.50 (3.90)	6.00 (1.70)	242.40 (10.40)
1997	34.80 (8.60)	183.60 (29.40)	36.80 (4.60)	14.40 (2.20)	268.80 (38.60)
1998	43.20 (6.00)	172.00 (18.80)	22.40 (3.30)	9.60 (2.20)	247.20 (24.80)
1999	87.20 (16.60)	184.80 (42.40)	90.40 (16.00)	13.80 (6.80)	560.00 (31.20)
2000	92.00 (30.40)	148.00 (7.70)	226.40 (18.40)	8.80 (2.90)	475.20 (16.80)
2001	24.00 (5.20)	212.80 (15.80)	133.60 (13.00)	9.60 (3.50)	380.00 (26.30)
2002	5.60 (2.70)	101.60 (20.10)	67.20 (11.40)	45.60 (9.20)	220.00 (27.30)
2003	10.70 (2.90)	39.30 (10.40)	61.30 (12.90)	40.00 (5.00)	151.30 (25.10)
2004	64.00 (12.90)	38.50 (4.90)	19.50 (4.40)	25.50 (5.90)	147.50 (22.90)
2005	69.00 (10.10)	39.50 (4.00)	21.00 (2.40)	20.00 (6.20)	149.50 (8.40)
2006	11.50 (1.40)	48.00 (4.70)	17.00 (3.70)	18.00 (2.90)	94.50 (9.90)
2007	28.50 (3.80)	37.00 (2.40)	17.00 (3.90)	20.00 (3.90)	102.50 (11.80)
2008	19.00 (2.24)	43.50 (7.27)	18.50 (2.13)	17.50 (3.02)	98.50 (7.09)

Dataset = cfdpsbol.d08

Table 99. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Boltz Lake in 2008; confidence intervals are in parentheses.

Species	No. >8.0 in	PSD	RSD_{15}
Largemouth bass	159	45 (± 8)	22 (± 6)

Dataset = cfdpsbol.d08

Table 100. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Boltz Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																					STD
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1	3	1	4																	8	4	4.00	3.58
2				30	42	8	3													83	42	41.39	1.70
3						10	10	12												32	16	16.11	2.39
4								2	15	7	4	5								33	17	16.42	3.43
5											2									2	1	1.00	0.21
6									3		2		2	7						13	7	6.62	2.07
7										2	2	2	2							8	4	4.13	0.53
8													2		1					3	1	1.33	1.33
9															1	3				4	2	2.00	1.25
10																3		5		8	4	4.00	0.33
11																	2		1	3	2	1.50	0.65
Total	3	1	4	30	42	18	13	14	18	9	10	7	5	7	2	6	2	5	1	197	100	98.50	11.78
%	2	1	2	15	21	9	7	7	9	5	5	4	3	4	1	3	1	3	1	100			

Dataset = cfdagbol.d06 and cfdpsbol.d08

Table 101. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Boltz Lake from 1998-2008.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	25.90	77.70	55.00	0.80	0.80	0.00	51.00	15.50	7.00	20.50	4.00
2	45.80	86.10	52.60	29.60	11.20	16.10	27.40	68.80	28.70	30.20	41.39
3	71.40	212.20	50.80	115.30	101.80	23.80	16.30	17.40	22.90	13.60	16.11
4	70.50	92.20	115.00	81.60	27.20	47.00	21.10	19.50	14.30	17.30	16.42
5	11.80	47.80	132.00	42.30	18.80	16.50	5.60	6.10	1.20	0.40	1.00
6	7.90	30.20	62.20	55.30	18.10	15.40	7.80	6.30	6.30	6.80	6.62
7	6.10	3.50	5.20	41.90	23.00	20.90	10.20	9.20	5.00	5.30	4.13
8	2.20	3.40	1.60	10.10	12.00	8.20	4.30	4.70	3.50	4.30	1.33
9	3.20	3.50	0.80	3.20	7.00	2.60	2.80	1.30	3.50	2.80	2.00
10	1.00	2.70				0.80	1.00	0.80	1.50	0.50	4.00
11	1.00	1.10							0.50	1.00	1.50

Table 102. Population assessment for largemouth bass collected from Boltz Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	10.3 ± 0.2	2
Spring CPUE age 1	4.00 ± 3.58	1
Spring CPUE 12.0-14.9 in	18.50 ± 2.13	1
Spring CPUE ≥15.0 in	17.50 ± 3.02	3
Spring CPUE ≥20.0 in	4.00 ± 1.51	4
Instantaneous mortality (z)	0.219	
Annual Mortality (A)	19.7%	
Total Score		11
Assessment Rating		Fair

* 2006 age and growth dataset was used

Table 103. 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 2008: 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
Largemouth bass	16	58	26	8	1	17	8	8	10	8	6	4	3	6	0	2	2	2	185	123.33 (15.30)

Dataset = cfdwrbol.d08

Table 104. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Boltz Lake on 25 September 2008. 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	34	83 (1)	13	86 (3)	12	98 (2)	59	87 (1)

Dataset = cfdwrbol.d08

Table 105. 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.

Year Class	No. of fish	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
1997	145	4.2	(0.04)	96.70	(11.30)	6.70	(1.70)	25.90	(4.40)
1998	147	5.0	(0.05)	98.00	(12.00)	48.00	(5.80)	77.70	(31.00)
1999	170	5.2	(0.07)	113.30	(16.20)	68.70	(13.00)	55.00	(24.70)
2000	19	3.0	(0.27)	12.70	(6.70)	1.30	(1.30)	0.80	(0.80)
2001	46	3.2	(0.09)	30.70	(6.90)	0.70	(0.70)	0.80	(0.80)
2002	50	3.7	(0.10)	28.60	(7.40)	1.70	(1.20)	0.00	(0.00)
2003*	27	3.7	(0.15)	18.00	(4.50)	1.30	(0.80)	7.00	(2.20)
2004*	80	4.1	(0.07)	53.30	(7.10)	6.70	(2.70)	15.00	(3.40)
2005*	34	3.9	(0.11)	22.70	(5.00)	1.30	(0.80)	4.00	(1.10)
2006	90	4.6	(0.06)	60.00	(7.50)	18.70	(3.70)	20.50	(3.60)
2007	17	4.2	(0.21)	11.30	(2.60)	2.00	(0.90)	4.00	(3.58)
2008	108	3.6	(0.07)	72.00	(11.91)	5.33	(1.69)		

*Only include wild largemouth bass CPUE for age-1 year class, stocked largemouth bass were marked by fin clip and removed from dataset.

Table 106. Species composition, relative abundance, and CPUE (fish/hr) of bluegill collected in 1.25 hour of 7.5-minute electrofishing runs in Boltz Lake, May 2008; numbers in parentheses are standard errors.

Species	Inch class 1	2	3	4	5	6	7	Total	CPUE
Bluegill	17	236	175	115	39	51	1	634	507.20 (54.51)

Dataset = cfdpsbol.d08

Table 107. PSD and RSD_8 values calculated for bluegill collected during 1.00 hour of electrofishing at Boltz Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. ≥3.0 in	PSD	RSD_8
Bluegill	381	13 (± 3)	0 (± 0)

Dataset = cfdpsbol.d08

Table 108. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Boltz Lake from 1992-2008; 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
1991	0.50 (0.50)	60.80 (8.50)	10.80 (2.10)		72.40 (9.60)
1993	15.20 (7.40)	57.20 (15.80)	10.00 (5.20)		82.80 (24.00)
1994	26.00 (7.30)	131.60 (17.60)	30.50 (5.10)	0.50 (0.50)	188.40 (25.60)
1995	50.00 (9.80)	232.50 (31.70)	57.60 (12.80)	1.50 (0.70)	347.60 (46.00)
1997	91.50 (16.90)	43.00 (7.50)	39.20 (7.00)	5.40 (2.00)	179.20 (19.90)
1998	886.90 (210.80)	94.60 (13.80)	53.10 (7.70)	13.10 (2.30)	1047.70 (216.90)
1999	144.60 (30.70)	140.00 (51.50)	35.40 (6.90)	6.90 (3.10)	326.20 (62.30)
2000	1799.20 (73.50)	393.80 (19.40)	10.80 (3.20)	0.80 (0.80)	2204.60 (63.80)
2001	167.80 (51.50)	257.70 (40.00)	11.50 (3.80)	0.80 (0.80)	437.70 (60.00)
2002	174.60 (26.80)	396.20 (45.60)	16.90 (3.60)		587.70 (62.40)
2003	156.90 (49.40)	373.10 (26.30)	51.50 (16.50)		581.50 (47.70)
2004	313.30 (29.90)	261.10 (27.20)	31.80 (12.00)		606.20 (58.80)
2005	131.50 (16.00)	205.40 (34.30)	15.40 (5.40)		352.30 (35.80)
2006	229.00 (42.00)	367.00 (41.60)	39.00 (12.00)		635.00 (63.50)
2007	208.80 (29.90)	135.20 (23.10)	30.40 (8.20)		374.40 (44.30)
2008	202.40 (28.50)	263.20 (33.72)	41.60 (5.82)		507.20 (54.21)

Table 109. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Boltz Lake in 2008.

		Age					
Year	No.	1	2	3	4	5	6
2007	18	2.4					
2006	19	2.5	4.0				
2005	11	3.5	5.2	6.1			
2004	2	2.4	4.9	6.2	6.7		
2003	2	2.1	4.0	5.2	5.7	6.0	
2002	1	3.4	4.4	5.4	6.0	6.3	6.5
Mean	53	2.7	4.5	6.0	6.1	6.1	6.5
Smallest		1.7	3.1	5.1	5.5	5.8	6.5
Largest		4.4	5.9	6.8	7.0	6.3	6.5
Std Error		0.1	0.1	0.1	0.2	0.1	
95% ConLo		2.5	4.2	5.7	5.6	5.8	
95% ConHi		2.9	4.7	6.2	6.6	6.4	

Intercept value = 0.00
Dataset = cfdagbvr.d08

Table 110. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Boltz Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class										STD
Age	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1	17	236	48					301	47	240.58	32.19
2			127	115	9			251	40	200.75	27.33
3					26	36		62	10	49.36	7.93
4						5	1	6	1	4.88	0.84
5					4	5		9	1	7.55	1.23
6						5		5	1	4.08	0.60
Total	17	236	175	115	39	51	1	634	100	507.20	54.51
%	3	37	28	18	6	8	0	100			

Dataset = cfdagbol.d08 and cfdpsbol.d08

Table 111. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Boltz Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	12.70	62.00	44.80	10.20	31.10	31.70	13.60	537.00	267.00	240.58
2	11.90	243.20	167.70	70.40	100.10	102.20	63.20	41.80	66.70	200.75
3	3.90	52.10	140.00	201.70	26.40	17.90	62.00	16.10	34.20	49.36
4	6.30	43.50		49.50	119.60	50.60	37.80	32.40		4.88
5	0.70	3.20		1.80	26.80	79.90	32.30	6.70		7.55
6						15.30	15.80	1.00		4.08

Table 112. Population assessment for bluegill collected from Boltz Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.0 ± 0.1	2
Years to 6.0 in	3 – 3+	3
CPUE ≥6.0 in	41.60 ± 5.82	2
CPUE ≥8.0 in	0.00	0
Instantaneous mortality (z)	0.930	
Annual Mortality (A)	60.5%	
Assessment Total		7
Assessment Rating		Fair

Table 113. Number of fish and the relative weight (Wr) for each length group of bluegill collected at Boltz Lake on 25 September 2008. 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	60	85 (2)	1	78 (-)			61	85 (2)

Dataset = cfdwrbol.d08

Table 114. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Bullock Pen Lake, April 2008; numbers in parentheses are standard errors.

	Inch class																			
Location/Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Largemouth bass	1	4	2	12	10	12	17	56	52	51	47	27	20	32	20	23	2	0	1	389	194.50 (11.68)

Dataset = cfdpsbpl.d08

Table 115. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Bullock Pen Lake from 1991-2008; 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	Total
1991		36.60	22.80	16.40	75.20
1994	10.00 (2.30)	17.50 (2.80)	37.60 (3.60)	40.00 (9.90)	104.00 (12.40)
1995	7.00 (1.60)	36.40 (4.70)	33.20 (4.40)	40.80 (5.60)	117.60 (9.90)
1996	10.50 (2.50)	26.50 (4.60)	26.00 (6.00)	30.50 (6.10)	93.60 (11.60)
1997	18.00 (3.50)	71.60 (8.70)	34.40 (3.30)	34.40 (6.10)	158.40 (17.30)
1998	18.00 (4.40)	43.60 (4.80)	39.60 (9.20)	33.20 (7.20)	139.20 (19.20)
1999	14.00 (3.60)	40.40 (4.00)	35.20 (4.00)	38.40 (12.00)	128.00 (14.00)
2000	15.10 (4.80)	35.50 (5.00)	21.00 (3.10)	42.40 (9.80)	113.50 (6.50)
2001	9.00 (3.20)	33.50 (4.30)	38.50 (7.20)	66.00 (15.20)	147.20 (16.40)
2002	6.50 (1.70)	29.50 (3.00)	41.50 (7.20)	54.50 (10.40)	132.00 (16.50)
2003	9.00 (2.50)	19.50 (2.30)	32.50 (4.10)	56.50 (8.80)	117.50 (9.80)
2004	6.50 (1.30)	31.50 (3.70)	45.00 (8.50)	57.50 (11.40)	140.50 (13.40)
2005	9.50 (1.30)	17.00 (2.60)	38.00 (5.80)	63.00 (13.70)	127.50 (15.50)
2006	13.50 (4.30)	35.50 (6.00)	25.50 (3.90)	62.50 (8.40)	137.00 (8.70)
2007	17.50 (3.50)	44.50 (6.70)	32.00 (2.80)	44.00 (8.10)	138.00 (6.10)
2008	9.50 (2.92)	47.50 (5.78)	75.00 (5.74)	62.50 (9.32)	194.50 (11.68)

Dataset = cfdpsbpl.d08

Table 116. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Bullock Pen Lake in 2008; confidence intervals are in parentheses.

Species	No. >8.0 in	PSD	RSD_{15}
Largemouth bass	370	74 (± 4)	34 (± 5)

Dataset = cfdpsbpl.d08

Table 117. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Bullock Pen Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																					STD
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1	1	3																		4	1	2.10	1.13
2			1	2	11	8	6													27	7	13.46	4.16
3				1	3	5	13	34	12											66	17	33.21	3.72
4						2	4	11	23	28	21	7								96	25	47.95	1.83
5								11	6	17	10	7								51	13	25.59	0.69
6									6	6	10	3	10							35	9	17.63	1.01
7									6			3			7	15				31	8	15.58	3.39
8											5		10		7					22	6	10.94	2.12
9												7		11	7	8				32	8	15.88	2.26
10														11			1			12	3	5.83	1.07
11																				0		0.00	0.000
12																	1		1	2	1	1.00	0.76
13														11						11	3	5.33	0.76
Total	1	4	2	12	10	12	17	56	52	51	47	27	20	32	20	23	2	0	1	276	100	194.50	11.68
%	0	1	1	3	3	3	4	14	13	13	12	7	5	8	5	6	1	0	0	100			

Dataset = cfdagbpl.d06 and cfdpsbpl.d08

Table 118. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Bullock Pen Lake from 1997-2008.

	Year										
Age	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	3.00	4.00	6.80	0.00	0.50	1.80	0.00	1.30	2.50	3.40	2.10
2	21.40	18.60	13.00	17.70	11.40	14.60	17.10	9.00	23.10	23.30	13.46
3	25.70	26.80	15.40	19.60	32.90	13.80	24.80	19.70	19.10	28.60	33.21
4	30.50	29.60	12.50	19.30	14.30	18.40	23.80	20.30	20.50	24.70	47.95
5	16.70	22.70	13.70	20.50	35.50	21.10	23.50	21.10	10.10	12.10	25.59
6	10.90	5.40	11.10	18.90	13.60	16.40	16.20	15.90	13.20	12.30	17.63
7	7.20	6.20	9.90	25.80	11.30	15.90	15.30	15.60	11.20	8.50	15.58
8	9.50	11.30	14.50	12.30	6.60	5.80	6.20	7.10	11.30	9.70	10.94
9	2.60	2.40	9.00	10.20	2.70	5.20	6.00	7.20	14.50	9.30	15.88
10	2.80	0.60	6.50	2.60	1.40	1.20	2.00	3.00	5.60	3.10	5.83
11	2.70		0.80			2.80	3.80	4.30	0.00	0.00	0.00
12	0.60				0.70	0.60	2.00	3.00	0.30	0.30	1.00
13									5.30	2.80	5.33

Table 119. Population assessment for largemouth bass collected from Bullock Pen Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	10.2 ± 0.3	2
Spring CPUE age 1	2.10 ± 1.13	1
Spring CPUE 12.0-14.9 in	75.00 ± 5.74	4
Spring CPUE ≥15.0 in	62.50 ± 9.32	4
Spring CPUE ≥20.0 in	1.50 ± 1.05	2
Instantaneous mortality (z)	0.148	
Annual Mortality (A)	13.8%	
Total Score		13
Assessment Rating		Good

* 2006 age and growth dataset was used

Table 120. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Bulllock Pen Lake in October 2008: 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
Largemouth bass	3	11	9	7	2	10	13	4	6	13	27	19	19	18	14	6	4	6	1		1	193	128.67 (15.30)

Dataset = cfdwrbpl.d08

Table 121. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Bullock Pen Lake on 2 October 2008. 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	36	84 (1)	64	92 (1)	50	99 (1)	150	92 (1)

Dataset = cfdwrbpl.d08

Table 122. 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 Bullock Pen 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
1997	Total	3.6	(0.1)	34.00	(11.90)	0.70	(0.70)	3.00	(1.70)
1998	Total	3.5	(0.1)	28.00	(8.40)	1.30	(1.30)	4.00	(0.90)
1999	Total	3.7	(0.1)	30.00	(6.10)	2.00	(1.40)	6.80	(2.60)
2000	Total	3.8	(0.3)	6.30	(1.50)	0.00		0.00	
2001	Total	3.6	(0.2)	12.00	(2.70)	1.30	(0.80)	0.50	(0.50)
2002	Total	3.1	(0.1)	17.30	(4.60)	0.00		1.80	(0.70)
2003	Total	3.3	(0.1)	22.00	(8.10)	0.00		0.00	
2004	Total	4.1	(0.2)	16.00	(3.70)	4.00	(1.50)	*	
2005	Total	3.5	(0.1)	28.00	(8.10)	2.00	(0.90)	2.50	(1.30)
2006	Total	4.2	(0.2)	4.00	(1.50)	0.00		3.40	(1.10)
2007	Total	4.1	(0.2)	6.70	(2.00)	0.70	(0.70)	2.10	(1.13)
2008	Total	4.1	(0.2)	20.67	(5.60)	5.33	(1.69)		

*Largemouth bass were stocked, and were not able to be distinguished from the wild age-1 largemouth bass

Table 123. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Corinth Lake, April 2008; 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	11	60	20	13	146	142	44	66	76	42	21	14	10	14	10	12	9	3	2	1	716	358.00 (25.15)

Dataset = cfdpscor.d08

Table 124. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Corinth Lake from 1992-2008; 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	Total
1992	31.00 (9.30)	22.50 (5.30)	5.00 (2.60)	0.00	58.50 (9.80)
1993	34.00 (8.20)	111.30 (11.50)	7.30 (2.40)	2.00 (1.40)	154.70 (13.50)
1996	53.50 (10.10)	174.50 (16.70)	14.50 (2.00)	4.50 (1.60)	247.00 (18.10)
1998	15.50 (3.20)	111.50 (9.80)	19.00 (3.00)	4.00 (1.70)	150.00 (14.40)
1999	137.00 (14.20)	56.50 (5.20)	24.50 (4.30)	3.50 (1.20)	221.50 (16.40)
2000	312.80 (47.00)	136.00 (18.20)	22.40 (6.50)	4.80 (2.30)	476.00 (63.70)
2001	127.20 (16.60)	231.20 (8.00)	20.80 (5.10)	9.60 (3.20)	388.80 (13.50)
2002	40.70 (8.10)	153.30 (21.70)	13.30 (2.90)	16.70 (2.80)	224.00 (28.70)
2003	58.00 (13.60)	146.00 (16.40)	23.30 (3.80)	6.00 (2.00)	233.30 (28.20)
2004	23.00 (4.80)	77.50 (5.00)	40.00 (4.30)	5.00 (1.50)	145.50 (8.00)
2005	45.50 (3.90)	115.00 (9.30)	72.00 (10.00)	20.50 (3.00)	253.00 (16.00)
2006	15.00 (2.70)	74.50 (6.80)	29.00 (1.30)	34.50 (4.70)	153.00 (8.80)
2007	88.50 (14.80)	106.00 (7.00)	21.50 (3.40)	22.50 (3.50)	238.50 (17.60)
2008	52.00 (9.74)	199.00 (16.97)	69.50 (4.84)	37.50 (3.85)	358.00 (25.15)

Dataset = cfdpscor.d08

Table 125. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	612	35 (± 4)	12 (± 3)

Dataset = cfdpscor.d08

Table 126. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Corinth Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																					STD
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	%	CPUE	ERR
1	11	60	20	4																	95	13	47.67	9.06
2				9	146	142	5														302	42	150.78	14.25
3							15	33													48	7	23.83	2.77
4							24	33	57	38	15		3								170	24	85.14	4.77
5									10		6	14	7	5							41	6	20.57	2.34
6									10						5						15	2	7.25	1.00
7															3	6					9	1	4.25	1.36
8										4				9	3		9				25	3	12.52	1.51
9																					0	0	0.00	0.00
10																6		3	2	1	12	2	6.00	1.13
Total	11	60	20	13	146	142	44	66	76	42	21	14	10	14	10	12	9	3	2	1	716	100	358.00	25.15
%	2	8	3	2	20	20	6	9	11	6	3	2	1	2	1	2	1	0	0	0	100			

Dataset = cfdagcor.d07 and cfdpscor.d08

Table 127. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Corinth Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	120.40	293.20	63.40	35.30	54.30	21.10	32.40	11.10	86.70	47.67
2	36.60	57.00	134.20	26.30	68.00	37.10	71.30	41.10	68.50	150.78
3	34.50	62.50	119.10	114.10	53.80	25.30	34.60	25.10	17.30	23.83
4	9.80	34.00	34.00	24.30	49.30	54.80	88.60	40.60	39.70	85.14
5	15.70	19.00	25.50	2.40	3.30	4.30	14.60	17.50	11.00	20.57
6	1.00	3.90	8.20	6.40	1.90	1.50	6.10	9.70	2.40	7.25
7	2.00	2.40	2.70	2.20	0.70	0.30	1.30	2.90	1.40	4.25
8	5.00	0.80	1.60	2.90	0.80	0.30	1.30	2.60	8.80	12.52
9	2.60	3.20			1.30	1.00	2.80	2.40		
10	0.70								2.30	6.00
11	5.80									
12	1.80									

Table 128. Population assessment for largemouth bass collected from Corinth Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	11.1 ± 0.2	3
Spring CPUE age 1	47.67 ± 9.06	3
Spring CPUE 12.0-14.9 in	69.50 ± 4.84	4
Spring CPUE ≥15.0 in	37.50 ± 3.85	4
Spring CPUE ≥20.0 in	7.50 ± 1.92	4
Instantaneous mortality (z)	0.394	
Annual mortality (A)	32.6%	
Total Score		17
Assessment Rating		Excellent

* 2007 age and growth dataset was used

Table 129. 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 26 September 2008: 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	3	67	87	12	38	89	53	31	12	7	3	3	0	2	3	3	2	3	418	278.70 (35.30)

Dataset = cfdwrcor.d08

Table 130. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Corinth Lake on 26 September 2008. Standard errors are in parentheses.

Species	Area	Length group							
		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	88	79 (1)	13	82 (2)	13	97 (3)	114	82 (1)

Dataset = cfdwrcor.d08

Table 131. 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 Corinth 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
1999	Total	4.3	0.1	74.00	12.30	8.00	2.90	293.20	46.00
2000	Total	4.3	0.1	35.30	7.40	3.30	1.90	63.40	10.90
2001	Total	4.6	0.1	112.70	15.60	32.00	6.80	35.30	7.40
2002	Total	4.6	0.1	163.30	13.70	42.00	4.50	54.30	13.40
2003	Total	4.1	0.1	73.70	9.20	4.60	1.80	21.10	5.10
2004	Total	4.0	0.1	74.00	6.20	2.70	1.30	32.40	4.20
2005	Total	4.4	0.1	41.30	2.70	4.70	1.20	11.10	2.70
2006	Total	4.9	0.1	176.50	15.20	78.00	9.940	86.70	14.30
2007	Total	5.1	0.04	152.70	31.20	89.30	28.80	47.67	9.06
2008	Total	5.1	0.1	112.67	14.95	66.00	12.89		

Table 132. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2008; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	1	2	3	4	5	6	7	8	9		
Bluegill		12	83	214	154	165	98	1		727	290.80 (18.82)
Redear sunfish				2	24	67	17	62	7	179	71.60 (7.90)

Dataset = cfdpscor.d08

Table 133. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Corinth Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD
Bluegill	715	37 (± 4)	0.1 (± 0.1)
Redear sunfish	179	48 (± 7)	4 (± 3)

Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpscor.d08

Table 134. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Corinth Lake from 1992-2008; 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	3.00 (1.70)	36.00 (24.90)	49.00 (8.50)	10.00 (5.50)		98.00 (30.40)
1993	2.70 (1.30)	42.00 (13.10)	54.00 (10.90)	20.70 (5.20)		119.30 (26.20)
1996	6.00 (3.90)	75.00 (12.00)	54.50 (14.50)	1.50 (0.70)		137.00 (25.90)
1998	2.00 (1.10)	80.00 (19.40)	50.50 (10.30)	3.00 (1.00)		135.50 (23.70)
1999	42.00 (17.10)	113.00 (16.50)	32.50 (7.20)	17.00 (5.80)		204.50 (26.60)
2000	8.80 (2.50)	270.40 (20.10)	100.80 (12.00)	20.80 (3.60)		400.80 (25.90)
2001	7.20 (4.00)	185.60 (18.00)	140.00 (14.80)	5.60 (2.10)		338.40 (23.50)
2002	2.40 (1.20)	140.00 (16.70)	56.80 (12.10)	0.00		199.20 (26.60)
2003	14.20 (6.20)	164.40 (14.10)	91.60 (10.70)	0.90 (0.90)		271.10 (23.30)
2004	17.60 (4.90)	174.40 (15.90)	61.60 (10.90)	0.00		253.60 (22.70)
2005	12.00 (4.20)	262.40 (32.70)	82.40 (22.20)	0.00		356.80 (47.80)
2006	40.40 (6.00)	211.20 (17.90)	32.80 (6.40)	0.00		284.40 (14.70)
2007	13.20 (2.60)	148.80 (12.10)	98.00 (10.20)	0.00		260.00 (17.90)
2008	4.80 (1.22)	180.40 (13.65)	105.20 (12.41)	0.40 (0.40)		290.80 (18.82)

Dataset = cfdpscor.d08

Table 135. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Corinth Lake in 2008.

		Age					
Year	No.	1	2	3	4	5	6
2007	10	2.4					
2006	24	2.2	4.3				
2005	7	2.6	4.8	6.0			
2004	6	2.7	4.7	6.3	7.1		
2003	9	2.3	4.3	5.6	6.5	7.2	
2002	4	2.3	4.0	5.2	5.7	6.2	6.6
Mean	60	2.3	4.4	5.8	6.5	6.9	6.6
Smallest		1.0	3.1	4.9	5.5	6.0	6.3
Largest		3.5	5.7	7.4	8.2	7.8	6.8
Std Error		0.1	0.1	0.1	0.2	0.2	0.1
95% ConLo		2.2	4.2	5.6	6.2	6.5	6.4
95% ConHi		2.5	4.5	6.0	6.8	7.2	6.9

Intercept value = 0.00
Dataset = cfdagcor.d08

Table 136. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Corinth Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class										STD
Age	2	3	4	5	6	7	8	Total	%	CPUE	ERR
1	12	8						20	3	8.12	1.23
2		75	214	86				374	51	149.70	11.62
3				68	45			113	16	45.38	4.24
4					30	29	1	60	8	24.16	2.69
5					30	69		99	14	39.44	4.36
6					60			60	8	24.00	3.43
Total	12	83	214	154	165	98	1	727	100	290.80	18.82
%	2	11	29	21	23	13	0	100			

Dataset = cfdagcor.d08 and cfdpscor.d08

Table 137. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Corinth Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	37.70	32.00	11.50	2.40	14.20	23.30	12.00	47.70	29.50	8.12
2	81.20	295.50	167.50	108.40	153.80	142.00	200.80	168.30	123.60	149.70
3	8.90	37.90	140.90	71.80	47.80	33.60	98.30	27.20	22.40	45.38
4	26.10	2.20	1.50	16.60	22.10	20.60	34.20	40.40	74.30	24.16
5	6.40	13.30	3.90		33.20	34.20	11.50	0.70	10.20	39.44
6	2.30	2.20								24.00
7	2.10	2.20								

Table 138. Population assessment for spring-collected bluegill collected from Corinth Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.3 ± 0.1	2
Years to 6.0 in	3 - 3+	3
CPUE ≥6.0 in	105.60 ± 12.37	4
CPUE ≥8.0 in	0.40 ± 0.40	1
Instantaneous mortality (z)	0.380	
Annual mortality (A)	31.6%	
Assessment Total		10
Assessment Rating		Fair

Table 139. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Corinth Lake from 1992-2008; 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	0.00	0.00	0.00	0.00	0.00	0.00
1993	0.00	0.00	0.00	2.00 (2.00)	1.30 (1.30)	2.00 (2.00)
1996	0.50 (0.50)	7.00 (2.80)	5.50 (2.70)	10.50 (3.50)	4.00 (1.70)	23.50 (3.90)
1998	0.00	4.00 (0.80)	0.50 (0.50)	19.00 (4.30)	15.50 (3.30)	23.50 (4.00
1999	0.00	3.70 (1.60)	2.70 (1.10)	5.30 (1.50)	3.20 (1.10)	21.50 (3.50)
2000	0.00	14.40 (4.10)	33.60 (15.80)	52.80 (6.60)	16.80 (4.20)	100.80 (21.90)
2001	1.60 (1.10)	20.80 (5.00)	54.40 (9.20)	72.80 (10.00)	44.00 8.70)	149.60 (15.60)
2002	0.00	4.00 (1.80)	6.40 (2.00)	82.40 (15.40)	52.00 (8.70)	92.80 (15.90)
2003	0.90 (0.90)	11.60 (3.60)	11.60 (2.40)	28.40 (5.20)	24.90 (5.60)	52.40 (6.10)
2004	0.80 (0.80)	13.60 (1.70)	17.60 (5.20)	19.20 (5.20)	14.40 (3.30)	51.20 (6.80)
2005	0.00	38.40 (4.40)	28.80 (6.40)	31.20 (11.10)	3.20 (1.80)	98.40 (17.30)
2006	0.00	19.60 (3.90)	54.00 (6.60)	7.60 (1.50)	0.40 (0.40)	81.20 (7.20)
2007	0.00	5.20 (1.30)	37.60 (7.10)	21.20 (5.50)	0.00	64.00 (11.70)
2008	0.00	10.40 (2.18)	33.60 (4.48)	27.60 (5.01)	0.00	71.60 (7.90)

Dataset = cfdpscor.d08

Table 140. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Corinth Lake in 2008.

		Age					
Year	No.	1	2	3	4	5	6
2006	26	3.3	5.9				
2005	5	3.9	6.5	8.0			
2004	4	3.4	5.8	7.3	8.1		
2003	10	3.0	5.7	7.1	8.0	8.9	
2002	4	3.8	6.2	7.3	8.0	8.4	8.9
Mean	49	3.4	5.9	7.4	8.0	8.7	8.9
Smallest		2.4	3.1	6.2	7.1	7.5	7.8
Largest		6.1	7.2	8.4	8.5	9.3	9.6
Std Error		0.1	0.1	0.1	0.1	0.1	0.4
95% ConLo		3.2	5.7	7.2	7.8	8.5	8.1
95% ConHi		3.5	6.1	7.6	8.2	9.0	9.6

Intercept value = 0.00
Dataset = cfdagcor.d08

Table 141. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Corinth Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class									STD
Age	4	5	6	7	8	9	Total	%	CPUE	ERR
2	2	24	67	5			98	55	39.14	3.77
3				7	11		19	10	7.42	1.32
4				2	17		19	11	7.74	1.32
5					34	4	38	21	15.13	2.75
6				2		3	5	3	2.17	0.72
Total	2	24	67	17	62	7	179	100	71.60	7.90
%	1	13	37	9	35	4	100			

Dataset = cfdagcor.d08 and cfdpscor.d08

Table 142. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Corinth Lake from 2002-2008.

	Year						
Age	2002	2003	2004	2005	2006	2007	2008
1	0.8	2.2	2.8	5.2	1.2	5.20	39.14
2	7.2	10.0	14.3	41.9	17.7	10.31	7.42
3	50.7	26.5	25.1	40.8	51.1	17.41	7.74
4	32.3	12.1	7.7	7.3	10.8	27.70	15.13
5				3.2		3.37	2.17
6							
7							
8							
9							
10	1.8	0.7	0.5				

Table 143. Population assessment for redear sunfish collected from Corinth Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	8.0 ± 0.2	4
Years to 8.0 in	3 - 3+	4
CPUE ≥8.0 in	27.60 ± 5.01	4
CPUE ≥10.0 in	0.00	0
Assessment Total		12
Assessment Rating		Good

Table 144. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Corinth Lake on 26 September 2008. 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	69	90 (2)	36	79 (2)			105	86 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	10	100 (3)	10	95 (2)			20	97 (2)

Dataset = cfdwrcor.d08

Table 145. 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 2008; 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	12	120	90	33	43	78	83	130	85	43	30	17	9	6	3	3	4	2	2	793	396.50 (35.19)

Dataset = cfdpselm.d08

Table 146. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Elmer Davis Lake from 1996-2008; 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	Total
1996	102.00 (15.30)	163.50 (19.50)	37.00 (6.20)	9.00 (3.40)	312.00 (32.70)
1997	113.50 (20.10)	252.00 (27.20)	39.00 (5.60)	19.00 (3.70)	423.50 (43.90)
1998	52.50 (9.50)	93.30 (6.80)	16.80 (2.30)	7.50 (1.70)	170.10 (15.10)
1999	247.10 (29.70)	50.20 (8.00)	34.20 (6.40)	16.40 (4.90)	348.00 (40.50)
2000	134.50 (14.70)	136.50 (11.00)	31.50 (6.00)	29.00 (4.40)	331.50 (21.30)
2001	121.00 (17.00)	220.00 (21.20)	18.50 (2.40)	21.00 (4.10)	380.50 (24.90)
2002	99.00 (16.30)	124.00 (12.30)	4.00 (1.30)	10.00 (2.70)	237.00 (26.20)
2003	96.00 (10.20)	189.50 (16.50)	14.50 (3.90)	15.00 (2.70)	315.00 (25.10)
2004	107.50 (10.00)	123.50 (10.00)	22.00 (3.50)	15.00 (1.70)	268.00 (17.40)
2005	93.00 (10.60)	197.00 (11.20)	60.00 (10.40)	15.00 (2.40)	365.00 (27.20)
2006	74.50 (11.50)	123.50 (12.20)	40.50 (7.90)	6.50 (1.80)	245.00 (15.40)
2007	32.50 (5.80)	137.00 (16.40)	41.50 (10.30)	8.00 (2.80)	219.00 (28.90)
2008	149.00 (17.85)	188.00 (20.72)	45.00 (5.64)	14.50 (4.00)	396.50 (35.19)

Dataset = cfdpselm.d08
Shad eradication in fall of 1997

Table 147. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	495	24 (± 4)	6 (± 2)

Dataset = cfdpselm.d08

Table 148. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Elmer Davis Lake in 2008.

		Age										
Year	No.	1	2	3	4	5	6	7	8	9	10	11
2007	27	5.2										
2006	16	5.3	8.2									
2005	22	5.7	8.7	9.8								
2004	8	5.4	9.1	10.9	11.8							
2003	8	5.9	9.1	11.0	12.2	13.0						
2002	3	6.3	9.0	10.5	11.5	12.6	13.5					
2001	10	5.8	9.1	10.7	12.0	12.9	13.8	14.6				
2000	1	5.0	8.0	10.0	10.8	11.8	12.1	12.3	12.5			
1998	1	6.2	11.4	13.7	15.5	16.4	17.1	18.0	18.3	18.8	19.2	
1997	1	7.8	10.8	13.5	15.4	16.4	17.3	18.1	18.9	19.9	20.5	20.7
Mean	97	5.5	8.8	10.5	12.1	13.1	14.1	15.0	16.6	19.3	19.8	20.7
Smallest		3.5	6.2	8.1	9.3	9.8	10.3	10.6	12.5	18.8	19.2	20.7
Largest		7.8	11.4	14.0	16.0	17.0	17.3	18.7	18.9	19.9	20.5	20.7
Std Error		0.1	0.1	0.2	0.3	0.4	0.5	0.7	2.0	0.5	0.6	
95% ConLo		5.4	8.6	10.2	11.6	12.4	13.0	13.7	12.6	18.3	18.6	
95% ConHi		5.7	9.0	10.8	12.7	13.9	15.2	16.3	20.6	20.4	21.1	

Intercept value = 0.00
Dataset = cfdagelm.d08

Table 149. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Elmer Davis Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																					STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	ERR
1	12	120	90	33																255	32	127.50	16.40
2					43	52	14	13												120	15	60.92	8.87
3						26	69	78	17											190	24	95.08	9.40
4									51	12										63	8	31.64	4.39
5								13	17	12	10	4			3					60	8	29.77	3.94
6								13			10			3						26	3	13.00	2.32
7								13		12	10	13	9	3		3				63	8	31.52	4.65
8										6										6	1	3.07	0.62
9																				0	0	0.00	0.00
10																	4			4	1	2.00	0.76
11																		2	2	4	1	2.00	1.31
Total	12	120	90	33	43	78	83	130	85	43	30	17	9	6	3	3	4	2	2	793	100	396.50	35.19
%	2	15	11	4	5	10	10	16	11	5	4	2	1	1	0	0	1	0	0	100			

Dataset = cfdagelm.d08 and cfdpselm.d08

Table 150. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Elmer Davis Lake from 2000-2008.

	Year								
Age	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	73.80	52.80	80.60	57.50	94.40	78.10	68.10	26.90	127.50
2	123.70	151.20	45.00	96.10	66.10	93.10	31.10	59.10	60.92
3	80.30	103.30	67.70	85.40	47.90	72.90	61.10	51.10	95.08
4	12.40	42.50	30.90	52.40	10.30	16.00	11.80	11.30	31.64
5	14.50	10.70	3.80	8.60	22.60	50.20	39.00	35.90	29.77
6	17.60	4.20	1.50	1.40	14.40	43.50	29.20	28.80	13.00
7	4.30	4.30	1.40	1.30	5.30	5.30	2.50	3.20	31.52
8	2.00	5.10	2.20	1.80	2.40	2.10	0.80	1.50	3.07
9	0.50	2.50	1.40	1.80	1.00	1.00	0.50	1.00	0.00
10	1.50	3.00	1.90	4.80	1.20	0.30	0.30	0.30	2.00
11	1.00	0.50	0.90	0.60	2.50	2.50	0.50		2.00
12				3.00					
13				0.50					
14		0.50							

Table 151. Population assessment for largemouth bass collected from Elmer Davis Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture	9.8 (0.2)	1
Spring CPUE age 1	127.50 (16.40)	4
Spring CPUE 12.0-14.9 in	45.00 (5.64)	3
Spring CPUE ≥15.0 in	14.50 (4.00)	2
Spring CPUE ≥20.0 in	2.00 (1.31)	3
Instantaneous mortality (z)	0.443	
Annual mortality (A)	35.8%	
Total Score		13
Assessment Rating		Good

Table 152. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Elmer Davis Lake in September 2008: numbers in parentheses are standard errors.

	Inch class																		
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	Total	CPUE
Largemouth bass	4	58	47	1	3	48	46	30	35	57	26	22	10	6	6	1	1	401	267.33 (12.67)

Dataset = cfdwrelm.d08

Table 153. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Elmer Davis Lake on 17 September 2008. 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	101	85 (1)	56	83 (1)	14	89 (2)	171	85 (1)

Dataset = cfdwrelm.d08

Table 154. 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 Elmer Davis 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)	269.60	(33.20)	14.40	(2.00)	52.80	(9.70)
2001	Total	4.5	(0.1)	210.70	(25.00)	47.30	(3.00)	80.60	(13.30)
2002	Total	4.3	(0.1)	67.30	(10.00)	13.30	(3.20)	57.50	(7.90)
2003	Total	4.2	(0.1)	179.00	(32.00)	27.00	(10.00)	94.40	(9.90)
2004	Total	4.3	(0.03)	180.00	(38.50)	24.70	(4.30)	78.10	(9.90)
2005	Total	4.4	(0.04)	190.00	(29.60)	33.30	(5.30)	68.10	(10.20)
2006	Total	3.7	(0.04)	166.00	(17.40)	8.00	(2.50)	26.90	(6.10)
2007	Total	4.3	(0.05)	114.00	(24.60)	17.30	(5.40)	127.50	(16.40)
2008	Total	3.9	(0.1)	73.33	(9.61)	0.67	(0.67)		

Table 155. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2008; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	2	3	4	5	6	7	8	9	10		
Bluegill	86	149	116	68	60	87	16	1		583	233.20 (32.99)
Redear sunfish	3	6	8	19	61	41	23	14	7	182	72.80 (14.68)

Dataset = cfdpselm.d08

Table 156. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD
Bluegill	497	33 (± 4)	3 (± 2)
Redear sunfish	173	49 (± 7)	12 (± 5)

Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpselm.d08

Table 157. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Elmer Davis Lake from 1994-2008; 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	1.00 (0.70)	12.00 (3.00)	29.00 (5.70)	1.50 (1.10)	43.50 (6.00)
1995	NS				
1996	42.00 (7.90)	75.00 (9.70)	55.00 (11.20)	20.00 (5.40)	192.00 (22.50)
1997	0.50 (0.50)	79.50 (12.50)	59.00 (16.30)	5.50 (2.10)	144.50 (28.60)
1998	2.70 (1.10)	17.10 (4.50)	7.70 (1.60)	2.90 (1.10)	30.40 (5.80)
1999	579.50 (74.50)	502.00 (65.40)	23.00 (7.60)	5.00 (3.40)	1,109.50 (130.90)
2000	NS				
2001	1.50 (0.80)	109.50 (28.00)	157.00 (23.50)	0.50 (0.50)	268.50 (49.60)
2002	33.60 (11.80)	78.40 (19.30)	272.80 (55.30)	0.80 (0.80)	385.60 (78.20)
2003	17.60 (4.70)	89.60 (12.90)	151.20 (30.10)	2.40 (1.70)	260.80 (37.10)
2004	40.00 (8.70)	100.80 (13.70)	119.20 (29.80)	8.80 (3.90)	268.80 (44.70)
2005	38.40 (11.40)	92.80 (16.10)	59.20 (9.80)	8.80 (3.00)	199.20 (23.90)
2006	162.40 (35.90)	115.20 (20.10)	42.40 (8.50)	16.00 (4.50)	336.00 (43.80)
2007	7.60 (1.80)	81.20 (7.40)	42.80 (9.70)	9.20 (2.40)	140.80 (14.90)
2008	34.40 (5.66)	133.20 (24.68)	58.80 (9.31)	6.80 (2.34)	233.20 (32.99)

Dataset = cfdpselm.d08

Table 158. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Elmer Davis Lake in 2008.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2007	17	2.9									
2006	17	1.9	4.1								
2005	25	2.7	4.6	6.3							
2004	7	2.4	4.9	6.7	7.7						
2003	1	1.7	3.5	5.4	6.9	7.4					
2002	3	2.8	4.8	6.5	7.5	7.9	8.2				
2000	4	2.5	4.8	6.1	6.9	7.5	7.9	8.2	8.4		
1999	1	2.7	4.5	5.8	6.7	7.1	7.5	7.9	8.2	8.5	
1998	1	2.9	4.4	5.6	6.3	6.8	7.1	7.6	7.9	8.2	8.4
Mean	76	2.5	4.5	6.3	7.3	7.5	7.9	8.0	8.3	8.3	8.4
Smallest		1.1	3.0	4.9	6.3	6.8	7.1	7.6	7.9	8.2	8.4
Largest		4.5	6.3	7.3	8.1	8.2	8.4	8.5	8.7	8.5	8.4
Std Error		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
95% ConLo		2.4	4.3	6.1	7.0	7.2	7.6	7.8	8.1	8.0	
95% ConHi		2.7	4.7	6.5	7.5	7.7	8.1	8.3	8.5	8.7	

Intercept value = 0.00
Dataset = cfdagelm.d08

Table 159. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class										STD
Age	2	3	4	5	6	7	8	Total	%	CPUE	ERR
1	86	56	13					155	27	61.91	8.81
2		93	90	8				191	33	76.36	14.00
3			13	60	60	40		173	30	69.15	11.56
4						40	3	42	7	16.98	3.11
5						8		8	1	3.16	0.57
6							4	4	1	1.75	0.63
7								0	0	0.00	0.00
8							6	6	1	2.33	0.83
9							1	1	0	0.58	0.21
10							1	1	0	0.58	0.21
Total	86	149	116	68	60	87	16	582	100	233.20	32.99
%	15	26	20	12	10	15	3	100			

Dataset = cfdagcor.d08 and cfdpscor.d08

Table 160 Electrofishing catch rate (fish/hr) of each age of bluegill collected from Elmer Davis Lake from 2001-2008.

	Year							
Age	2001	2002	2003	2004	2005	2006	2007	2008
1	2.60	35.80	21.20	43.10	21.20	237.80	2.50	61.91
2	45.40	69.40	75.90	95.00	97.20	41.60	82.10	76.36
3	212.90	20.00	34.60	45.40	47.40	26.90	24.40	69.15
4	7.60	246.30	21.30	29.60	12.20	19.80	18.30	16.98
5		14.20	107.80	7.80	6.00	9.90	8.00	3.16
6				46.80	5.00		3.50	1.75
7				1.10	3.90		2.00	0.00
8								2.33
9								0.58
10								0.58

Table 161. Population assessment for bluegill collected from Elmer Davis Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.1 ± 0.1	2
Years to 6.0 in	2 – 2+	4
CPUE ≥6.0 in	65.60 ± 10.52	3
CPUE ≥8.0 in	6.80 ± 2.34	2
Instantaneous mortality (z)	0.513	
Annual mortality (A)	40.2%	
Assessment Total		11
Assessment Rating		Good

Table 162. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Elmer Davis Lake from 1994-2008; 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	0.00	0.50 (0.50)	0.50 (0.50)	2.50 (2.00)	1.50 (1.50)	3.50 (1.90)
1995	NS					
1996		7.50 (1.60)	23.50 (3.30)	4.00 (1.10)	1.00 (0.70)	35.00 (4.60)
1997	0.00	1.00 (1.00)	0.50 (0.50)	13.00 (3.80)	0.50 (0.50)	14.50 (4.60)
1998	0.00	0.30 (0.30)	0.00	0.00	0.00	0.30 (0.30)
1999	0.00	19.00 (4.40)	13.00 (2.20)	20.50 (5.30)	0.00	52.50 (7.50)
2000	NS					
2001	0.00	3.50 (2.10)	21.00 (5.10)	3.50 (1.60)	1.00 (0.70)	28.00 (4.80)
2002	0.80 (0.80)	4.00 (1.80)	8.80 (4.70)	15.20 (4.20)	0.80 (0.80)	28.80 (6.10)
2003	1.60 (1.10)	7.20 (5.50)	31.20 (7.40)	19.20 (6.20)	0.80 (0.80)	59.20 (13.50)
2004	4.00 (2.70)	8.00 (3.40)	66.40 (18.40)	24.80 (9.70)	3.20 (2.40)	103.20 (29.10)
2005	0.00	11.20 (2.40)	54.40 (16.70)	63.20 (18.60)	4.80 (1.80)	128.80 (26.90)
2006	0.00	12.80 (4.00)	4.80 (1.80)	30.40 (6.50)	4.00 (1.30)	51.20 (10.00)
2007	0.40 (0.40)	1.60 (0.70)	18.00 (3.50)	15.60 (3.40)	2.00 (1.10)	35.60 (5.60)
2008	1.20 (0.66)	13.20 (2.74)	40.80 (9.16)	17.60 (5.27)	2.80 (1.45)	72.80 (14.68)

Dataset = cfdpselm.d08

Table 163. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Elmer Davis Lake in 2008.

		Age					
Year	No.	1	2	3	4	5	6
2007	18	3.8					
2006	26	2.9	6.3				
2005	21	3.6	7.0	8.8			
2004	2	3.6	7.3	8.8	9.9		
2003	3	3.3	6.5	8.8	9.6	10.2	
2002	3	2.7	6.9	9.0	9.7	10.2	10.6
Mean	73	3.3	6.6	8.8	9.7	10.2	10.6
Smallest		1.7	4.6	7.0	9.0	9.7	10.1
Largest		5.4	7.9	9.5	10.3	10.6	11.0
Std Error		0.1	0.1	0.1	0.1	0.1	0.3
95% ConLo		3.1	6.4	8.6	9.4	9.9	10.1
95% ConHi		3.5	6.9	9.0	10.0	10.4	11.1

Intercept value = 0.00
Dataset = cfdagelm.d08

Table 164. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class												STD
Age	2	3	4	5	6	7	8	9	10	Total	%	CPUE	ERR
1	3	6	8							17	9	6.80	1.57
2				19	61	33				113	62	45.12	9.06
3						8	23	13		44	24	17.52	4.54
4								1	1	3	1	1.03	0.45
5									4	4	2	1.40	0.73
6									2	2	1	0.93	0.48
Total	3	6	8	19	61	41	23	14	7	182	100	72.80	14.68
%	2	3	4	10	34	23	13	8	4	100			

Dataset = cfdagelm.d08 and cfdpselm.d08

Table 165. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Elmer Davis Lake from 2001-2008.

	Year							
Age	2001	2002	2003	2004	2005	2006	2007	2008
1	0.00	35.80	7.20	7.20	0.00	16.00	0.40	6.80
2	0.50	69.40	34.40	78.80	61.30	4.80	20.20	45.12
3	13.50	20.00	4.10	8.70	53.60	23.40	6.70	17.52
4	7.90	246.30	13.50	8.50	10.10	7.00	6.70	1.03
5	5.60	14.20			1.00		1.70	1.40
6	0.50				2.80			0.93

Table 166. Population assessment for redear sunfish collected from Elmer Davis Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	8.8 ± 0.1	4
Years to 8.0 in	2 – 2+	4
CPUE ≥8.0 in	17.60 ± 5.27	4
CPUE ≥10.0 in	2.80 ± 1.45	2
Assessment Total		14
Assessment Rating		Excellent

Table 167. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Elmer Davis Lake on 17 September 2008. 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	75	95 (2)	50	91 (1)	3	80 (3)	128	93 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	41	100 (2)	9	103 (3)	3	105 (5)	76	95 (1)

Dataset = cfdwrelm.d08

Table 168. 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 2008; 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
Spotted bass						1	3		3	1	1	1									10	5.00 (2.10)
Largemouth bass	1	1	2	13	15	39	50	57	39	29	30	37	44	45	62	25	24	13	10	1	537	268.50 (31.87)

Dataset = cfdpskin.d08

Table 169. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Kincaid Lake from 1992-2008; 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	Total
1992	4.00 (0.00)	34.00 (3.10)	13.30 (1.80)	53.30 (4.10)	104.70 (3.50)
1995	27.50 (3.40)	38.50 (4.50)	17.50 (2.90)	65.00 (6.50)	148.50 (11.90)
1997	13.50 (2.90)	59.00 (6.20)	53.00 (4.20)	92.00 (14.30)	217.50 (18.00)
1999	15.00 (4.30)	60.00 (8.60)	55.00 (3.70)	94.00 (6.80)	224.00 (8.60)
2000	15.30 (5.70)	64.50 (7.00)	36.50 (5.50)	70.00 (7.80)	186.00 (16.30)
2001	16.00 (2.90)	99.30 (13.70)	35.30 (5.80)	102.70 (10.60)	253.30 (23.50)
2002	10.00 (4.50)	35.30 (9.40)	36.70 (8.40)	110.00 (14.80)	192.00 (29.20)
2003	23.40 (5.80)	70.30 (12.10)	32.60 (4.00)	94.90 (15.80)	221.10 (22.80)
2004	7.00 (2.90)	76.00 (12.50)	38.50 (5.00)	71.00 (10.00)	192.50 (16.50)
2005	22.00 (3.70)	56.00 (8.20)	69.50 (9.30)	113.00 (18.50)	260.50 (30.70)
2006	14.50 (3.50)	82.00 (8.30)	43.00 (5.00)	112.50 (9.80)	252.00 (14.90)
2007	21.50 (5.30)	50.50 (6.10)	47.50 (5.30)	96.00 (6.70)	215.50 (13.60)
2008	16.00 (3.38)	92.50 (11.50)	48.00 (6.37)	112.00 (15.21)	268.50 (31.87)

Dataset = cfdpskin.d08

Table 170. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	505	63 (± 4)	44 (± 4)

Dataset = cfdpskin.d08

Table 171. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Kincaid Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																						STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1	1	1																			2	0	1.00	0.65
2			2	13	15	39	20														89	17	44.50	6.66
3							25	41	16												82	15	40.98	4.59
4							5	16	20	26	27	20	18	9							140	26	70.17	7.36
5									3	3	3	13	9		18						49	9	24.73	3.37
6												3	18	27	35						83	16	41.70	4.66
7														9	9	8	6				32	6	16.10	2.22
8																17	12				29	5	14.33	2.79
9																	6	7			13	2	6.25	0.90
10																				1	1	0	0.50	0.50
11																		7			7	1	3.25	0.53
12																			5		5	1	2.50	1.24
17																			5		5	1	2.50	1.24
Total	1	1	2	13	15	39	50	57	39	29	30	37	44	45	62	25	24	13	10	1	537	100	268.50	31.87
%	0	0	0	2	3	7	9	11	7	5	6	7	8	8	12	5	4	2	2	0	100			

Dataset = cfdagkin.d05 and cfdpskin.d08

Table 172. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Kincaid Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	3.50	1.50	0.00	0.00	0.00	1.00	0.00	1.50	0.00	1.00
2	26.00	26.80	17.40	15.50	39.90	12.50	36.10	36.30	36.50	44.50
3	32.50	28.10	26.90	24.80	48.10	61.00	25.70	36.77	20.20	40.98
4	28.60	27.60	45.60	43.60	31.20	35.70	81.30	64.95	59.70	70.17
5	31.30	23.20	29.80	22.30	26.70	23.90	25.30	22.59	20.20	24.73
6	10.20	15.40	28.60	35.00	30.00	20.90	35.40	36.53	29.00	41.70
7	28.30	11.00	20.90	4.50	6.50	5.10	17.20	16.15	14.30	16.10
8	11.10	17.30	13.40	5.30	28.40	22.80	19.90	17.58	16.70	14.33
9	16.00	15.20	9.30	1.30	6.50	5.10	10.10	7.88	7.00	6.25
10	7.30	5.80	9.20		0.60	1.00	0.50	2.50	2.00	0.50
11		9.50	9.20		3.10	3.60	5.50	4.75	3.50	3.25
12	13.30	3.30	2.30				1.80	2.25	3.30	2.50
13	3.50	0.50	0.60							
14		1.00								
15				5.30						
16				1.30						
17							1.80			2.50

Table 173. Population assessment for largemouth bass collected from Kincaid Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture*	10.5 ± 0.2	2
Spring CPUE age 1	1.00 ± 0.65	1
Spring CPUE 12.0-14.9 in	48.00 ± 6.37	3
Spring CPUE ≥15.0 in	112.00 ± 15.21	4
Spring CPUE ≥20.0 in	12.00 ± 3.63	4
Instantaneous mortality (z)	0.156	
Annual mortality (A)	14.5%	
Total Score		14
Assessment Rating		Good

*2005 age and growth dataset was used.

Table 174. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for largemouth bass in Kincaid Lake in September 2008: 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	Total	CPUE
Largemouth bass	1	17	11	13		7	11	10	19	25	23	16	21	11	13	7	8	5	5	5	228	152.00 (12.73)

Dataset = cfdwrkin.d08

Table 175. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Kincaid Lake on 18 September 2008. 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	77	88 (1)	48	92 (1)	43	96 (1)	168	91 (1)

Dataset = cfdwrkin.d08

Table 176. 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 Kincaid Lake.

Year Class	No. of fish	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
1999	25	3.1	(0.2)	16.70	(5.70)	0.00		1.50	(1.10)
2000	11	3.1	(0.2)	4.70	(1.60)	0.00		0.00	
2001	36	2.9	(0.1)	20.60	(6.70)	0.00		0.00	
2002	76	2.6	(0.1)	43.40	(10.60)	0.00		0.00	
2003	33	2.8	(0.1)	22.00	(4.70)	0.00		1.00	(0.70)
2004	19	3.0	(0.1)	12.70	(4.30)	0.00		0.00	
2005	259	2.5	(0.03)	129.50	(19.30)	0.00		1.50	(0.70)
2006	64	2.7	(0.1)	42.70	(11.90)	0.00		0.00	
2007	29	3.2	(0.1)	19.30	(4.80)	0.70	(0.70)	1.00	(0.65)
2008	42	3.3	(0.1)	28.00	(2.07)	0.00			

Dataset = cfdwrkin.d08

Table 177. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 1.5 hours of 15-minute electrofishing runs in McNeely Lake, April 2008; 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	Total	CPUE
Largemouth bass	15	76	71	29	16	43	69	58	50	23	15	4	11	6	7	1	2	496	330.67 (21.48)

Dataset = cfdpsmcl.d08

Table 178. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from McNeely Lake from 1996-2008; 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	Total
1996	77.30 (9.20)	6.70 (2.00)	18.00 (3.40)	23.30 (2.80)	125.30 (11.00)
1998	80.00 (11.10)	134.70 (18.60)	7.30 (2.20)	14.00 (3.40)	236.00 (26.00)
1999	71.00 (10.60)	161.00 (4.40)	27.00 (7.40)	22.00 (5.30)	281.00 (7.50)
2000	44.70 (5.00)	144.70 (13.40)	104.70 (13.80)	20.70 (2.20)	314.70 (24.70)
2001	71.30 (10.10)	144.00 (6.40)	97.70 (16.40)	31.30 (3.80)	346.00 (28.10)
2002	28.70 (3.00)	48.00 (12.50)	43.30 (4.80)	9.30 (1.70)	129.30 (30.30)
2003	44.70 (8.20)	96.00 (12.40)	56.00 (10.70)	27.30 (3.20)	224.00 (19.70)
2004	27.30 (4.30)	58.00 (8.90)	23.30 (4.30)	28.00 (3.90)	136.70 (15.60)
2005	23.30 (6.30)	76.70 (5.90)	46.00 (4.90)	30.00 (6.20)	176.00 (8.60)
2006	56.00 (5.60)	72.70 (12.10)	37.30 (6.50)	24.00 (2.50)	190.00 (14.60)
2007	14.70 (1.70)	98.00 (11.90)	46.70 (13.10)	40.00 (8.90)	199.30 (30.80)
2008	127.30 (6.50)	124.00 (14.60)	58.70 (6.60)	20.70 (4.60)	330.70 (21.50)

Dataset = cfdpsmcl.d07

Table 179. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in McNeely Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	305	39 (± 6)	10 (± 3)

Dataset = cfdpsmcl.d08

Table 180. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from McNeely Lake in 2008.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2007	45	6.1									
2006	17	5.8	9.4								
2005	17	6.3	9.3	11.5							
2004	9	5.0	9.1	11.1	12.5						
2003	7	5.7	9.1	11.3	12.9	14.1					
2002	2	5.8	9.7	11.7	13.4	14.3	14.7				
2001	7	6.3	9.6	11.6	12.9	14.6	15.6	16.4			
2000	1	5.1	9.5	11.2	12.5	13.4	13.8	14.3	14.7		
1999	1	6.6	10.8	13.4	15.2	16.9	18.2	18.8	19.6	20.1	
1998	1	6.7	10.4	12.6	14.1	15.3	16.8	17.2	17.6	18.4	18.9
Mean	107	6.0	9.4	11.5	13.0	14.4	15.6	16.5	17.3	19.2	18.9
Smallest		3.7	6.2	8.7	10.7	12.1	13.1	13.8	14.7	18.4	18.9
Largest		8.5	11.5	14.2	16.2	16.9	18.2	18.8	19.6	20.1	18.9
Std Error		0.1	0.1	0.2	0.3	0.3	0.5	0.5	1.4	0.9	
95% ConLo		5.8	9.1	11.1	12.4	13.8	14.7	15.5	14.5	17.6	
95% ConHi		6.2	9.6	11.8	13.5	15.1	16.6	17.5	20.1	20.9	

Intercept value = 0.00
Dataset = cfdagelm.d08

Table 181. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 1.50 hours of electrofishing at McNeely Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																				STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	ERR
1		15	76	71	29	4													195	40	130.00	6.66
2						12	43	27											82	17	54.36	7.34
3								32	52	21	3								109	22	72.51	8.75
4								11	6	14	10	2							43	9	28.47	2.83
5										14	3	9		4					30	6	19.87	1.39
6											3			4					7	1	4.63	1.21
7											3	2		4	6	4			19	4	12.40	1.53
8												2							2	0	1.43	0.35
9																		2	2	0	1.33	0.84
10																4			4	1	2.33	0.80
Total		15	76	71	29	16	43	69	58	50	23	15	0	11	6	7	0	2	491	100	330.67	21.48
%		3	15	14	6	3	9	14	12	10	5	3	0	2	1	1	0	0	100			

Dataset = cfdagmcl.d08 and cfdpsmcl.d08

Table 182. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from McNeely Lake from 2001-2008.

	Year							
Age	2001	2002	2003	2004	2005	2006	2007	2008
1	70.00	23.30	20.00	24.70	12.70	50.70	5.30	130.00
2	53.10	22.60	72.90	13.80	27.60	26.90	50.20	54.36
3	35.60	10.60	22.80	41.40	51.10	45.90	52.20	72.51
4	62.10	22.10	26.90	21.40	43.70	29.90	39.90	28.47
5	47.50	17.90	22.50	11.60	12.10	12.10	19.10	19.87
6	31.40	14.40	20.60	6.30	9.60	8.00	10.20	4.63
7	23.00	13.20	20.00	5.90	8.60	5.60	8.90	12.40
8	7.80	3.60	9.20	7.30	5.30	7.30	4.70	1.43
9	5.10	1.00	3.90	0.00	0.00	0.00	0.00	1.33
10	5.10		1.70	4.20	5.50	3.70	8.80	2.33
11	4.50	0.70	3.10					
12	0.80		0.40					

Table 183. Population assessment for largemouth bass collected from McNeely Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture	11.4 ± 0.2	3
Spring CPUE age 1	130.00 ± 6.66	4
Spring CPUE 12.0-14.9 in	58.67 ± 6.59	4
Spring CPUE ≥15.0 in	20.67 ± 4.55	3
Spring CPUE ≥20.0 in	1.33 ± 0.84	2
Instantaneous mortality (z)	0.520	
Anural mortality (A)	40.5%	
Total Score		16
Assessment Rating		Good

Table 184. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs for black bass in McNeely Lake in September 2008: 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
Largemouth bass	2	73	178	112	11	23	82	54	23	28	21	9	12	2	3	4	2	3	642	513.60 (33.39)

Dataset = cfdwrmcl.d08

Table 185. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at McNeely Lake on 24 September 2008. 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	97	85 (1)	41	87 (1)	14	89 (4)	152	86 (1)

Dataset = cfdwrmcl.d08

Table 186. 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 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)	87.30	(16.10)	10.00	(2.30)	70.00	(9.40)
2001	Total	4.1	(0.9)	20.70	(1.60)	2.00	(1.40)	23.30	(2.40)
2002	Total	4.7	(0.1)	24.00	(5.80)	10.70	(3.80)	20.00	(2.50)
2003	Total	4.1	(0.1)	56.00	(14.00)	7.00	(1.90)	24.70	(3.50)
2004	Total	4.0	(0.1)	49.00	(2.40)	3.50	(0.90)	12.70	(2.40)
2005	Total	4.7	(0.1)	193.30	(17.20)	88.00	(12.10)	50.70	(7.20)
2006	Total	4.5	(0.1)	108.70	(23.30)	33.30	(5.70)	5.30	(1.70)
2007	Total	5.2	(0.04)	174.40	(49.00)	116.00	(28.30)	130.00	(6.66)
2008	Total	4.6	(0.1)	300.00	(34.53)	97.60	(16.62)		

Table 187. 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 2008; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE
	1	2	3	4	5	6	7	8	9	10		
Bluegill	13	110	104	70	56	158	100				611	488.80 (37.70)
Redear sunfish		8	18	7	3	27	21	36	7	2	48	38.40 (8.80)

Dataset = cfdpsmcl.d08

Table 188. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD
Bluegill	488	53 (± 4)	0
Redear sunfish	103	64 (± 9)	9 (± 5)

Bluegill = RSD_8; Redear = RSD_9
Dataset = cfdpsmcl.d08

Table 189. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from McNeely Lake from 1994-2008; 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	17.60 (3.70)	303.20 (59.60)	13.60 (2.40)	0.00	334.40 (59.10)
1996	2.70 (1.30)	187.30 (52.60)	95.30 (20.50)	0.00	285.30 (68.30)
1998	0.00	72.00 (31.80)	68.70 (15.40)	0.00	140.70 (44.80)
1999	8.00 (4.30)	108.00 (20.60)	108.00 (27.70)	0.00	224.00 (44.80)
2000	2.00 (0.90)	204.70 (36.60)	110.00 (23.30)	0.00	316.70 (46.30)
2001	73.60 (23.80)	152.00 (17.00)	200.80 (29.10)	1.60 (1.10)	428.00 (35.20)
2002	53.60 (11.70)	270.40 (33.20)	335.20 (33.80)	0.80 (0.80)	660.00 (41.90)
2003	12.00 (2.20)	132.00 (31.90)	30.40 (10.60)	0.00	174.40 (40.90)
2004	4.00 (1.80)	181.60 (25.20)	74.40 (8.60)	0.00	260.00 (27.30)
2005	22.00 (3.30)	159.00 (16.70)	174.00 (27.60)	0.00	355.00 (33.50)
2006	47.00 (11.10)	145.00 (23.70)	101.00 (27.60)	0.00	293.00 (40.60)
2007	8.80 (2.80)	114.40 (18.60)	118.40 (22.50)	0.00	241.60 (30.80)
2008	98.40 (11.81)	184.00 (17.77)	206.40 (21.53)	0.00	488.80 (37.70)

Dataset = cfdpsmcl.d08

Table 190. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from McNeely Lake in 2008.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	19	2.9							
2006	15	2.6	4.8						
2005	12	2.4	4.7	6.2					
2004	1	2.7	5.1	6.5	7.1				
2003	3	2.5	4.6	6.0	6.5	7.0			
2000	3	2.8	4.9	5.7	6.2	6.7	7.0	7.2	7.4
Mean	53	2.6	4.8	6.1	6.5	6.9	7.0	7.2	7.4
Smallest		1.1	3.8	4.8	5.8	6.5	6.9	7.1	7.3
Largest		4.5	5.9	7.0	7.1	7.5	7.1	7.3	7.5
Std Error		0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
95% ConLo		2.5	4.6	5.8	6.1	6.6	6.9	7.1	7.3
95% ConHi		2.8	5.0	6.4	6.8	7.1	7.2	7.4	7.5

Intercept value = 0.00
Dataset = cfdagmcl.d08

Table 191. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at McNeely Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class										STD
Age	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1	13	110	89	8				220	36	175.94	16.68
2			15	54	41			110	18	88.02	7.57
3				8	15	132	33	188	31	150.44	14.70
4							22	22	4	17.78	2.61
5						26	11	37	6	29.96	3.11
6								0	0	0.00	0.00
7								0	0	0.00	0.00
8							33	33	5	26.67	3.92
Total	13	110	104	70	56	158	100	611	100	488.80	37.70
%	2	18	17	11	9	26	16	100			

Dataset = cfdagmcl.d08 and cfdpsmcl.d08

Table 192. Electrofishing catch rate (fish/hr) of each age of bluegill collected from McNeely Lake from 2001-2008.

	Year							
Age	2001	2002	2003	2004	2005	2006	2007	2008
1	131.70	53.60	27.40	5.50	29.10	82.40	10.40	175.94
2	76.00	244.70	39.20	79.30	103.30	110.80	128.70	88.02
3	142.10	128.00	96.60	108.30	79.40	33.60	71.10	150.44
4	40.20	186.10	9.50	64.90	111.40	22.80	20.50	17.78
5	37.20	14.90	0.50		31.80	38.10	7.30	29.96
6		32.60	0.50			5.40		0.00
7			0.90	2.00			3.60	0.00
8	0.80							26.67

Table 193. Population assessment for spring-collected bluegill collected from McNeely Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.9 ± 0.2	3
Years to 6.0 in	2 – 2+	4
CPUE ≥6.0 in	206.40 ± 21.53	4
CPUE ≥8.0 in	0.00	0
Assessment Total		11
Assessment Rating		Good

Table 194. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from McNeely Lake from 1998-2008; 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	0.00	0.70 (0.70)	5.30 (2.20)	1.30 (1.30)	0.00	7.80 (3.40)
1999	0.00	10.00 (3.80)	3.00 (1.90)	1.00 (1.00)	0.00	14.00 (3.50)
2000	0.00	3.30 (2.60)	14.70 (2.50)	0.70 (0.70)	0.00	18.70 (3.40)
2001	2.40 (1.70)	8.80 (3.00)	15.20 (4.80)	8.00 (4.80)	0.00	34.40 (7.80)
2002	1.60 (1.10)	49.60 (10.60)	22.40 (5.80)	6.40 (2.00)	0.00	80.00 (13.40)
2003	0.80 (0.50)	5.20 (1.20)	20.40 (3.80)	2.40 (1.20)	0.00	28.80 (5.40)
2004	0.00	4.80 (1.80)	24.80 (6.50)	25.60 (7.00)	0.00	55.20 (9.90)
2005	1.00 (1.00)	25.00 (5.90)	16.00 (6.60)	33.00 (11.80)	0.00	75.00 (17.00)
2006	1.00 (1.00)	15.00 (3.80)	20.00 (4.00)	16.00 (2.60)	0.00	52.00 (6.20)
2007		2.40 (1.70)	29.60 (6.80)	6.40 (2.30)	0.00	38.40 (8.80)
2008	6.40 (2.87)	22.40 (4.43)	38.40 (3.83)	36.00 (4.81)	1.60 (1.07)	103.20 (9.42)

Dataset = cfdpsmcl.d08

Table 195. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from McNeely Lake in 2008.

		Age					
Year	No.	1	2	3	4	5	6
2007	20	3.3					
2006	18	3.3	6.5				
2005	8	4.5	6.7	8.5			
2004	4	3.6	7.3	8.2	9.2		
2002	1	4.1	7.0	8.8	9.7	10.0	10.5
Mean	51	3.6	6.6	8.4	9.3	10.0	10.5
Smallest		2.5	5.2	7.8	8.7	10.0	10.5
Largest		5.6	7.8	9.2	9.7	10.0	10.5
Std Error		0.1	0.1	0.1	0.2		
95% ConLo		3.4	6.4	8.3	9.0		
95% ConHi		3.7	6.9	8.6	9.6		

Intercept value = 0.00
Dataset = cfdagmcl.d08

Table 196. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2008. Fish were collected in 7.5-minute runs.

	Inch class												STD
Age	2	3	4	5	6	7	8	9	10	Total	%	CPUE	ERR
1	8	18	7							33	26	26.40	5.47
2				3	27	21				51	40	40.80	6.69
3							33	1		34	26	27.30	4.21
4							3	4		7	6	5.98	1.51
5								1		1	1	1.12	0.54
6									2	2	2	1.60	1.07
Total	8	18	7	3	27	21	33	7	2	129	100	103.20	9.42
%	6	14	5	2	21	16	28	5	2	100			

Dataset = cfdagmcl.d08 and cfdpsmcl.d08

Table 197. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from McNeely Lake from 2001-2008.

	Year						
Age	2001	2003	2004	2005	2006	2007	2008
1	0.00	3.60	0.80	1.00	14.00	0.00	26.40
2	8.80	8.80	15.20	39.30	15.90	28.30	40.80
3	7.40	16.40	39.20	20.60	18.50	7.80	27.30
4	8.60			7.40	3.60	2.20	5.98
5	5.60			4.00			1.12
6				2.70			1.60
7							
8	1.60						

Table 198. Population assessment for spring collected redear sunfish collected from McNeely Lake in May 2008.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	8.5 ± 0.1	4
Years to 8.0 in	2 - 2+	4
CPUE ≥8.0 in	36.00 ± 4.81	4
CPUE ≥10.0 in	1.60 ± 1.07	1
Assessment Total		13
Assessment Rating		Good

Table 199. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at McNeely Lake on 24 September 2008. 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	89 (2)	34	82 (2)			111	87 (1)
	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
Redear sunfish	54	95 (1)	14	95 (1)	3	88 (7)	72	94 (1)

Dataset = cfdwrmcl.d08

Table 200. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.5 hours of 15-minute electrofishing runs in AJ Jolly Lake, April 2008; numbers in parenthesis 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	2	3	5	2	6	11	10	6	10	21	7	9	8	4	5	1	2	112	44.80 (6.20)

Dataset = uflb04aj.d08

Table 201. Electrofishing CPUE data (fish/hr) for each length group of largemouth bass collected from AJ Jolly Lake from 1992-2008; 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		All sizes	
1996	18.40	(2.80)	13.60	(1.70)	24.00	(5.60)	9.60	(2.50)	65.60	(7.40)
1997	11.60	(1.90)	37.20	(3.80)	19.60	(1.20)	20.40	(2.60)	88.80	(4.70)
1998	11.60	(1.90)	42.40	(8.00)	24.40	(2.40)	25.60	(3.60)	104.00	(11.60)
1999	5.20	(2.40)	21.20	(6.00)	32.00	(6.40)	26.00	(4.40)	84.00	(13.60)
2000	27.00	(5.40)	25.00	(4.30)	9.50	(1.50)	20.00	(3.30)	81.50	(7.80)
2001	35.60	(5.90)	48.40	(5.70)	12.00	(2.40)	26.00	(5.20)	122.00	(13.50)
2002	10.00	(2.10)	44.50	(8.20)	9.50	(1.50)	18.00	(3.10)	82.00	(10.50)
2003	14.50	(4.30)	40.50	(4.20)	19.00	(4.30)	7.50	(2.20)	81.50	(7.70)
2004*										
2005	55.50	(10.40)	19.50	(4.00)	12.50	(1.80)	7.00	(2.00)	94.50	(14.90)
2006	28.00	(6.90)	23.50	(3.50)	5.50	(2.00)	2.50	(1.10)	59.50	(7.60)
2007	31.60	(4.40)	36.80	(5.90)	15.20	(2.30)	14.00	(2.80)	97.60	(11.20)
2008	7.20	(1.40)	14.80	(4.10)	14.80	(2.70)	8.00	(3.10)	44.80	(6.20)

Dataset = uflb04aj.d08
*No spring sample was done in 2004

Table 202. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in AJ Jolly Lake in 2008; confidence intervals are in parentheses.

Species	No. fish ≥8.0 in	PSD	RSD_{15}
Largemouth bass	94	61 (± 10)	21 (± 9)

Dataset = uflb04aj.d08

Table 203. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected at A.J. Jolly Lake in 2008.

		Age						
Year Class	No.	1	2	3	4	5	6	7
2007	9	5.3						
2006	17	5.7	8.5					
2005	25	5.9	9.6	11.7				
2004	6	6.1	10.0	12.6	14.3			
2002	1	5.5	9.3	10.6	11.3	12.0	12.8	
2001	2	7.0	10.7	12.8	14.2	15.9	16.7	17.9
Mean	60	5.8	9.3	11.9	13.9	14.6	15.4	17.9
Smallest		2.7	5.2	7.8	11.3	12.0	12.8	16.9
Largest		8.4	12.5	15.1	17.2	16.4	17.4	18.9
Std Error		0.2	0.2	0.3	0.7	1.3	1.4	1.0
95% ConLo		5.5	8.8	11.2	12.5	12.0	12.7	15.9
95% ConHi		6.1	9.7	12.5	15.3	17.2	18.1	19.9

Intercept Value = 0.00
Dataset = uflboajj.d08

Table 204. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.5 hours of electrofishing at AJ Jolly Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																		STD
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	%	CPUE	ERR
1	3	5	1													9	8	3.60	1.07
2			1	4	11	7										23	21	9.07	2.08
3				2		3	6	10	9	7	6	8				51	48	20.53	3.29
4									9		3			5		17	16	6.80	1.12
6									3							3	3	1.20	0.29
7													4		1	5	5	2.00	0.89
Total	3	5	2	6	11	10	6	10	21	7	9	8	4	5	1	108	100		
%	3	5	2	6	10	9	6	9	19	6	8	7	4	5	1	100			

Dataset = uflboajj.d08 and uflb04aj.d08

Table 205. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from AJ Jolly Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004*	2005	2006	2007	2008
1	4.00	24.50	6.50	5.50	11.40		49.80	23.70	28.49	3.60
2	9.30	6.70	40.00	15.30	13.70		11.40	14.80	15.09	9.07
3	12.90	12.70	28.10	39.90	32.40		14.20	13.50	26.10	20.53
4	17.50	8.30	10.50	4.60	16.90		11.60	5.10	15.36	6.80
5	18.40	6.10	7.50	9.30	3.90		3.00	1.20	6.49	
6	7.30	3.70	4.10		0.60		0.20	0.30	0.40	1.20
7	5.40	6.20	5.80	3.50	1.10		2.00	0.60	2.49	2.80
8	0.60	7.30	7.20	3.30	1.00		0.90	0.30	2.32	
9	2.50	3.20	3.30						0.00	
10	2.70	2.40	2.50		0.20		0.40	0.10	0.32	
11	2.00	0.50	2.50	0.50						
12			1.00							
13			1.00		0.30				0.53	

*No spring sample was done in 2004

Table 206. Population assessment from largemouth bass collected from AJ Jolly Lake during April 2008.

Parameter	Value	Assessment Score
Length of age 3 at capture	11.8 ± 0.4	3
Spring CPUE age 1	3.60 ± 1.1	1
Spring CPUE 12.0-14.9 in	14.80 ± 2.7	1
Spring CPUE ≥15.0 in	8.00 ± 3.1	2
Spring CPUE ≥20.0 in	0.00	
Instantaneous mortality (z)*	0.313	
Annual Mortality (A)*	27%	
Total Score		7
Assessment Rating		Poor

*Weighted regressions used to calculate z and A

Table 207. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.75 hours of 15-minute electrofishing runs for black bass in A.J. Jolly Lake in September 2008: numbers in parentheses are standard errors.

	Inch class																
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE
Largemouth bass	6	33	16	3	4	11	8	9	9	7	5	3	3	2	3	122	70.0 (7.0)

Dataset = uflb09aj.d08

Table 208. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at A.J. Jolly Lake on September 2008. Standard errors are in parentheses.

Species	Area	Length group							
		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	37	88.2 (1.2)	15	91.4 (2.2)	8	96.1 (3.0)	60	90.1 (1.1)

Dataset = uflb09aj.d08

Table 209. 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 A.J. Jolly Lake.

Year Class	Area	Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2004	Total	3.5	0.1	36.70	5.20	2.00	0.90	49.80	9.20
2005	Total	4.3	0.1	16.00	3.70	2.70	1.30	23.70	5.70
2006	Total	4.1	0.2	8.70	2.80	0.70	0.70	28.49	4.45
2007	Total	4.4	0.3	5.60	1.80	2.00	0.90	3.60	1.07
2008	Total	4.6	0.1	29.70	4.40	7.40	2.20		

Table 210. Species composition, relative abundance, and CPUE (fish/hr) of bluegill collected in 1.25 hours of 7.5-minute electrofishing runs in A.J. Jolly Lake, June 2008; numbers in parentheses are standard errors.

Species	Inch class						Total	CPUE
	1	2	3	4	5	6		
Bluegill	22	222	101	86	54	8	493	364.40 (32.10)

Dataset = ufsf06aj.d08

Table 211. PSD and RSD values calculated for bluegill collected during 1.25 hours of electrofishing at A.J. Jolly Lake during June 2008. Fish were collected in 7.5-minute runs.

Species	No. fish >3.0 in	PSD	RSD_8
Bluegill	249	3.2 (± 2.2)	0

Bluegill = RSD-8
Dataset = ufsf06aj.d08

Table 212. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from A.J. Jolly Lake from 1992-2008; 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	All Sizes
1995	15.70 (4.00)	228.80 (24.80)	26.40 (4.70)			270.40 (27.20)
1997	39.90 (7.20)	249.50 (31.90)	21.60 (5.00)			311.50 (36.20)
1998	231.50 (61.50)	137.70 (23.80)	50.80 (11.40)			420.00 (75.30)
1999	88.50 (17.70)	450.00 (33.10)	63.80 (15.40)			602.30 (45.30)
2000	64.40 (12.90)	333.80 (49.50)	43.10 (9.70)			441.50 (53.40)
2001	36.20 (13.20)	160.80 (25.20)	40.80 (7.90)			237.70 (42.30)
2002	46.20 (9.50)	365.40 (60.20)	113.90 (35.00)			525.40 (94.00)
2003	42.30 (10.60)	258.50 (47.90)	90.00 (25.90)			390.80 (67.10)
2004	59.20 (10.10)	535.40 (89.10)	78.50 (12.40)			673.10 (101.70)
2005	63.90 (13.20)	406.90 (34.10)	47.70 (5.60)			518.50 (45.20)
2007	0.00	194.20 (26.50)	2.90 (1.20)			197.10 (25.90)
2008	195.20 (31.60)	192.80 (25.90)	6.40 (2.90)			364.40 (32.10)

Dataset = ufsf06aj.d08

Table 213. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from A.J. Jolly Lake in June 2008.

		Age				
Year	No.	1	2	3	4	5
2007	10	2.6				
2006	13	1.9	3.4			
2005	15	2.8	4.2	4.7		
2004	7	2.4	4.0	5.0	5.7	
2003	4	2.1	4.1	4.8	5.4	5.9
Mean	49	2.4	3.9	4.8	5.6	5.9
Smallest		1.3	2.8	3.9	5.0	5.8
Largest		6.4	7.1	5.9	6.5	6.0
Std Error		0.1	0.1	0.1	0.1	0.0
95% ConLo		2.2	3.6	4.6	5.3	5.8
95% ConHi		2.6	4.1	5.0	5.8	6.0

Intercept value = 0.00
Dataset = ufbgoajj.d08

Table 214. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at A.J. Jolly Lake during June 2008. Fish were collected in 7.5-minute runs.

	Inch class								STD
Age	2	3	4	5	6	Total	%	CPUE	ERR
1	200	14				214	45	171.38	25.09
2	22	79	9			110	23	88.13	9.20
3		7	77	21		105	22	84.31	12.73
4				25	3	28	6	22.07	4.73
5				8	5	14	3	10.91	3.03
Total	222	101	86	54	8	471	100		
%	47	21	18	11	2	100			

Dataset = ufbgoajj.d08 and ufsf06aj.d08

Table 215. Electrofishing catch rate (fish/hr) of each age of bluegill collected from A.J. Jolly Lake from 1999-2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006*	2007	2008
1	158.10	82.40	53.50	80.00	120.80	85.80	94.30		12.30	171.40
2	205.60	102.20	23.20	148.50	85.20	195.80	141.00		60.20	88.10
3	96.70	152.00	91.40	80.70	98.10	213.40	175.70		75.60	84.30
4	74.20	81.50	53.40	126.80	59.70	92.90	74.10		25.20	22.10
5	61.40	19.60	8.20	66.00	27.00	42.60	9.50		23.80	11.00
6	6.40	3.90	8.20	11.30		7.90	19.10			
7				12.10		7.90				
8						26.90	4.80			

*bluegill were not sampled in 2006

Table 216. Population assessment for spring-collected bluegill collected from A.J. Jolly Lake in June 2008.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	3.4 ± 0.1	1
Years to 6 inches	>4+	1
CPUE of fish ≥ 6.0 in	6.40 ± 2.9	1
CPUE of fish ≥ 8.0 in	0.00	1
Instantaneous mortality (z)	0.6822	
Annual Mortality (A)	50%	
Assessment Total		4
Assessment Rating		Poor

Table 217. Number of fish and the relative weight (Wr) for each length group of bluegill collected at A.J. Jolly Lake on 24 September 2008. Standard errors are in parentheses.

Species	Length group								Total	
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0-7.9 in		≥8.0 in					
Bluegill	106	82.8 (1.5)							106	82.8 (1.5)

Dataset = uflb09aj.d08

Table 218. Length composition, relative abundance, and CPUE (fish/net set) of channel catfish at A.J. Jolly Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 6 October 2008. Nets were pulled three days after setting them, and 5 sets of tandem nets were used for the sampling event.

	Inch class															Total	Average per set
Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Channel catfish	9	67	128	78	46	21	10	8	3	1	1	2			1	375	75.00

Table 219. PSD and RSD_{15} values obtained for channel catfish from tandem hoop net samples in AJ Jolly Lake in 2008; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Channel catfish	93	5 (± 0.8)	

Dataset = ufccfajj.d08

Table 220. Age frequency and CPUE (fish/hr) per inch class of channel catfish collected during a 72 hour set of tandem hoop nets at AJ Jolly Lake during September 2008. Fish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 6 October 2008.

	Inch class															STD
Age	7	8	9	10	11	12	13	14	15	16	17	18	Total	%	CPUE	ERR
2		29											29	8	6.74	0.87
3	9		26	16		2							52	14	10.46	1.84
4		19	51	23		8							102	27	20.43	2.22
5		19	26	16	25	2	2						90	24	17.91	1.70
6			26	8	4	2		8	3				51	14	10.14	1.65
7				16	8	2	2					2	30	8	6.01	1.01
8					4	4							8	2	1.68	0.37
9							4			1			5	1	0.90	0.35
10							2						2	1	0.40	0.17
11					4					1			5	1	0.94	0.21
12																
Total	9	67	128	78	46	21	10	8	3	1		2	373	100		
%	2	18	34	21	12	6	3	2	1	0		1	100			

Dataset = ufcfoajj.d07 and ufccfajj.d08

Table 221. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at A.J. Jolly Lake in October 2008. Standard errors are in parentheses.

	Length group									
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	11.0 – 15.9 in		16.0 – 24.0 in.						Total	
Channel catfish	88	91.7 (1.5)	5	93.2 (3.6)					93	91.2 (1.4)

Dataset = ufccfajj.d08

Table 222. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of 15-minute electrofishing runs in Williamstown Lake, April 2008; 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	2	12	9	2	9	21	23	16	25	28	22	8	3	3	3	2	2	1	191	95.50 (15.67)

Dataset = cfdpswil.d08

Table 223. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Williamstown Lake from 2007-2008; 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	Total
2007	13.00 (4.26)	38.00 (7.01)	14.50 (2.82)	7.50 (1.40)	73.00 (10.84)
2008	17.00 (4.19)	42.50 (7.21)	29.00 (6.54)	7.00 (2.10)	95.50 (15.67)

Dataset = cfdpswil.d08

Table 224. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Williamstown Lake in 2008; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD_{15}
Largemouth bass	157	46 (± 8)	9 (± 4)

Dataset = cfdpswil.d08

Table 225. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Williamstown Lake in 2008.

		Age											
Year	No.	1	2	3	4	5	6	7	8	9	10	11	12
2007	14	4.8											
2006	25	5.1	8.5										
2005	24	5.9	9.3	11.7									
2004	2	6.1	9.7	11.9	12.8								
2003	3	5.9	9.6	12.4	14.2	15.4							
2002	1	6.2	10.5	13.2	15.4	17.5	18.2						
2000	2	3.7	8.2	12.0	13.2	14.6	15.4	16.4	16.8				
1996	1	6.6	9.8	12.2	14.5	16.3	17.6	18.1	18.5	19.1	19.5	19.9	20.2
Mean	72	5.4	9.0	11.8	13.8	15.6	16.7	16.9	17.4	19.1	19.5	19.9	20.2
Smallest		3.4	5.9	9.9	12.0	14.2	15.2	16.2	16.6	19.1	19.5	19.9	20.2
Largest		7.1	11.3	14.1	15.4	17.5	18.2	18.1	18.5	19.1	19.5	19.9	20.2
Std Error		0.1	0.1	0.2	0.3	0.4	0.7	0.6	0.6				
95% ConLo		5.2	8.7	11.4	13.2	14.8	15.2	15.8	16.2				
95% ConHi		5.6	9.3	12.2	14.5	16.4	18.1	18.1	18.5				

Intercept value = 0.00
Dataset = cfdagelm.d08

Table 226. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Williamstown Lake during April 2008. Fish were collected in 15-minute runs.

	Inch class																				STD
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	Total	%	CPUE	ERR
1	2	12	9	2														25	13	12.50	3.58
2					9	21	20	2										51	27	25.66	5.37
3							3	14	25	24	15	8						89	47	44.68	10.07
4										4	7							11	6	5.67	1.31
5													3					3	2	1.50	0.73
6															2	2		4	2	1.75	0.59
7																		0	0	0.00	0.00
8														3	2			5	2	2.25	0.96
9																		0	0	0.00	0.00
10																		0	0	0.00	0.00
11																		0	0	0.00	0.00
12																	1	1	1	0.50	0.50
Total	2	12	9	2	9	21	23	16	25	28	22	8	3	3	3	2	1	189	100	95.50	15.67
%	1	6	5	1	5	11	12	8	13	15	12	4	2	2	2	1	1	100			

Dataset = cfdagwil.d08 and cfdpswil.d08

Table 227. Population assessment for largemouth bass collected from Williamstown Lake during April 2008.

Parameter	Value	Assessment Score
Mean length age 3 at capture	11.6 ± 0.2	4
Spring CPUE age 1	12.50 ± 3.58	1
Spring CPUE 12.0-14.9 in	29.00 ± 6.54	2
Spring CPUE ≥15.0 in	7.00 ± 2.10	2
Spring CPUE ≥20.0 in	0.50 ± 0.50	1
Total Score		10
Assessment Rating		Fair

Table 228. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs for black bass in Williamstown Lake in September 2008: 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
Largemouth bass	1	9	9	13	6	7	12	11	8	13	13	5	5	5			1	1	117	78.00 (10.57)

Dataset = cfdwrwil.d08

Table 229. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Williamstown Lake on 30 September 2008. 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	44	89 (1)	23	89 (2)	5	97 (1)	72	90 (1)

Dataset = cfdwrwil.d08

Table 230. 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 Williamstown 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
2007	Total	4.7	(0.3)	7.33	(1.61)	2.67	(1.33)	12.50	(3.58)
2008	Total	4.7	(0.2)	24.67	(6.06)	12.00	(3.27)		

Table 231. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass, bluegill, and redear sunfish collected by electrofishing in Lincoln Homestead Lake State Park Lake, April and May 2008; 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
Bluegill	4	46	40	68	38	19	2													217	289.33 (15.24)
Redear sunfish		1	1	6	6		10	5	8	2										39	52.00 (17.00)
Largemouth bass						2	1		4	3	4	7	2	3		1		1	1	29	58.00 (2.00)

Dataset = cfdpslhl.d08 (Sample time = 0.50 hours for largemouth bass and 0.75 hours for bluegill and redear sunfish)

Table 232. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass, bluegill and redear sunfish collected in 0.50 hours of electrofishing in Lincoln Homestead Lake, September 2008; 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	Total	CPUE
Bluegill		8	44	20	29	3	1											105	210.00 (82.00)
Redear sunfish		3				7	3	1										14	28.00 (4.00)
Largemouth bass		5	8	5	3	1	5	7	4	2	4	1				2		47	94.00 (6.00)

Dataset = cfdwrjer.d08

Table 233. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Sympson Lake, May 2008; 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	1	1	2	16	15	22	23	24	30	30	20	35	28	22	15	7	4	1	296	148.00 (16.99)

Dataset = cfdpssym.d08

Table 234. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of electrofishing in Jericho Lake, May 2008; 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	3	4	3	5	5	8	1	16	11	13	13	30	22	15	13	8	9	2	176	117.33 (17.97)

Dataset = cfdpsjer.d08

Table 235. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.50 hours of electrofishing in Jericho Lake, September 2008; 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	Total	CPUE
Largemouth bass	17	12	3	3	2	13	15	8	9	12	9	10	15	7	10	4	4	153	102.00 (13.50)

Dataset = cfdwrjer.d08

Table 236. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.00 hours of electrofishing in Doe Run Lake, May 2008; 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
Bluegill	3	21	10	32	17																83	83.00 (5.26)
Largemouth bass		1	4	5	3	4	2			1	2	2	4	4	4	1	3	2	2	1	45	45.00 (1.91)

Dataset = cfdpsdoe.d08

Table 237. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.00 hours of electrofishing in Doe Run Lake, September 2008; 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	2	8	5	1	7	21	4	5	1		1	1		3	2		2	63	63.00 (24.14)
Bluegill		18	18	14														50	50.00 (15.35)

Dataset = cfdwrdoe.d08

Table 238. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 0.75 hours of 15-minute electrofishing runs in Jacobson Park Lake, April 2008; numbers in parentheses are standard errors.

	Inch class																
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE
Largemouth bass	2	2	2	3	1		1	3	1	6	2	7	4	5	3	42	56.00 (4.62)

Dataset = cfdpsjac.d08

Table 239. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.00 hours of 15-minute electrofishing runs in Jacobson Park Lake, October 2008; 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	Total	CPUE
Largemouth bass	4	7	6	16	20	6	4	5	9	5	9	7	3	3	2	1	93	93.00 (11.36)

Dataset = cfdwrjac.d08

Table 240. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected by electrofishing runs in General Butler State Park Lake, April and May 2008; 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
Largemouth bass		3	29	41	20	28	12	5	1		4	6	5	4	6	3	1	2	170	136.00 (25.55)
Bluegill	14	49	50	31	12														156	208.00 (42.43)

Dataset = cfdpsgbs.d08 (Sample time = 1.25 hours for largemouth bass and 0.75 hours for bluegill and redear sunfish)

Table 241. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.00 hours of 15-minute electrofishing runs in General Butler State Park Lake, October 2008; 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
Largemouth bass		2	4	7	9	3	3	2		1	1	3	3	1	1	1	1	1	43	43.00 (12.58)
Bluegill	3	20	22	24	1														70	70.00 (24.58)

Dataset = cfdwrgbs.d08

Table 242. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.278 hours of electrofishing in Kleber Pond, May 2008.

	Inch class																		
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE
Largemouth bass			1	4	2		8	12	3						1		1	32	115.11
Bluegill	1	6	4	7	7	4		1										30	107.91
Redear sunfish					2		1											3	10.79
Black crappie						3												3	10.79
Channel catfish										2								2	7.19

Dataset = cfdpsklb.d08

Table 243. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.314 hours of electrofishing in the Lower Sportsman's Lake (formerly Lower Game Farm Lake), May 2008.

Species	Inch class																	Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Largemouth bass		3	5	5	3	4	4	3	2	2	3	3	6	3	2	1	2	51	162.42
Bluegill	2	4	25	38														70	222.93
Redear sunfish		2			8	3												13	41.40
Green sunfish		1	1															2	6.37
Warmouth				1														1	3.18
Sunfish hybrids				1														1	3.18
Black crappie						8	9											17	54.14
Channel catfish												2	2		1			5	15.92
Yellow bullhead				1														1	3.18
Hybrid striped bass																		3	12.0
Yellow bass			5		19	8	2											34	108.28
Rainbow trout						1	7	2	2									12	38.22

Dataset = cfdpsgfl.d08

Table 244. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.375 hours of 7.5-minute electrofishing runs in Leary Lake, April 2008.

Species	Inch class																	Total	CPUE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Largemouth bass							2	1	1	6	10	13	3	2	1		1	40	106.67
Bluegill	1	3	11	15	4	14	30	15	1		1							95	253.33
Black crappie												1						1	2.67

Dataset = cfdpslry.d08

Table 245. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Willisburg Lake, April 2008; numbers in parentheses are standard errors.

Species	Inch class																		Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Largemouth bass	3	6	8	11	17	24	13	15	19	16	4	5	14	14	5	4	5	1	184	92.00 (11.41)

Dataset = cfdpswlb.d08

NORTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwaters Fishery Surveys

FINDINGS

Special Note:
During our spring sampling a problem arose with our shocking boat that caused a loss of effectiveness in shocking. For this reason the spring data should be interpreted carefully. This mistake affected our spring muskellunge sampling on Cave Run Lake and all of our spring black bass and sunfish sampling, it was repaired prior to our fall black bass sampling.

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

Muskellunge were sampled 31 March through 02 April 2008 for a total of 18 hours (30 min. runs) within all sections of the lake. A total of one hundred and fifty muskellunge were captured and an additional 69 were observed but not captured (25 = 13.0-19.9 in, 12 = 20.0-29.9 in, 31 = 30.0-39.9 in, and 1 = 40.0-49.9 in). Including those observed and known to be age-1 (51), the catch rate was 175 muskellunge or 10.00 f/h (Table 2). The largest muskellunge captured in 2008 was a 48.3 in long female that weighed 28.50 pounds. This muskellunge was the only fin clipped fish captured in 2008 and was from the 1997 year class (11 years old). Assessment values determined for muskellunge in 2008, compared with values since 1995, are shown in Table 3; values for 2008 rated the population as "Good".

Black Bass Sampling (Spring)

The upper, middle and lower shoreline sections of Cave Run Lake were sampled (boat electrofishing) for black bass on the nights of 28-30 April 2008. Data obtained during the spring of 2008 from boat electrofishing is suspect due to a perceived and eventually diagnosed (summer of 2008) electrical problem with the electrofishing boat which greatly inhibited efforts in capturing fish. Therefore, accurate comparisons of spring data to the 2008 sample can not be made. Total sampling hours were reduced to 6 (2h in each section as was done in 2005 and 2006) compared to 12 hours in 2007. Of the black bass sampled (Table 4), 56.9% were largemouth bass (61.00 f/h), 40.9% were spotted bass (43.80 f/h), and 2.2% were smallmouth bass (7.00 f/h). The largest black bass sampled was a 21.0 in smallmouth bass. CPUE of fin clipped largemouth bass stocked in 2005 (31,795) as part of the largemouth bass stocking initiative continued to be evaluated. Of the 366 largemouth bass sampled, only one stocked fish (15.3 in) was collected (0.27%). Catch rates for various length groups can be found in Table 5. Management objectives (revised in 2008 to assess the largemouth bass population based on the present protective slot limit at Cave Run Lake) were met only for ≥20.0 in. All other objectives were not met, presumable due to anomalies with the electrofishing boat. Table 6 shows and compares proportional and relative stock densities by lake sections for the three black bass species sampled within the lake. Table 7 compares the CPUE by age and year from 1999-2008. Table 8 shows population assessment values (based on lakes ≥ 1,000 acres) for largemouth bass. Table 9 shows assessment values for largemouth bass compared to historical findings (1996-present) from Cave Run Lake which has had a 13.0-16.0 in protective slot limit imposed since 1996. Both assessments rated the largemouth bass population as "Fair".

Black Bass Sampling (Fall)

Six hours (2h upper, 2h middle, and 2h lower) were spent sampling for black bass 15-17 September 2008 (Table 10). In order to conform to standardized methods, the middle section was sampled for the first time since fall sampling was initiated.

In 2008, the total catch of largemouth bass in the upper and lower sections combined (566 = 141.50 f/h) was greater than the catch in 2007 (423= 105.80 f/h) and 2006 (522 = 130.50 f/h). Of all sections sampled, 75% of the largemouth bass sampled in 2008 were collected within the upper section of the lake. Relative weight (Wr) values (Table 11) for largemouth bass within the three length group categories averaged 103 from the lower lake section and were 88 and 89 for the middle and lower sections respectively. Spotted bass $\leq$ 10.9 in from each lake section were found to have Wr values of 90, while smallmouth bass of this size had a Wr value of 81. Indices of year class strength (Table 12) revealed age 0 (76.50 f/h) and age 0 $\geq$5.0 in (26.33 f/h) were sufficient enough that largemouth bass stocking was not warranted at that time.

Crappie Trap Netting

During 21-24 October, trap nets were set for crappie within the lake. Fifteen nets were set in the upper section of the lake for a total of 57 net nights (nn) in 2008 (one net could not be fished for the remaining three nights after being destroyed). Since 2004 only the upper reaches of the lake have been sampled as compared to both the upper and lower sections prior to 2004. Length frequencies of crappie captured are shown in Table 13. A total of 209 crappie were netted. White crappie made up the majority of the catch (90.4%) with young-of-year and age-1 comprising 52.6%. Only 17% of the white crappie captured were $\geq$8.0 in. Table 14 shows PSD and RSD_{10} values for these fish. One of the fish management goals for black and white crappie combined, is for a CPUE of 1.17 (f/nn) for $\geq$ 8.0 in crappie. This goal was not met this year as the CPUE was 0.65 f/nn (0.68 f/nn in 2007, 0.75 f/nn in 2006). Young-of-year white crappie accounted for 39% of the total catch and ranged in size from 3.0-4.0 in. Age 1 (19%) and age 2 (35%) ranged from 5.0-6.0 in and 5.0-9.0 in respectively. Ninety two percent of age 2 white crappie ranged from 6.0-8.0 in (Table 15). The population assessment value (Table 16) for white crappie rated the population sample in 2008 as being "Poor". However crappie anglers perceive their catch as fair to good. Only 20 black crappie were sampled therefore no assessment was performed.

White Bass Gill Netting

Gill netting for white bass during 21-23 October 2008 was conducted in both the upper and middle sections of the lake. Twelve net nights caught 135 (11.25 f/nn) white bass ranging in size from 6.0-17.0 in. Length frequency and CPUE are shown in Table 17. Relative weight values depicted generally good body weights for those fish sampled (Table 18). The majority of white bass captured (52%) were age 3 and ranged in length from 13.0-15.0 in (Table 19). The white bass population assessment (Table 20) rated this fishery as "Fair".

Miscellaneous

On 02 November 2008 a new state record muskellunge was caught by hook and line which weighed 47 lbs and was 54.0 in. long. Three hundred and seventy recycled Christmas trees were used to create fish attractors and placed in sites around the lake with assistance from Minor Clark Fish Hatchery staff as well as USFS personnel. During the fall, 2,800 muskellunge which averaged 13.3 in. were stocked into the lake.

Grayson Lake (1,512a)

Black Bass Sampling (Spring)

Upper, middle and lower sections (areas) of Grayson Lake were nocturnally electrofished for black bass on 21-23 April. Half hour (1800 sec) sampling periods totaling two hours were completed within each section of the lake for a total effort of six hours (two hours each section). A total of 515 fish were captured and of this, 380 were largemouth bass (74%). The remainder of fish sampled were spotted bass (26%) with no smallmouth bass sampled (Table 21). Of the total black bass captured, largemouth bass comprised 61%, 80%, and 61% of the total found within the lower, middle, and upper sections of the lake, respectively. Largemouth bass were stocked into Grayson Lake from 1998 to 2004 as part of a project to try and improve their numbers in the lake. Of the total numbers of largemouth bass sampled during spring of 2008, none of the fish sampled were stocked bass.

Of the total largemouth bass sampled, stocked fish comprised 3.7% in 2007, 10.5% in 2006 and 19.4% in 2005 (note: total effort in 2005 was 9h as compared to 6h in 2006 and 2007). Total catch rates of largemouth bass had been declining from 2004 to 2006, 2007 showed a slight increase, but 2008 showed a tremendous decline from the 2004-2006 period and certainly the 2007 period. Along with the cessation of the stocking program and natural mortality; drought conditions experienced in the past two years may be contributing to the decline in total catch rates. Also, the failure of the shocking boat during this time period played a key role in the declines observed in 2008.

Catch rates for various length groups of largemouth bass showed a decline across the board, with the lone exception being that a single fish over 20.0 in was captured in 2008 for the first time (Table 22). The management objectives for 8.0-11.9 in fish (60.00 f/h), for 12.0-14.9 in fish (20.00 f/h) and ≥15.0 in fish (6.00 f/h) were not met in 2008. Proportional and relative stock values remained relatively unchanged (Table 23). Aging of fish took place in 2008 and demonstrated that fish reach 12.0 in by their fourth year of life (some as early as 3 and others as late as 5), and most fish reach a harvestable size of 15.0 inches by their fifth year (Table 24). The majority of fish captured are in the 4.0-10.0 in length group and are around 1 to 2 years old (Table 25). The catch rates by ages, like all other categories, are down in 2008; again this decrease could be attributed to drought conditions, excessive natural mortality, but, most likely, due to the ineffectiveness of the shocking boat this spring (Table 26). The overall assessment of Grayson Lake largemouth bass in 2008 was "Poor", but again this must be interpreted carefully due to the problems with our sampling boat (Table 27).

Black Bass Sampling (Fall)

In September (8-10), the upper, middle, and lower reaches of the lake were sampled for black bass (4.5 h, 1.5h each section). Length frequency and catch rates from this sampling are shown in Table 28. In total, 798 fish were captured and of these, 469 were largemouth (59%), 327 were spotted (41%) and 2 were smallmouth bass (<1%). Relative weight (Wr) values can be compared in Table 29. By far, the upper section provides for better weight conditions than the other two sections of the lake but overall the relative weight conditions are poor. The management objective Wr value for ≥15.0 in fish is ≥90 and this was met in all sections of the lake. The indices of largemouth bass year class strength are presented in Table 30. Based on the 2008 year class strength, supplemental stocking of largemouth bass was needed and in the fall 3,780 fish were stocked.

Crappie Electrofishing (Fall)

Crappie were sampled from the upper section of Grayson Lake on 14 October for 3.0 hours using electrofishing gear. A trail boat was used once again in 2008. In all, 326 fish were captured, of which 319 were white crappie (98%) and 7 were black crappie (2%; Table 31). Table 32 shows PSD and RSD values from this sampling. Aging of crappie took place in 2008 and showed that the majority of the fish sampled were 1+ to 4+ years old ranging in size from 3.0 to 10.0 in but of these the majority were 7.0 in (Tables 33 and 34). As this crappie data was gathered using electrofishing and not trap netting, assessment values and ratings could not be made. However, Table 35 compares 2008 values generally used for assessment purposes to those found in previous years.

Creel Survey

A roving creel survey was carried out at Grayson Lake from 03 April – 28 October 2008. A total of 2,558 fishing trips and 10,305 angler hour were logged in 2008 which was down significantly from 2002 (8,206 trips and 47,661 angler hours; Table 36). Likewise the catch and harvest rates were lower than that recorded from the 2002 creel survey. The majority of the anglers were males, "casting" (closely followed by "still" fishing) from a boat. Table 37 shows the majority of fishing trips were made for black bass (49.26%), followed by crappie (30.90%) and "anything" (14.30%).

The most successful anglers were those fishing for crappie (80.84%), panfish (87.18%) and "anything" (36.84%; Table 38). Black bass anglers were the least successful of all anglers at 1.6% success. Of the 357 largemouth bass caught over the legal size limit only 40 were harvested (Table 39).

The majority of the bass were caught in September followed by May and the majority of the crappie were caught in May followed by September (Table 39). Largemouth bass made up 100% of the black bass species that were harvested and those harvested averaged 16.38 inches in length and 2.28 pounds (Table 40).

Angler Attitude Survey

In conjunction with the creel survey, anglers were asked several additional questions (Table 41). Anglers were only asked these questions once during the year. Findings from this questionnaire revealed that the majority of the anglers fish for bass (92.7%), crappie (57.5%) and catfish (12.2%). However, when asked what species they fish for most often, the third most often fished for species changed to hybrid striped bass (4.1%) in spite of the fact that they have not been stocked for 5 years. Of the bass anglers, only 35.0% were very or somewhat satisfied with bass fishing at the lake and 57.7% were either somewhat or very dissatisfied. The majority of those unsatisfied were unhappy with the size and the number of the fish they caught (51.4% and 38.5% respectively). Of the crappie anglers 47.6% were either somewhat or very satisfied and 31.3% were somewhat or very dissatisfied. Again the majority of those unsatisfied were unhappy with the size and number of fish (35.4% and 68.8% respectively). Anglers supported the reduction of the statewide creel limit on crappie (56.5%), the re-introduction of hybrid striped bass to Grayson Lake (61.3%) and the implementation of a statewide maximum size or creel limit on catfish (55.0%). The majority of the anglers were satisfied with the current regulations on Grayson Lake (57.1% to 30.0%).

Lake Carnico (114a)

Black Bass Electrofishing (Spring)

It was discovered sometime after spring electrofishing studies were concluded that the electrofishing boat had mechanical problems with the wiring, henceforth numbers of fish captured were potentially reduced making comparisons to past years most difficult.

On 01 May, 2008 the shoreline of Lake Carnico (Nicholas County) was nocturnally electrofished for black bass. A total of 54 (292 in 2007) largemouth bass were captured ranging in size from 3.0-22.0 in (Table 42). Largemouth bass age and growth is shown in Table 43 and age frequency is found in Table 44. Population assessments (Table 45) again rated Lake Carnico as a "Fair" largemouth bass fishery. Catch rates by length groups are shown in (Table 46). PSD and the RSD_{15} values compared to past years can be found in (Table 47).

Bluegill / Redear Sunfish Sampling

On 28 May the shoreline of Lake Carnico was diurnally electrofished for sunfish species. A total of 426 fishes were captured of which 357 were bluegill, 6 (7 in 2007) were redear sunfish, and the remainder were green sunfish, longear sunfish and hybrid sunfish (Table 48). CPUE for various length groups of bluegill and redear sunfish can be found in (Table 49). The PSD remains below the desired level (Table 50), and the overall assessment for the bluegill population remained classified as "Fair" (Table 51).

Black Bass Electrofishing (Fall)

On 22 September the shoreline of Lake Carnico was nocturnally electrofished for black bass. In total 140 largemouth bass were sampled ranging in size from 2.0-20.0 in (Table 52). Relative weight values (Table 53) remained the same except for those fish in the ≥15.0 in range, which dropped from a value of 91 in 2007 to a value of 79 in 2008.

Clear Creek Lake (40a)

Black bass electrofishing (Spring)

Spring nocturnal electrofishing along the shoreline of Clear Creek Lake (Bath County) for largemouth bass was accomplished on 12 May, 2008. Table 54 shows the length frequency and CPUE of all largemouth bass sampled during that time. The total CPUE for all length groups (562.00 f/h) has continued to increase since 2004 (Table 55). The most notable increase was for those fish in the <8.0 in length group (378.00 in 2008; 197.30 in 2007, 136.00 in 2006). Increasing aquatic vegetation continues to contribute to the survival of these fish. The PSD value for largemouth bass was 28 (Table 56) and continues to remain below the desired level.

Bluegill/redear sunfish electrofishing

Bluegill and redear sunfish sampling was conducted on 20 May during the daytime (4-7.5 minutes runs). Increasing aquatic vegetation prohibited a fifth sample, which has been the norm lately. A total of 281 (112 in 2007 and 351in 2006) bluegill and 127 (130 in 2007 and 94 in 2006) redear sunfish were collected. Tables 57 and 58 show length frequency and CPUE for each length group of sunfish collected. Age frequency distributions are found in (Table 59). The PSD value was within the desirable range (Table 60). The population assessment (Table 61) rates the bluegill fishery as "Good".

Black bass electrofishing (Fall)

Fall sampling for largemouth bass was unable to be accomplished during the past two years due to Eurasian watermilfoil covering approximately 80% of the lake. Grass carp were stocked in 2008 and 2007.

Greenbo Lake (181a)

Black bass electrofishing (Spring)

The shoreline of Greenbo Lake was nocturnally electrofished on 24 April, 2008. A total of 120 largemouth bass were collected resulting in a CPUE of 80.00 f/h. This CPUE was approximately 64% lower than the mean CPUE over the past nine years and could be a reflection of our malfunctioning electrofishing boat. Table 62 shows length frequency and CPUE of all fish sampled during this time. Catch rates for largemouth bass fell below designated levels as specified in the lake management plan for all length groups : ≥8.0 in bass (desired = 100.00 f/h, actual = 56.00 f/h), ≥12.0 in bass (desired = 50.00 f/h, actual = 28.66 f/h), and ≥15.0 in bass (desired = 15.00 f/h, actual = 9.33 f/h). Largemouth bass PSD (Table 63) remained within the desired range with a value in 2008 of 51 (2007 = 46, 2006 = 51, 2005 = 41). The age frequency for largemouth bass is shown in Table 64. CPUE by length group is shown in table 65. The population assessment rated the bass fishery as "Fair" (Table 66). Electrofishing catch rates for each age of largemouth bass from 1999 through 2008 are shown in Table 67.

Bluegill/redear sunfish electrofishing (Spring)

Daytime electrofishing for bluegill and redear sunfish was conducted on 22 May, 2008. A total of 405 bluegill and 17 redear sunfish were collected. Length frequency and CPUE for all sunfish sampled is found in Table 68. Catch-per-unit-effort for each length group of bluegill and redear sunfish can be found in Table 69. Bluegill PSD was 19 (Table 70) in 2008 as compared to 22 in 2007 and 26 in 2006. Age and growth analysis shows bluegill reaching 6.0 in between age 2 and 3, and 8.0 in by age 5 (Table 71). No bluegill were captured in excess of age 6. Age frequency for bluegill is shown in Table 72. The population assessment (Table 73) rating for the bluegill fishery dropped from "Good" to "Fair". Only 17 redear sunfish (ranging in size from 3.0-8.0 in) were sampled in 2008 compared to 30 in 2007. Too few redear sunfish were collected to make an accurate population assessment. During 2003-2005, 181,500 1.0-in redear sunfish were stocked into the lake.

Black bass electrofishing (Fall)

On 11 September, 2008 the shoreline of Greenbo Lake was nocturnally electrofished for largemouth bass relative weights and length frequency. A total of 233 largemouth bass were collected in 1.5 hours of electrofishing (6-15 minute runs). Table 74 shows length frequencies and CPUE from fall sampling. Relative weight values have decreased from those values obtained during the past two years (Table 75). Largemouth bass indices of year class strength at age 0 and age 1 are found in Table 76. For a second year in a row, the year class strength was determined to be insufficient and as a result the lake was stocked with 2,715 largemouth bass averaging in length from 3.0-5.0 in.

Miscellaneous

Grass carp are still being observed and three were collected during routine sampling in the spring (2-36.0 in and 1-32.0 in) along with 3 additional observations. The grass carp were stocked in 1989. During the year 4,255 channel catfish and 15,000 rainbow trout were stocked.

Mill Creek Lake (41a)

Black Bass Electrofishing (Spring)

On 07 May, 2008 the shoreline of Mill Creek Lake (Powell/Wolfe Counties) was nocturnally electrofished for black bass. In total, 149 largemouth bass were captured ranging in size from 5.0 in-22.0 in (Table 77). The overall catch was down when compared to the last two years and this was due to the decreased catch of the fish less than 8.0 in (Table 78). These results should be interpreted carefully due to the ineffectiveness of the electrofishing boat during this time period. The PSD and RSD_{15} values increased this year (Table 79). Otoliths were taken this year for determination of age and growth. They revealed that fish reach a harvestable size between their sixth and seventh year of life (Table 80) and that the majority of the fish captured were between two and six years old and ranged in size from 8.0-12.0 in (Table 81). Population assessments rate this lake as a "Fair" largemouth bass fishery which is a boost from "Poor" a year ago; this was probably due to the increased catch of greater than 15.0 and 20.0 in fish (Table 82).

Bluegill / Redear Sunfish Sampling

On 14 May, 2008 the shoreline of Mill Creek Lake was diurnally electrofished for sunfish. In total 121 fish were captured, 96 of these were bluegill, 15 green sunfish and 10 longear sunfish (Table 83). Overall, this season's results show an increase in CPUE, especially in the 3.0–5.9 in length group (Table 84). The PSD and RSD_8 values, for bluegill, showed a slight decrease from 2007 (Table 85). The assessment rating for bluegill was again "fair" (Table 86).

Black Bass Electrofishing (Fall)

On the 25 September, 2008 the shoreline of Mill Creek Lake was nocturnally electrofished for largemouth bass. In total, 120 fish were collected ranging in size from 2.0-22.0 in (Table 87). Relative weights were also calculated for fish in the 8.0 in, 12.0-14.9 in, and greater than 15.0 in length groups and they were fairly stable for the small fish but showed an increase for the larger fish (Table 88).

Lake Reba (76a)

Black Bass Electrofishing (Spring)

On the 08 May, 2008 Lake Reba was nocturnally electrofished for largemouth bass. In total, 498 fish were captured that ranged in size from 3.0-19.0 inches in size (Table 89). This resulted in a CPUE of 332.00 f/h which was down from 2007, but above the mean CPUE since 1999.

There was a significant decrease in the less than 8.0 in and the 12.0-14.9 in fish and no changes in the 8.0-11.9 in and the greater than 15.0 in fish (Table 90). There also was no change in the PSD and RSD_{15} values (Table 91). The assessment rating in 2008 was "Fair" which was down from 2007 and this decrease was primarily in the 12.0 – 14.9 in fish (Table 92). A management plan for Lake Reba was written in 2008. The management objectives that can be determined through routine sampling are included in Table 106 and it can be noted that for largemouth bass the only objective met in 2008 was Objective 3 (>11.00 f/h for ≥ 15.0 in fish). Any decreases in catch during this time should be considered with care as the sampling boat was probably not sampling at peak performance.

Bluegill / Redear Sunfish Sampling

On the 19 May, 2008 Lake Reba was diurnally electrofished for sunfish. In total, 1009 fish were captured and 453 of these were bluegill, 370 were redear sunfish and 152 were warmouth. The other fish species captured were green sunfish and hybrid bluegill or sunfish species (Table 93). The management objectives that can be determined through routine sampling are included in Table 106 and it can be noted that for bluegill the only objective that was met in 2008 was Objective 2 (>75.00 f/h for ≥ 6.0 in fish).

For bluegill, the overall catch was higher than 2007, but lower than the average since 2003 and there was an increase in the 3.0 – 6.0 in and the 6.0 – 8.0 in length groups (Table 94). There was no change in the PSD values and not enough larger fish were captured to calculate the RSD_8 values (Table 95). Otoliths were collected in 2008 for determination of age growth and these results revealed that bluegill reach 6.0 in by their third to fourth year of life but age frequency showed that they could reach 6.0 in as early as two years and as late as five years (Tables 96 and 97). The overall assessment for bluegill was "Fair" (Table 98).

For redear sunfish, there was an overall increase in catch when compared to 2007 and to the mean since 2003; this was especially true for the 6.0 – 8.0 in fish (Table 99). Age and growth showed that the fish reach 7.0 in by their fifth year of life but some reached this size as early as two years old and some as late as seven years old (Tables 100 and 101). The overall assessment for redear sunfish was "Poor" (Table 102). The trend in Lake Reba is to classify it as a poor redear sunfish fishery and is likely due to the lack of larger fish.

Black Bass Electrofishing (Fall)

On the 18 September, 2008 Lake Reba was nocturnally electrofished for determination of relative weights of largemouth bass. In total 389 fish were captured ranging in size from 2.0-15.0 in (Table 103). Relative weight determination showed a decrease in the 8.0-11.9 in and greater than 15.0 in fish and no change for the 12.0-14.9 in fish over the 2007 values (Table 104). Lake Reba has been classified as a "Priority One" lake by the department and indexing of the YOY largemouth bass showed that Lake Reba needed supplemental stocking (Table 105). In the fall of 2008 Lake Reba was stocked with 780 5.0-in largemouth bass which was just over 10 f/a.

Rebel Trace Lake (19a)

Rebel Trace Lake (Menifee County) was nocturnally electrofished in the spring for largemouth bass on 12 May. Table 107 gives length frequency and CPUE for largemouth bass collected. The PSD value (38) is below the desirable range (Table 108). CPUE for each length group of largemouth bass is presented in Table 109. On 20 May the lake was electrofished during the daytime for sunfish. Length frequencies of sunfish collected are found in Table 110 and CPUE for selected length groups are presented in Table 111. The most notable increase in CPUE was for those fish in the <3.0 in (518 in 2008 and 124 in 2006). The PSD value of 5 is well below the desirable range (Table 112). The population assessment rated the bluegill fishery as "Poor" (Table 113). Fall sampling for largemouth bass could no be accomplished due to the extensive coverage of Eurasian watermilfoil. Grass carp are have been stocked in 2007 and 2008 to attempt to remedy this situation.

Approximately 33% of the shoreline around this 19-acre lake can no longer be sampled due to increased sediment loading. Rebel Trace was originally built for flood control and sediment retention and is fulfilling this purpose.

Smoky Valley Lake (36a)

Black Bass Electrofishing (Spring)

On the 05 May, 2008 the shoreline of Smoky Valley Lake was nocturnally electrofished for black bass species. In total, 400 largemouth bass were sampled ranging in size from 3.0-13.0 in (Table 114). This catch was higher than both the 2007 sampling and the mean of all sampling since 2000 (Table 115). In spite of this, the catch of fish in the 8.0-12.0 in length group was significantly lower than in 2007 (Table 115). There was no change in PSD over 2007 and no fish over 15.0 in were captured to calculate RSD_{15} (Table 116). There was a dramatic increase in the catch of age-1 fish which boosted the lakes rating from "Poor" in 2007 to "Fair" in 2008 (Table 117).

Bluegill / Redear Electrofishing

On the 15 May, 2008 the shoreline of Smoky Valley Lake was diurnally electrofished for sunfish species. In total, 154 fish were captured. Of these, 84 were bluegill and 59 green sunfish; the remainder were warmouth, hybrid sunfish and longear sunfish (Table 118). The catch of bluegill in 2008 was lower than it was in 2007 especially in the 3.0-6.0 in fish and no fish over 7.0 in were captured (Table 119). The PSD was significantly higher in 2008 than any year since 2005 but there were no fish captured over 8.0 in so RSD_8 could not be calculated (Table 120). In 2008 otoliths were removed from bluegill for determination of age and growth. This revealed that bluegill reached 6.0 inches in their third year of life, but some as early as two years old and some as late as four years old (Tables 121 and 122). Age frequency showed that the majority of the fish we captured were two and three year old fish (Table 122). In 2008 the assessment of the bluegill population was boosted from "Poor" to "Fair" probably due to the decrease in the amount of time it takes the fish to reach 6.0 in (Table 123).

Black Bass Electrofishing (Fall)

On the 24 September, 2008 the shoreline of Smoky Valley Lake was nocturnally electrofished to sample black bass for determination of relative weights. In total 208 largemouth bass were captured ranging in size from 2.0-13.0 in (Table 124). Relative weights for the 8.0-12.0 in and the 12.0-15.0 in length groups both dropped in 2008 (Table 125). Routine sampling in the last several years and the age growth data collected in 2007 showed that the population of largemouth bass in Smoky Valley appears to be stunted out. In 2008 a fish over 13.0 inches was not sampled in either our spring or fall sampling and our 2007 age data showed the growth rates to be incredibly slow. For these reasons, in 2008 the decision was made to attempt to thin some of the largemouth bass out of the lake by temporarily implementing a "no minimum size limit" regulation on Smoky Valley that will go into effect in 2009. Since this regulation is temporary, continued regular sampling and collection of age growth data will determine when we remove this regulation.

Lake Wilgreen (169a)

Black Bass Electrofishing (Spring)

On 06 May, 2008 the shoreline of Lake Wilgreen (Madison County) was nocturnally electrofished for black bass. In total, 94 largemouth bass were captured ranging in size from 3.0-21.0 in (Table 126). Catches by length groups were down across the board and some showed a drastic drop that could be attributed to the ineffectiveness of the shocking boat during this time period (Table 127). Both the PSD and RSD_{15} showed an increase over the 2007 values (Table 128).

Otoliths were taken this year for determination of age and growth. They revealed that fish reach a harvestable size between their third and forth year of life (Table 129) and that the majority of the fish captured were between two and four years old and there was a drastic drop in the capture of age 1 fish (Table 130). Due to the decrease in overall catch rates (primarily in the smaller size classes), the assessment took a hit this year and dropped from "Excellent" in 2007 to "Fair" in 2008 (Table 131). Again these decreases in catch and resulting drops in assessment were probably due to the shocking boat not effectively sampling fish at this time.

Bluegill / Redear Sunfish Sampling

On 29 May, 2008 the shoreline of Lake Wilgreen was diurnally electrofished for sunfish species. In total, 267 fishes were captured of which 210 were bluegill, 21 were redear sunfish, and the remainder were green sunfish and warmouth (Table 132). CPUE by length group was down significantly for bluegill and slightly for redear sunfish (Table 133). The PSD was higher than the 2007 values and RSD_8 could not be calculated this year as no 8.0 in fish were captured (Table 134), and the overall assessment for the bluegill population was downgraded to "Fair" (Table 135). The decreases in catch and drop in assessment were most likely due to the poor shocking of the boat, but continued monitoring of the population is necessary as some of the drops could be attributed to the introduction of gizzard shad and the likelihood that they compete with sunfish.

Black Bass Electrofishing (Fall)

On 23 September, 2008 the shoreline of Lake Wilgreen was nocturnally electrofished for black bass. In total 417 largemouth bass were sampled ranging in size from 2.0-18.0 in (Table 136). The relative weights of all length groups increased from 2007 especially in the greater than 15.0 in group (Table 137). The increase in this larger category could be due to the abundance of large gizzard shad in the lake that can only be fed upon by this size class of largemouth bass.

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

Water body	Species	Date (2008)	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments[a]
Cave Run Lake	Muskie	3/31	830	shock	cloudy / rain	51.00	727.51	24	good	upper lake; used 2 boats - 6 runs a boat
Cave Run Lake	Muskie	4/1	900	shock	overcast / windy	50.75	728.31	24	good	middle lake: used 2 boat - 6 runs a boat
Cave Run Lake	Muskie	4/2	900	shock	clear / cool	47.50	727.96	21	good	lower lake; used 2 boats - 6 runs a boat
Cave Run Lake	LMB	4/28	2100	shock	rain/cold/windy	65.00	730.12	72	good	upper lake; cond: 115
Cave Run Lake	LMB	4/29	2100	shock	cold-36°	61.50	730.17	60	good	middle lake; cond: 100
Cave Run Lake	LMB	4/30	2100	shock	clear/lt breeze	61.30	730.21	42	good	lower lake; cond: 95
Cave Run Lake	LMB	9/15	2030	shock	clear/cool	77.40	729	36	good	upper lake; cond: 167
Cave Run Lake	LMB	9/16	2030	shock	clear/cool	77.40	729	42	good	middle lake; cond: 140
Cave Run Lake	LMB	9/17	2030	shock	clear/cool	76.80	729	70	good	lower lake; cond: 130
Cave Run Lake	WC/BC	10/21	900	trap net	overcast/ windy	63.50	727.83	na	fair	checked 15 nets in upper section
Cave Run Lake	WC/BC	10/22	900	trap net	sunny/cool	64.00	727.75	na	fair	checked 14 nets in upper section
Cave Run Lake	WC/BC	10/23	900	trap net	sunny/cool	61.10	727.68	na	fair	checked 14 nets in upper section
Cave Run Lake	WC/BC	10/24	900	trap net	light rain	61.10	727.63	na	fair	pulled and checked 14 nets in upper section
Cave Run Lake	WB	10/21	900	gill net	overcast/ windy	63.50	727.83	na	good	2 nets in upper; 2 in middle
Cave Run Lake	WB	10/22	900	gill net	sunny/cool	64.00	727.75	na	good	2 nets in upper; 2 in middle
Cave Run Lake	WB	10/23	900	gill net	sunny/cool	61.10	727.68	na	good	2 nets in upper; 2 in middle
Grayson Lake	LMB	4/21	2100	shock	warm/clear	62.20	645.22	30	good	upper lake; turbid @summer pool
Grayson Lake	LMB	4/22	2100	shock	warm/clear	64.20	645.39	42	good	middle lake; cond: 100
Grayson Lake	LMB	4/23	2100	shock	warm/clear	67.00	645.34	48	good	lower lake; cond: 100
Grayson Lake	LMB	9/8	2030	shock	warm/clear	82.10	643.32	24	good	upper lake; turbid @summer pool; cond: 238
Grayson Lake	LMB	9/9	2030	shock	overcast./cool	78.60	643.31	42	good	middle lake; cond: 163
Grayson Lake	LMB	9/10	230	shock	clear/cool	79.10	643.28	72	good	lower lake; cond: 154
Grayson Lake	WC/BC	10/14	900	shock	sunny/ calm	63.90	642.23	18	good	upper lake; shocked with trail boat; lake has turned over
Lake Carnico	LMB	5/1	2100	shock	windy/cloudy	62.00	normal	12	good	more turbid than normal
Lake Carnico	BG/RE	5/28	900	shock	clear/windy	68.60	normal	50	fair	cond: 200; very windy on first 2 runs
Lake Carnico	LMB	9/22	2030	shock	calm/clear	74.70	low ~1'	24	fair	cond: 205
Clear Creek	LMB	5/12	2000	shock	cloudy	61.80	slightly up	30	good	cond: 105; saw one grass carp; stocked 07'
Clear Creek	BG/RE	5/20	1130	shock	overcast/wind	62.10	normal	54	good	cond: 110
Clear Creek	LMB	*did not sample in fall because of abundance of aquatic vegetation*								
Greenbo Lake	LMB	4/24	2100	shock	clear/calm	70.60	normal	144	good	cond: 73
Greenbo Lake	BG/RE	5/22	900	shock	sun/clear	60.60	normal	144	good	cond: 60
Greenbo Lake	LMB	9/11	2030	shock	overcast/ rain	80.20	low ~6"	108	good	cond: 70
Mill Creek Lake	LMB	5/7	2100	shock	calm-rainy	66.60	normal	78	good	cond: 80
Mill Creek Lake	BG/RE	5/14	900	shock	overcast	63.00	normal	72	good	cond: 80; broke boom on 5th run, only sampled 30 minutes
Mill Creek Lake	LMB	9/24	2030	shock	clear/cool	74.30	low ~6"	120	fair	cond: 135; very clear
Lake Reba	LMB	5/8	2100	shock	overcast/rainy	68.10	normal	66	normal	cond: 230; heavy rain on runs 5 and 6
Lake Reba	BG/RE	5/19	1000	shock	prt. cloudy/ cool	64.60	up ~ 8"	36	normal	cond: 230; clearer than spring LMB sampling
Lake Reba	LMB	9/18	2030	shock	clear/cool	74.40	down 28"	12	fair	cond: 212; turbid - phytoplankton bloom

Table 1 cont.

Water body	Species	Date (2007)	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Rebel Trace Lake	LMB	5/12	2200	shock	cloudy	59.40	slightly up	28	good	cond: 55; no grass carp observed; stocked 07'
Rebel Trace Lake	BG/RE	5/20	800	shock	overcast/cool	61.90	normal	40	good	cond: 60; some veg, had ot sample away from shore line.
Rebel Trace Lake	LMB	*did not sample in fall because of abundance of aquatic vegetation*								
Smoky Valley	LMB	5/5	2100	shock	clear/calm	66.10	normal	36	good	cond: 230
Smoky Valley	BG/RE	5/15	900	shock	overcast/drizzle	59.70	normal	24	murky	cond: 180
Smoky Valley	LMB	9/25	2010	shock	clear/cool	74.20	down ~2'	41	fair	cond: 269; water murkey in parts
Lake Wilgreen	LMB	5/6	2100	shock	warm/clear	68.60	down 12"	32	poor	cond: 280; unusual amounts of vegetation in May.
Lake Wilgreen	BG/RE	5/29	915	shock	sunny/calm	70.60	normal	24	fair	cond: 330
Lake Wilgreen	LMB	5/23	2010	shock	clear/cool	76.70	down 24"	36	good	cond: 333

Cave Run Lake Normal Summer Pool = 730.00 msl

Grayson Lake Normal Summer Pool = 645.00 msl

[a] cond = conductivity in µS/cm

Table 2. Relative abundance and CPUE (fish/hr) of muskellunge collected in the upper, middle and lower sections (includes ≤20.0 in observed but not collected) during 6 hours (18 hours total) of 30 minute runs in each area of Cave Run Lake (31 March - 02 April 2008).

		Inch class																																	
Species	Area	12	13	14	15	16	17	18	19	21	22	23	24	25	26	27	28	30	31	32	33	34	35	36	37	38	39	40	41	46	48	Total	CPUE	SE
Muskellunge	Upper		6	8	14	4			3	2	1	2	9	4	2	2	2	3	2	3		1	5	1	2	1						77	12.83	2.89
	Middle		1	5	9				1	1			2	3	3			1		4	1	3	6	3	3	1		1				48	8.00	1.53
	Lower	1	6	5	11		1	1				1		2	2	1	1			1	3	1	2	2	1	2	2	1	1	1	1	50	8.33	1.15
	Total	1	13	18	34	4	1	1	4	3	1	3	11	9	7	3	3	4	2	8	4	5	13	6	6	3	3	2	1	1	1	175	9.72	1.19

nedMS2cr.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 3. Muskellunge assessment using statewide criteria for Cave Run Lake spring electrofishing 1995-2008.

	CPUE age 1 fish		CPUE ≥20.0 in		CPUE ≥30.0 in		CPUE ≥36.0 in		CPUE ≥40.0 in		Total	Rating
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Score	
1995	2.87	2	4.52	2	2.83	3	1.56	4	0.55	3	14	Good
1996	5.23	3	4.16	2	2.36	2	0.83	2	0.42	3	12	Good
1997	*Lake flooded, muddy water, too few muskellunge collected for comparison purposes*											
1998	3.75	3	2.82	3	2.82	2	1.04	3	0.25	2	13	Good
1999	1.64	1	3.15	2	2.30	2	0.67	2	0.24	2	9	Fair
2000	1.72	1	2.78	1	1.78	2	0.94	3	0.28	3	10	Fair
2001	2.32	2	4.41	2	3.07	3	1.51	4	0.64	4	15	Good
2002	*Lake flooded, muddy water, did not sample*											
2003	1.94	1	3.22	2	2.33	2	1.00	3	0.33	3	11	Fair
2004	1.28	1	3.17	2	2.61	3	1.28	3	0.44	3	12	Good
2005	2.87	2	5.53	3	4.00	4	2.00	4	0.80	4	17	Excellent
2006	2.44	2	2.89	1	2.17	2	1.22	3	0.44	3	11	Fair
2007	3.61	3	2.50	1	1.78	2	1.17	3	0.39	3	12	Good
2008	2.72	2	5.50	3	3.28	3	1.28	3	0.28	3	14	Good

nedMS2cr.d08,, nedMK1cr.d07, nedmuscr.d06-95

Table 4. Length frequency and CPUE (fish/hr) of black bass collected in 2.0 hours (6 hours total) of 30-minute nocturnal electrofishing runs in each area of Cave Run Lake from 28-30 April 2008.

		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	0.00	0.00
	Spotted bass		1	5	1	2	1	2													12	6.00	2.94
	Largemouth bass	4	20	39	24	9	8	19	17	11	7	6	5	3		2	2				176	88.00	8.83
Middle	Smallmouth bass		1							1											2	1.00	0.58
	Spotted bass	2	7	10	10	15	30	27	5												106	53.00	8.39
	Largemouth bass	1	11	16	11	1	5	13	10	7	4	1			1	1					82	41.00	13.87
Lower	Smallmouth bass	1					4	1			3		1			1				1	12	6.00	2.94
	Spotted bass	3	11	8	16	44	26	20	13	2	2										145	72.50	16.11
	Largemouth bass	1	1	10	3	4	9	13	17	11	11	8	8	5	1		1	2	3		108	54.00	11.22
Total	Smallmouth bass	1	1				4	1		1	3		1			1				1	14	2.33	1.20
	Spotted bass	5	19	23	27	61	57	49	18	2	2										263	43.83	10.08
	Largemouth bass	6	32	65	38	14	22	45	44	29	22	15	13	8	2	3	3	2	3		366	61.00	8.47

nedpsdcr.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 5. Spring 2008 electrofishing catch-per-unit-effort (CPUE-fish/hr) for each length group of largemouth bass collected at Cave Run Lake compared to past years.

	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		Total		Sections	TTL
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	Sampled*	hours
2008	25.83	6.16	23.33	2.59	8.33	1.28	3.50	0.96	61.00	8.47	L,M,U	6
2007	67.50	7.21	43.33	3.50	19.92	2.84	7.92	1.33	138.67	10.74	L,M,U	12
2006	50.67	10.14	48.50	7.70	14.67	1.99	10.17	1.42	124.00	19.07	L,M,U	6
2005	75.00	13.08	41.67	6.41	14.67	2.67	7.17	1.64	138.50	22.18	L,M,U	6
2004	29.00	3.02	60.67	5.88	26.00	3.03	14.08	1.35	129.75	10.14	L,M,U	12
2003	41.00	5.99	64.58	5.15	24.75	2.28	20.25	2.85	150.58	13.02	L,M,U	12
2002					No data collected							
2001	22.83	3.68	54.67	5.41	27.58	2.33	12.58	1.55	117.67	8.60	L,M,U	12
2000	45.08	4.88	78.33	6.48	26.83	2.89	9.00	1.51	159.25	10.69	L,M,U	12
1999	67.58	7.18	51.25	3.47	21.58	1.79	8.58	1.49	149.00	8.73	L,M,U	12
1998	18.71	3.52	17.86	2.94	20.57	2.14	6.86	1.54	64.00	7.64	L,M	7

nedpsdcr.d08 - d03, d01 - d98

* L - lower, M - middle, U - upper

Table 6. 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%)	RSDa (± 95%)
Lower	Smalllmouth bass	11	55 (± 31)	27 (± 27)
	Spotted bass	107	4 (± 4)	
	Largemouth bass	89	44 (± 10)	13 (± 7)
Middle	Smallmouth bass	1	100	
	Largemouth bass	42	17 (± 11)	5 (± 6)
Upper	Largemouth bass	80	31 (± 10)	9 (± 6)
Total	Smallmouth bass	12	58 (± 29)	25 (± 25)
	Spotted bass	189	2 (± 2)	
	Largemouth bass	211	33 (± 6)	10 (± 4)

Largemouth bass = RSD_{15}, spotted and smallmouth bass = RSD_{14}

nedpsdcr.d08

Table 7. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected during spring sampling at Cave Run Lake from 1999 - 2008.

	Year								
Age	1999	2000	2001	2003	2004	2005	2006	2007	2008
1	61.64	42.44	20.65	39.76	28.09	63.36	49.21	66.52	24.88
2	43.46	61.41	47.10	55.77	46.55	42.80	42.04	36.27	20.06
3	27.09	34.71	26.53	24.17	31.96	19.99	16.37	23.32	8.33
4	11.20	14.46	15.35	17.34	14.19	7.58	9.57	4.06	2.53
5	3.69	3.76	5.03	7.19	5.30	2.37	3.50	2.80	2.10
6	1.17	1.10	1.58	3.27	2.06	0.86	1.69	2.46	0.88
7	0.13	0.15	0.18	0.50	0.28	0.13	0.27	1.10	0.33
8	0.53	0.47	0.71	1.50	0.86	0.52	0.96	1.11	0.53
10	0.08	0.08	0.28	0.33	0.14	0.22	0.22	0.53	0.36
13		0.33	0.17	0.75	0.08	0.33	0.17		

Note: Did not sample in 2002 due to high water, reduction in 2008 CPUE may be attributed a malfunctioning electrofishing boat.

nedpsdcr.d08 - d03, d01 - d99

nedaagcr.d03,07

Table 8. Population assessment using statewide criteria for largemouth bass based on spring sampling from 2004 through 2008 at Cave Run Lake.

Parameter	2004		2005		2006		2007		2008	
	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture*	12.4	3	12.4	3	12.4	3	12.4	3	12.4	3
Spring CPUE age 1 Fish	28.09	2	63.36	4	49.21	3	66.52	4	24.88	2
Spring CPUE 12.0-14.9 in	26.00	3	14.67	1	14.67	1	19.92	2	8.33	1
Spring CPUE ≥15.0 in	14.08	3	7.17	2	10.17	2	7.92	2	3.50	1
Spring CPUE ≥20.0 in	0.33	2	0.67	2	0.17	1	0.33	2	0.50	2
Instantaneous mortality (z)		0.846		0.897		0.799		0.703		0.786
Annual mortality (A)		57.0%		59.0%		55.0%		51.0%		54.4%
Total score		13		12		10		13		9
Assessment rating		Good		Good		Fair		Good		Fair

Note: Poor sample in 2008 due to malfunctioning electrofishing boat.

nedpsdcr.d08 - d04; nedaagcr.d03,07

Table 9. Population assessment using 13.0-16.0-inch protective slot limit criteria for largemouth bass based on spring sampling from 2004 through 2008 at Cave Run Lake.

Parameter	2004		2005		2006		2007		2008	
	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture*	12.4	4	12.4	4	12.4	4	12.4	4	12.4	4
Spring CPUE age 1 Fish	28.10	2	43.00	3	49.20	3	66.50	4	24.88	1
Spring CPUE 11.0-12.9 in	32.20	3	18.30	1	13.80	1	23.90	2	8.50	1
Spring CPUE ≥13.0-15.9 in	16.50	2	10.50	1	11.20	1	9.80	1	6.00	1
Spring CPUE ≥16.0 in	8.90	4	3.80	2	6.80	3	5.80	3	2.17	1
Total score		15		11		12		14		8
Assessment rating		Good		Fair		Good		Good		Fair

Note: Poor sample in 2008 due to malfunctioning electrofishing boat.
nedpsdcr.d08 - d04; nedaagcr.d03,07

Table 10. Length frequency and CPUE (fish/hr) of black bass collected in 6.0 hours (2 hours in each area; 12-30 min. runs) of nocturnal electrofishing in Cave Run Lake on September 15-17 2008.

	Inch class																				Std.
Area/Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	error
Lower																					
Smallmouth bass	1	1	2		2	3			2	2									13	6.50	0.96
Spotted bass	3	2	14	15	19	21	34	37	8	6	2								161	80.50	6.99
Largemouth bass	1	4	17	16	3		2	6	6	10	10	2	6	2	1		1	1	88	44.00	8.91
Middle																					
Smallmouth bass		6	9		1	6	4		4	1	1								32	16.00	4.24
Spotted bass	4	7	4	3	18	23	40	39	24	3	2								167	83.50	9.29
Largemouth bass	1	4	8	16	1	2	5	8	13	8	4	1				1			72	36.00	7.35
Upper																					
Spotted bass		2	6		1	1	1		1	1									13	6.50	2.22
Largemouth bass	6	92	168	110	11	4	27	25	7	5	5	1	4		2	1			468	234.00	45.26
Total																					
Smallmouth bass	1	7	11		3	9	4		6	3	1								45	7.50	2.38
Spotted bass	7	11	24	18	38	45	75	76	33	10	4								341	56.83	11.31
Largemouth bass	8	100	193	142	15	6	34	39	26	23	19	4	10	2	3	2	1	1	628	104.67	30.98

nedwrscr.d08

Table 11. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Cave Run Lake sampled by nocturnal electrofishing. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Largemouth bass	Lower	24	95 (10.7)	18	128 (46.2)	5	85 (4.3)
	Middle	34	85 (2.5)	5	84 (2.0)	1	95
	Upper	64	83 (1.6)	9	88 (2.0)	3	96 (2.9)
	Total	122	86 (2.4)	32	110 (25.9)	9	90 (3.0)
		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Spotted bass	Lower	100	88 (0.5)	8	88 (9.9)		
	Middle	126	92 (0.7)	5	96 (9.8)		
	Upper	3	87 (2.8)	1	104		
	Total	229	90 (0.5)	14	86 (7.0)		
		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Smallmouth bass	Lower	5	81 (4.2)	2	75 (2.0)		
	Middle	14	81 (1.4)	2	78 (0.2)		
	Total	19	81 (1.4)	4	77 (1.3)		

nedwrscr.d08

Table 12. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing at Cave Run 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
2008	4.6	0.04	76.50	28.15	26.33	8.13		
2007	4.7	0.06	50.50	19.00	20.30	7.70	24.88	5.86
2006	4.8	0.05	68.50	26.20	31.50	13.10	66.50	7.10
2005	4.1	0.07	51.50	19.40	10.80	3.50	49.20	9.90
2004	5.3	0.06	86.00	26.30	53.50	14.00	63.40	9.90
2003	4.7	0.04	70.70	19.00	23.50	6.40	28.10	3.00

nedwrscr.d08 - 03; nedpsdcrd08 - d04
nedaagcr.d03, 07

Table 13. Length frequency and CPUE (fish/nn) for each species of crappie collected at Cave Run Lake (upper section only) in 57 net-nights during 21-24 October 2008.

	Inch class											
Species	2	3	4	5	6	7	8	9	10	Total	CPUE	Std. error
White crappie		67	7	7	50	26	18	6	8	189	3.32	0.75
Black crappie	2	1		3	6	3	3	2		20	0.35	0.13

nedctncr.d08

Table 14. PSD and RSD_{10} values for crappie collected in trap nets on Cave Run Lake; 95% confidence limits are in parentheses.

	No. ≥ 5.0 in	PSD (± 95%)	RSD_{10} (± 95%)
White crappie	115	28 (± 8)	7 (± 5)
Black crappie	17	29 (± 22)	

nedctncr.d08

Table 15. Age frequency and CPUE (fish/nn) of white crappie collected from trap nets fished in Cave Run Lake.

	Inch class											Std
Age	3	4	5	6	7	8	9	10	Total	%	CPUE	error
0+	67	7							74	39	1.30	0.43
1+			6	30					36	19	0.63	0.17
2+			1	20	26	16	4		67	35	1.17	0.24
3+						2	2	6	10	5	0.17	0.05
4+							2	2	2	1	0.04	0.01
Total	67	7	7	50	26	18	6	8	189	100		
%	35	4	4	26	14	10	3	4	100			

CPUE of ≥8.0 in (quality size) crappie = 0.60
CPUE of ≥10.0 in (preferred size) crappie = 0.15
nedctncr.d08, nedaagcr.d07

Table 16. Population assessment using statewide criteria for white crappie from Cave Run Lake in 2008 compared to previous years.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
CPUE (excluding age-0)	2.20	1	6.89	2	2.80	1	2.01	1
CPUE age 1 crappie	0.70	1	5.14	2	0.74	1	0.64	1
CPUE age 0 crappie	1.70	1	3.75	2	0.55	1	1.30	1
CPUE ≥8.0 in	0.90	1	0.65	1	0.60	1	0.56	1
Mean age 2 length at capture	7.9	1	7.9	1	7.7	1	7.7	1
Instantaneous mortality (Z)		0.572		0.951		1.41		0.588
Annual mortality (A)		43.60%		66.30%		75.50%		45.50%
Total score:		5		8		5		5
Assessment rating:		Poor		Fair		Poor		Poor

nedctncr.d08 - 05; nedaagcr.d04, 07

Table 17. Length frequency and CPUE (fish/nn) for white bass collected in 12 net-nights of sampling at Cave Run Lake from 21-23 October 2008.

	Inch class													
Species	6	7	8	10	11	12	13	14	15	16	17	Total	CPUE	Std. Error
White bass	2	14	6	1	18	16	21	38	14	4	1	135	11.25	1.65

nedwtbcr.d08

Table 18. Number of fish and relative weight (W_r) for each length group of white bass collected at Cave Run Lake. Standard errors are in parentheses.

	Length group					
	6.0-8.9 in		9.0-11.9 in		≥12.0 in	
Year	No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
2008	22	92.8 (1.9)	19	90.3 (1.6)	94	92.1 (0.9)
2007	4	94.5 (3.9)	16	87.5 (1.8)	49	92.6 (1.0)

nedwtbcr.d08

Table 19. Age frequency and CPUE (fish/nn) of white bass sampled using gill nets for 12 net-nights at Cave Run Lake.

	Inch class										Std.
Age	7	10	11	12	13	14	15	Total	%	CPUE	Error
0	14							14	11	1.17	0.32
1		1	18	8				27	22	2.25	0.50
2				8	2			10	8	0.84	0.22
3					17	38	8	63	52	5.27	1.20
4					2			2	2	0.18	0.05
5							6	6	5	0.47	1.15
Total	14	1	18	16	21	38	14	122	100		
%	11	1	15	13	17	31	11	100			

nedaagcr.d07, nedwtbcr.d08

Table 20. Population assessment using statewide criteria for white bass based on fall sampling from 2008 as compared to previous years at Cave Run Lake.

	2003		2005		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
CPUE age-1 fish and older	17.90	3	13.30	3	4.31	1	9.00	2
Mean length age-2 at capture	13.6	4	12.9	3	12.9	3	12.9	3
CPUE ≥12.0 in	4.90	2	7.50	3	3.06	2	7.83	3
CPUE age-1 fish	15.10	4	5.10	3	1.13	1	2.25	1
Instantaneous Mortality (z)				0.816		-1.83		-0.446
Annual Mortality (A)				55.80%		84.00%		36.00%
Total score		13		12		7		9
Assessment rating		Good		Good		Fair		Fair

nedwtbcr.d08,d07, d05, d03

Table 21. Length frequency and CPUE (fish/hr) of black bass collected in 6.0 hours of nocturnal electrofishing (12-30 minute runs, four in each area) for black bass at Grayson Lake on 21 - 23 April 2008.

		Inch class																					Std.
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	error
Lower	Spotted bass	7	4	10	15	19	10	12	4	2												83	41.50	4.57
	Largemouth bass	1	5	8	7	5	22	26	13	4	9	14	12	3	2	1			1			133	66.50	12.45
Middle	Spotted bass	6	14	4	10	9	2	1	1													47	23.50	1.71
	Largemouth bass	7	24	36	26	8	16	24	8	7	11	10	9	3	2	3	2					196	98.00	20.18
Upper	Spotted bass		1	1			1	1		1												5	2.50	0.50
	Largemouth bass		2	11	8	5	8		4	4	3	1			2	1		1			1	51	25.50	3.59
Total	Spotted bass	13	19	15	25	28	13	14	5	3												135	22.50	5.03
	Largemouth bass	8	31	55	41	18	46	50	25	15	23	25	21	6	6	5	2	1	1		1	380	63.33	11.51

nedpsdgl.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 22. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Grayson Lake from 1999-2008.

	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.
2008	25.50	7.23	22.67	4.39	11.50	2.48	3.67	0.85	0.33	0.22	63.33	11.51
2007	48.0	8.03	46.8	3.7	16.0	2.09	5.0	0.8			115.8	11.6
2006	18.83	2.88	55.50	7.40	23.67	3.91	5.33	1.11			103.33	10.07
2005	47.47	7.97	66.53	7.87	23.79	3.71	2.74	0.51			140.53	16.92
2004	162.33	21.99	77.78	10.10	12.89	1.38	2.89	0.59			255.89	31.87
2003	128.33	10.65	79.50	6.51	6.33	0.77	2.17	0.63			216.33	15.11
2002	132.50	17.87	54.50	5.48	4.83	1.42	3.00	0.76			194.83	22.74
2001	220.78	30.58	54.22	3.23	6.67	0.89	2.22	0.48			283.89	30.19
2000	143.33	20.56	65.67	5.86	13.44	1.51	6.67	1.04			229.11	25.92
1999	172.67	21.58	102.44	10.12	24.11	2.13	4.56	0.66			303.78	31.25

nedpsdgl.d08 - d99

Table 23. 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%)
Lower	Spotted bass	47	4.26 (± 5.83)	-
	Largemouth bass	107	39.25 (± 9.30)	6.54 (± 4.71)
Middle	Spotted bass	13	*	*
	Largemouth bass	95	42.11 (± 9.98)	10.53 (± 6.20)
Upper	Spotted bass	3	*	*
	Largemouth bass	25	36.0 (± 19.20)	20.0 (± 16.00)
Total	Spotted bass	63	4.76 (± 5.30)	*
	Largemouth bass	227	40.09 (± 6.39)	9.69 (± 3.86)

[a] For largemouth bass the preferred size used to calculate RSD was 15 inches, for spotted and smallmouth bass it was 14 inches.

* Not enough fish of proper size to calculate

nedpsdgl.d08

Table 24. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Grayson Lake, including the range of length of bass at each age and the 95% confidence intervals for each age class.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2007	22	5.9									
2006	31	5.2	8.9								
2005	14	5.2	8.9	11.6							
2004	13	5.1	8.7	10.6	12.1						
2003	11	5.8	9.3	11.3	12.7	14					
2002	4	5.6	9.3	11.5	12.8	14	15.1				
2001	4	6	9.4	11.7	13.6	14.8	15.8	16.9			
2000	1	5.9	8.5	10.0	11.6	13.5	16.1	17.6	18.9		
1999	1	6.6	9.6	12.0	13.2	14.1	15.0	15.9	16.8	17.7	
Mean		5.5	9	11.2	12.6	14.1	15.5	16.8	17.9	17.7	
Number		101	79	48	34	21	10	6	2	1	
Smallest		3.5	6.9	8.9	10.2	11.5	13.5	15.3	16.8	17.7	
Largest		7.4	10.8	14.1	15.5	16.3	17.3	18.5	18.9	17.7	
Std error		0.1	0.1	0.2	0.2	0.3	0.4	0.5	1.1		
95% CI (±)		0.3	0.4	0.6	0.9	1.2	1.7	2	3.1		

Otoliths were used for age-determinations; Intercept=0

nedaaggl.d08

Table 25. Age frequency and CPUE (fish/hr) of largemouth bass from Grayson Lake.

	Inch class																		Std.
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	%	CPUE	Error
1	31	55	36	6												128	35	21.31	6.24
2			5	12	46	50	10									123	33	20.52	3.62
3							13	5	9	5						32	9	5.36	0.79
4							3	7	12	5	4					30	8	5.00	8.50
5								3	12	5	17	4				30	8	5.07	1.17
6										10		1		2		13	3	2.14	0.47
7												1	6	2	1	10	3	1.64	0.40
8															1	1	0	0.17	0.11
9														2		2	0	0.28	0.13
Total	31	55	41	18	46	50	26	15	33	25	21	6	6	6	2	381	100		
%	8	15	11	5	12	14	7	4	6	7	6	2	2	1	1	100			

nedpsdgl.d08, nedaaggl.d08

Table 26. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Grayson Lake during spring sampling from 1999 - 2008.

	Year									
Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	167.02	130.80	218.11	127.20	125.23	158.93	44.34	17.33	45.9	21.31
2	68.45	63.35	36.37	40.52	57.68	50.79	35.12	26.41	28.9	20.52
3	21.00	9.04	11.76	10.94	14.31	16.01	18.01	16.26	10.6	5.36
4	16.49	7.52	4.97	4.08	5.41	9.84	15.54	14.72	10.0	5.00
5	18.48	8.30	7.37	6.48	8.55	12.22	17.37	15.84	10.4	5.07
6	9.69	6.12	3.58	3.44	3.57	5.68	7.90	9.98	7.2	2.14
7	0.39	0.81	0.24	0.43	0.35	0.25	0.31	0.50	0.5	1.64
8	1.19	1.21	0.61	0.33	0.25	0.62	0.62	1.24	1.4	0.17
9	0.22	0.11	0.11	0.67		0.22	0.11	0.17		0.28
10	0.17	0.55	0.13	0.35	0.26	0.18	0.22	0.28	0.3	
11		0.11	0.11	0.17	0.50	0.11	0.11	0.17	0.2	
13		0.30	0.07	0.22	0.06	0.15		0.11	0.2	

nedpsdgl.d08 - d99
nedaaggl.d03; d08.

Table 27. Population assessment of largemouth bass based on 2005 - 2008 spring electrofishing data from Grayson Lake.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	10.7	1	10.7	1	10.7	1	11.6	2
Spring CPUE age 1 fish	46.80	3	17.30	1	45.90	3	21.30	1
Spring CPUE 12.0-14.9 in	25.10	3	23.70	2	16.00	2	11.50	1
Spring CPUE ≥15.0 in	2.90	1	5.30	2	5.00	2	3.67	1
Spring CPUE ≥20.0 in	0.20	2	0.30	2	0.17	1	0.33	2
Instantaneous Mortality (z)		-0.731		-5.35		-0.538		-0.445
Annual Mortality (A)		51.90%		41.50%		41.60%		35.90%
Total score		10		8		9		7
Assessment rating		Fair		Fair		Fair		Poor

nedpsdgl.d08 - d05, nedaaggl.d08, d03

Table 28. Length frequency and CPUE (fish/hr) of black bass collected in 4.5 hours (1.5 hours in each area) of nocturnal electrofishing (9-30 min runs) for black bass in Grayson Lake on 8 - 11 September 2008.

	Inch class																						Std.
Area/Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	error
Lower																							
Spotted bass	7	15	9	32	29	18	19	16	7	4	1		1								158	105.33	4.81
Largemouth bass	4	7	8	5	1	1	10	7	2	2	2							1			50	33.33	8.35
Middle																							
Smallmouth bass		1	1																		2	1.33	0.67
Spotted bass	16	56	5	21	19	7	8	9	4	1											146	97.33	23.67
Largemouth bass	1	69	72	15	2	6	16	3	5	10	5	1	1	2	1	1					210	140.00	14.00
Upper																							
Spotted bass	3	10	2			2	2	1	2	1											23	15.33	2.67
Largemouth bass	8	45	44	17	1	10	32	15	13	10	3	3	1	3	2			1		1	209	139.33	27.09
Total																							
Smallmouth bass		1	1																		2	0.44	0.29
Spotted bass	26	81	16	53	48	27	29	26	13	6	1		1								327	72.67	16.00
Largemouth bass	13	121	124	37	4	17	58	25	20	22	10	4	2	5	3	1		2		1	469	104.22	19.93

nedwrsgl.d08

Table 29. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Grayson Lake. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Largemouth bass	Lower	21	79.6 (1.1)	2	84.6 (3.6)	1	92.1
	Middle	34	76.6 (2.3)	7	82.0 (2.3)	4	95.3 (1.5)
	Upper	70	92.3 (9.8)	7	90.7 (4.2)	7	96.4
	Total	125	85.9 (5.6)	16	86.1 (2.3)	12	95.7 (1.1)
		7.0-10.9 in		11.0-13.9 in		≥ 14.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Spotted bass	Lower	60	86.3 (0.9)	5	86.4 (3.3)	1	92.1
	Middle	28	86.8 (1.8)	1	96.9		
	Upper	7	93.9 (2.9)	1	102.6		
	Total	95	87.0 (0.8)	7	90.2 (3.4)	1	92.1

nedwrsgl.d08

Table 30. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in September 2006 while nocturnal electrofishing at Grayson Lake.

		Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
Year class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2008	Total	4.1	0.04	66.00	16.42	8.67	2.77		
2007	Total	4.3	0.07	44.90	9.20	12.90	2.80	29.80	9.99
2006	Total	4.1	0.04	87.10	17.94	12.00	2.58	45.90	8.00
2005	Total	4.0	0.04	72.30	17.01	11.70	2.23	17.30	2.80
2004	Total	4.3	0.08	40.40	5.74	11.30	2.08	46.80	7.80
2003	Total	4.3	0.03	59.10	6.82	10.40	1.72	158.90	21.73

nedwrsgl.d08 - d03; nedpsdgl.d08 - d04
nedaaggl.d03, d08

Table 31. Length frequency and CPUE (fish/hr) for each species of crappie collected at Grayson Lake while electrofishing 3.0h (12 - 15minute runs) 14 October 2008.

	Inch class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. error
White crappie	1	5	14	83	55	113	35	7	2	2	1	1	319	106.33	20.38
Black crappie				4	1	1	1						7	2.33	1.40

nedcwrgl.d08

Table 32. PSD and RSD values for crappie collected while electrofishing Grayson Lake; 95% confidence limits are in parentheses.

	No.≥5.0 in	PSD (± 95%)	RSD_{10} (± 95%)
White crappie	299	16.1 (± 4.2)	2.0 (± 1.6)
Black crappie	9	33.3 (± 32.7)	22.2 (± 28.8)

nedcwrgl.d08

Table 33. Mean back-calculated lengths (in) at each annulus for white crappie collected from Grayson Lake, including the range of length of fish at each age and the 95% confidence intervals for each age class.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2007	21	3.4									
2006	7	3.1	5.2								
2005	20	3.5	5.1	6.7							
2004	10	3.4	5.5	6.7	7.8						
2003	1	3.2	5.5	6.9	7.8						
2002	4	3.1	5.0	6.2	7.1	8.1	8.9				
2001	2	3.1	4.8	6.0	7.1	8.1	8.9	10.1			
2000	1	4.1	6.1	8.5	9.4	10.2	11.1	12	12.9		
1998	1	3	5	6.4	7.6	8.1	8.5	8.8	9.5	9.9	11.2
Mean		3.4	5.2	6.6	7.7	8.3	9.1	10.3	11.2	9.9	11.2
Number		67	46	39	19	9	8	4	2	1	1
Smallest		2.5	3.7	4.6	5.8	6.8	7.8	8.8	9.5	9.9	11.2
Largest		4.6	6.9	8.5	9.4	10.2	11.1	12	12.9	9.9	11.2
Std error		0.1	0.1	0.1	0.2	0.4	0.4	0.8	1.7		
95% CI (±)		0.2	0.5	0.5	0.8	1.4	1.6	3.1	6.6		

Otoliths were used for age-determinations; Intercept=0
nedaaggl.d08

Table 34. Age frequencies and CPUE (fish/hr) of white crappie collected while electrofishing (6-30 minute runs) at Grayson Lake.

	Inch class															Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	error
0+	1	4											5	2	1.67	0.67
1+		1	14	68									83	26	27.64	9.09
2+			18	15	20	11							46	15	15.46	2.83
3+				6	35	79	13	2					129	40	42.94	6.34
4+						23	16	2	1				42	13	13.84	2.48
5+							3						3	1	1.06	0.22
6+							3	2	1				6	2	2.06	0.52
7+								1			1		2	1	0.67	0.42
8+												1	1	0	0.33	0.33
10+										2			2	1	0.67	0.45
Total	1	5	32	89	55	113	35	7	2	2	1	1	343	100		
%	0	2	4	26	17	35	11	2	1	1	0	0	100			

nedcwrgl.d08; nedaaggl.d08

Table 35. Comparison of various white crappie findings based on electrofishing at Grayson Lake during fall sampling*.

	2005	2006	2007	2008
CPUE (excluding age- 0)	43.70	268.40	10.80	104.60
CPUE age 1	9.90	83.30	1.33	27.64
CPUE age 0	1.30	36.30	0.33	1.67
CPUE $\geq$ 8.0 in	16.70	42.40	6.00	16.00
Mean age-2 length at capture	5.1	5.6	5.6	6.4

*Electrofishing data for comparison purposes, assessment values only available for trap net nedcwrgl.d08 - d05

Table 36. Fishery statistics derived from a daytime creel survey at Grayson Lake during 03 April through 28 October 2008 compared to findings from 2002, and 1993.

	2007	2002	1993
Fishing trips			
No. of fishing trips (per acre)	2,558 (1.69)	8,206 (5.43)	9,592 (6.34)
Fishing pressure			
Total man-hours (S.E.)	10,305 (332.11)	47,661 (774)	57,268 (4,865)
Man hours/acre	6.82	31.52	37.9
Catch/harvest			
No. of fish caught (S.E.)	20,637 (1,943.26)	109,1335 (7,244)	59,771 (5,620)
No. of fish harvested (S.E.)	11,615 (1,206.81)	43,206 (3,799)	30,080 (3,367)
Lbs. of fish harvested	3,083	10,782	7,144
Harvest rate			
Fish/hour	1.13	0.8	0.12
Fish/acre	7.68	28.58	19.89
Lbs/acre	2.04	7.13	4.73
Catch rates			
Fish/hour	2.03	2.17	1.04
Fish/acre	13.65	72.18	39.53
Misc. characteristics (%)			
Male	84.76	85	90.3
Female	15.24	15	9.7
Resident	86.0	84	80.48
Non-resident	14.0	16	19.52
Method (%)			
Still fishing	43.58	41	36.55
Casting	55.08	57	61.82
Fly fishing	1.34	2	1.34
Trolling	0	t	0.29
Mode (%)			
Boat	98.66	94	92.6
Bank	0.67	6	7.15
Dock	0.67	t	0.29

(S.E.) = Standard error
t < 0.5%

Table 37. Fish harvest statistics derived from the 2008 creel survey at Grayson Lake.

	Crappie group	Largemouth bass	Spotted bass	Smallmouth bass	Black bass group	Bluegill	Rock bass	Longear Sunfish	Warmouth	Green sunfish	Panfish group	Channel catfish	Flathead catfish	Catfish group	Carp	Shad	Anything
Number caught	10,578	4,758	478	20	5,257	4,567	37	4	4	3	4,616	98	7	105	76	7	
(per acre)	6.996	3.147	.316	.013	3.477	3.021	.024	.003	.003	.002	3.053	.065	.005	.069	.05	.005	
Number harvested	8,304	40	0	0	40	3,204	7	0	4	0	3,214	57	0	57	0	0	
(per acre)	5.492	.027			.027	2.119	.038		.003		2.126	.038		.038			
% of total number harvested	71.49	0.34			0.34	27.58	0.06		0.03		27.67	0.49		0.49			
Pounds harvested	2,435	96			96	496	2.4		0.9		500	52.2		52			
(per acre)	1.610	.064			.064	.328	.002		.001		.330	.035		.035			
% of total pounds harvested	78.98	3.12			3.12	16.10	0.08		0.03		16.21	1.69		1.69			
Mean length (in)		16.40				6.20	8.00		7.00			13.20					
Mean weight (lb)		2.28				0.15	0.34		0.23			0.76					
Number fishing trips for that species	790.23				1260.00						128.47			13.38			365.63
% of all trips	30.90				49.26						5.02			0.52			14.30
Hours fished for that species	3183.28				5077.21						517.52			53.91			1472.89
(per acre)	(2.11)				(3.36)						(0.34)			(0.04)			(0.97)
Number harvested fishing for that species	7,208				41						1,047			29			
Pounds harvested fishing for that species	2160.00				97.50						167.50			29.90			
Number harvested per hour fishing for that species	2.25				0.01						2.85			0.42			
% success fishing for that species	80.84				1.63						87.18						36.84

Table 38. Length distribution (length of released fish are estimates) for each species of fish harvested (H) and/or released (R) at Grayson Lake from April through October 2008.

Species		Inch class																					
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Crappie Group	H				1137	487	4282	261	18	58	238	6	17	12	5								
	R		39	326	659	133	532	166	8	17	29	6	17										
Largemouth Bass	H														17	23							
	R						456	81	1,782	386	1,114	163	418	140	125	26	21	5					
Spotted Bass	R						99	6	187	76	110												
Smallmouth Bass	R									13	7												
Bluegill	H	29	140	217	1,864	472	477	4															
	R		24	98	709	132	400																
Rock Bass	H						6																
	R						15		15														
Longear Sunfish	R				3																		
Warmouth	H					3																	
Green Sunfish	R				3																		
Channel Catfish	H										21		14	7	7		7						
	R									6	12		12		10								
Flathead Catfish	R																			6			
Carp	R										25		5	10			15		10				10
Shad	R						7																

Table 39. Monthly black bass and crappie angling success at Grayson Lake during the 2008 creel survey period.

	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	
Month	Bass	Crappie	Bass	Crappie	Bass	Crappie	Bass	Crappie	Bass	Crappie	Bass	Crappie	Bass	Crappie	Bass	Crappie
Apr	422.83	995.28	6.51	657.01	195.19	154.34	786.29	621.71	365	950	0.34	2.12	7	657	0.01	1.46
May	928.05	3,376.67	21.42	2,648.51	274.98	202.85	1,107.68	817.14	841	3,006	0.81	3.02	21	2,392	0.02	2.40
Jun	538.64	429.55	6.82	303.41	122.28	26.20	492.59	105.55	464	242	0.83	2.54	7	222	0.01	2.32
Jul	524.08	1,252.27	5.52	1,015.06	143.26	57.31	577.11	230.85	470	657	0.81	2.90	6	519	0.01	2.29
Aug	446.64	807.84	0.00	598.11	97.62	46.69	393.23	188.07	393	660	1.01	2.46	0	474	0.00	1.77
Sep	1,538.18	2,096.89	0.00	1,689.92	234.83	147.72	945.97	595.05	1,477	1,876	1.31	3.36	0	1,552	0.00	2.78
Oct	858.18	1,619.39	0.00	1,391.52	192.22	155.13	774.34	624.91	839	1,600	1.00	2.76	0	1,392	0.00	2.40
Total	5,256.60	10,577.90	40.26	8,303.55	1,260.38	790.23	5,077.21	3,183.28	4,822	8,991			41	7,208		
Mean											0.88	2.80			0.01	2.25

Table 40. Black bass catch and harvest statistics derived from a creel survey carried out at Grayson Lake in 2008.

	Largemouth bass			Spotted bass		Smallmouth bass		
	Harvest (≥15.0 in)	Catch and Release (≥15.0 in)	Released (12.0-14.9 in)	Harvest (No size limit)	Catch and Release (12.0-14.9 in)	Harvest (≥15.0 in)	Catch and Release (≥15.0 in)	Released (12.0-14.9 in)
Total number of bass	40.26	317.12	1,695.98	0	110.09	0	7.12	0.00
% of black bass harvested by number	100							
Total weight of fish (lbs)	96.20	646.30	1,071.80		51.00		5.00	0.00
% of black bass harvested by weight	100							
Mean length (in)	16.38							
Mean Weight (lbs)	2.28							
Rate (f/h)	0.00							

Table 41: Angler attitude survey carried out in conjunction with 2008 creel survey on Grayson Lake.

3. Which species of fish do you fish for at Grayson Lake?

Bass = 92.7%; **Crappie** = 57.7%; **Catfish** = 12.2%; **Hybrid Striped Bass** = 8.9%; **Bluegill** = 5.7%; **Other** = Carp, White Bass, Drum

4. Which species do you fish for most often at Grayson Lake?

Bass = 77.2%; **Crappie** = 13.8%; **Hybrid Striped Bass** = 4.1%; **Catfish** = 3.3%; **No Response** = 1.6%

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Grayson Lake?

Very Satisfied = 5.0%	**Somewhat Satisfied** = 30.0%	**Total** = 35.0%
Very Dissatisfied = 28.3%	**Somewhat Dissatisfied** = 29.2%	**Total** = 57.5%
Neutral = 6.7%	**No Opinion** = 0.8%	

5a. If you responded 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 (57.5%)*

Number of fish	51.4%
Size of fish	38.5%
Unhappy with regulations	7.3%
Lake's lack of habitat	1.8%
Tournaments	0.9%

Crappie Anglers

6. What level of satisfaction do you have with crappie fishing at Grayson Lake?

Very Satisfied = 11.3%	**Somewhat Satisfied** = 36.3%	**Total** = 47.6%
Very Dissatisfied = 7.5%	**Somewhat Dissatisfied** = 23.8%	**Total** = 31.3%
Neutral = 17.5%	**No Opinion** = 3.8%	

6a. If you responded 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 (31.3%)*

Number of fish	35.4%
Size of fish	68.8%
Unfamiliar with lake	2.1%

All Anglers

7. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20

Support = 56.5% **Oppose** = 20.0% **No Opinion** = 23.5%

8. Do you support or oppose stocking of hybrid striped bass into Grayson Lake?

Support = 61.3% **Oppose** = 21.0% **No Opinion** = 17.6%

9. Are you satisfied with the current size and creel limits on all sport fish at Grayson Lake?

Yes = 57.1% **No** = 30.0% **No Response** = 5.3%

Table 41 cont.

9a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Note: numbers below are percentages **ONLY from the anglers that answered no in number 9- 30.0%*

Bass size limit changes: 15" (36.7%); 14" (22.4%); slot limit (22.4%); 18" (8.2%); 12" (6.1%)

Of those wanting a slot limit change: 13" - 16" (45.5%); 'slot' (36.4%); 12" - 15" (9.0%); 15" - 20" (9.0%)

Bass creel limit changes: 5 (48.3%); 15 (20.7%); 3 (13.8%); 10 (10.3%); 2 (3.4%); 20 (3.4%)

Crappie size limit changes: 10" (50.0%); 8" (14.3%); 9" (14.3%); 15" (14.3%); 11" (7.1%)

Crappie creel limit changes: 20 (61.9%); 30 (23.8%); 10 (4.8%); 15 (4.8%); 40 (4.8%)

Catfish size limit changes: 16" (66.7%); 12" (22.2%); 18" (11.1%)

Catfish creel limit changes: 15 (70.0%); 3 (20.0%); 10 (10.0%)

10. Would you support a maximum size limit change on catfish to promote a trophy fishery?

Support = 55.0% **Oppose** = 3.3% **No Opinion** = 41.7%

Unsupervised comments in the "General Comments" section of the angler attitude survey (edited)

Stockings of catfish, trout, smallmouth bass, largemouth bass, shad, hybrid striped bass, crappie, 15" long largemouth bass

New piers for boat launching, and improve and add handicapped fishing areas

Slot limit on bass

Needs more structure, hinge and cable trees

Size limit on spotted bass; too many being taken because of no size limit

Restock hybrid striped bass; helped the size on largemouth bass

Make off-limit spawning areas in coves

Table 42. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Carnico (Nicholas Co.) on 1 May 2008.

	Inch class																			Std.
Species	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	Total	CPUE	Error
Largemouth bass	1	1	2	2	9	6	7	6	2	6	2	2	1	3	2	1	1	54	36.00	7.30

nedpsdlc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 43. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Lake Carnico, including 95% confidence intervals for each mean length per age class.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2007	3	5.5									
2006	14	5.4	9.2								
2005	13	5.0	8.4	11.0							
2004	4	4.8	8.2	11.0	13.1						
2003	1	5.4	9.4	12.1	13.9	15.4					
2002	2	5.6	8.6	10.9	12.3	13.5	14.4				
2001	4	5.9	10.3	12.0	13.3	14.6	15.5	16.3			
1998	1	4.9	8.5	11.9	13.6	15.0	16.4	17.5	18.2	18.6	19.3
Mean		5.3	8.9	11.2	13.1	14.5	15.3	16.6	18.2	18.6	19.3
Number		42	39	25	12	8	7	5	1	1	1
Smallest		3.0	7.0	9.7	10.9	11.7	12.4	13.2	18.2	18.6	19.3
Largest		7.4	11.3	13.4	14.7	16.2	17.4	18.2	18.2	18.6	19.3
Std error		0.1	0.2	0.2	0.3	0.5	0.6	0.9			
95% CI (±)		0.3	0.3	0.4	0.7	1.1	1.2	1.8			

Otoliths were used for age-determinations; Intercept=0

nedaaglc.d08

Table 44. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Lake Carnico.

	Inch class																		Std
Age	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	error
1	1	1	2													4	8	2.67	0.84
2				2	8	2	1	2								15	29	9.89	2.34
3					1	4	5	2								12	24	8.19	2.85
4							1	2	1	2						6	11	3.92	1.18
5											2					2	4	1.33	0.84
6										4						4	8	2.67	0.69
7									1			2	1	3		7	13	4.67	1.12
10															2	2	4	1.33	0.84
Total	1	1	2	2	9	6	7	6	2	6	2	2	1	3	2	52	100		
%	2	2	4	4	17	12	13	12	4	12	4	4	2	6	4	100			

nedaaglc.d08, nedpsdlc.d08

Table 45. Population assessment of largemouth bass based on samples collected at Lake Carnico in 2008 compared to previous years.

	2004		2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	12.2	4	12.2	4	12.2	4	12.2	4	11.0	3
Spring CPUE age 1	54.10	3	23.20	2	27.50	2	39.50	2	2.67	1
Spring CPUE 12.0-14.9 in	36.00	3	24.70	2	18.00	1	31.30	2	9.33	1
Spring CPUE ≥15.0 in	19.30	3	14.00	2	9.30	2	14.70	2	8.00	2
Spring CPUE ≥20.0 in	0.70	1	0.70	1	0.67	1	1.30	2	1.33	2
Instantaneous Mortality (z)		-0.631		-0.511		-0.505		-0.679		-0.673
Annual Mortality (A)		46.90%		40.00%		39.60%		49.30%		49.00%
Total score		14		11		10		12		9
Assessment rating		Good		Fair		Fair		Fair		Fair

nedpsdlc.d08 - d04, nedaaglc.d03,08

Problems with electrofishing gear may be responsible for decreased numbers in sample.

Table 46. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Carnico from 2000 to 2008.

	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.
2008	2.67	0.84	16.00	4.5	9.33	2.46	8.00	2.07	1.33	0.84	36.00	7.3
2007	40.00	8.07	108.67	8.97	31.33	3.92	14.67	2.46	1.33	1.33	194.67	10.26
2006	28.67	5.10	41.33	8.56	18.00	3.69	9.33	2.86	0.67	0.67	97.33	18.12
2005	24.00	5.56	64.67	8.48	24.67	3.33	14.00	1.71	0.67	0.67	127.33	12.62
2004	56.67	13.36	121.33	15.62	36.00	5.16	19.33	3.00	0.67	0.67	233.33	34.71
2003	42.67	9.50	47.67	6.25	34.00	4.70	13.33	4.09	1.33	0.84	164.67	15.78
2002	49.00	9.43	51.00	17.08	30.00	7.75	9.00	1.91		-	139.00	29.59
2001	35.00	5.00	51.00	8.54	28.00	5.89	6.00	2.58		-	123.00	11.31
2000	28.00	6.32	41.00	3.00	16.00	5.66	9.00	3.00	1.00	1.00	94.00	15.87

nedpsdlc.d08 - d00

Table 47. Largemouth bass PSD and RSD values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD_{15} (±95%)
2008	50	52 (± 14)	24 (± 12)
2007	232	30 (± 6)	10 (± 4)
2006	103	40 (± 10)	14 (± 7)
2005	155	37 (± 8)	14 (± 6)
2004	265	31 (± 6)	11 (± 4)
2003	183	39 (± 7)	11 (± 5)
2002	90	43 (± 10)	10 (± 6)
2001	85	40 (± 11)	7 (± 6)
2000	66	38 (± 12)	14 (± 8)

nedpsdlc.d08 - d00

Table 48. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (8 - 7.5 minute runs) at Lake Carnico on 28 May 2008.

Species	Inch class								Total	CPUE	Std. Error
	1	2	3	4	5	6	7	8			
Bluegill	143	149	36	16	6	6	1		357	357.00	38.04
Green sunfish	1	4	16	13	9				43	43.00	12.73
Longear sunfish		3	9	4	3				19	19.00	7.70
Redear sunfish					1	2	1	2	6	6.00	2.93
Hybrid bluegill			1						1	1.00	1.00

nedsunlc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 49. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Carnico in 2003, 2006-2008.

		Length group							
		< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		Total	
Species	Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
Bluegill	2003	160.80	23.81	134.40	22.43	24.00	6.85	319.20	39.45
	2006	540.00	73.10	382.40	31.00	47.20	11.20	969.60	93.57
	2007	140.80	27.41	54.40	14.00	0.80	0.80	196.00	38.33
	2008	292.00	42.06	58.00	14.90	7.00	2.80	357.00	38.04
Redear sunfish	2003	0.80	0.80	0.80	0.80	0.80	0.80	4.00	1.79
	2006	2.40	1.22	4.80	2.72	8.80	3.86	22.86	5.90
	2007			4.00	1.79	1.60	1.07	5.60	2.40
	2008			1.00	1.00	3.00	2.10	6.00	2.90

nedsunlc.d08 - d06, d03

Table 50. Bluegill PSD and RSD values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD_8 (±95%)
2008	65	11 (± 8)	
2007	245	15 (± 5)	
2006	537	11 (± 3)	
2003	198	28 (± 6)	0.4 (± 0.8)

nedsunlc.d008 - d06, d03

Table 51. Population assessment for bluegill based on samples collected at Lake Carnico from 2006-2008.

	2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age-2 at capture	5.3	4	5.3	4	5.3	4
Years to 6.0 in	4	2	4	2	3	3
CPUE ≥ 6.0 in	47.20	2	0.80	1	7.00	1
CPUE ≥ 8.0 in	0.00	1	0.00	0	0.00	0
Instantaneous Mortality (z)		-0.037		-0.561		-0.759
Annual Mortality (A)		31.10%		42.90%		53.20%
Total score		9		7		8
Assessment rating		Fair		Fair		Fair

nedsunlc.d08 - d06

Table 52. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Carnico on 22 September 2008.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	20	Total	CPUE	Std.Error
Largemouth bass	9	22	9	5	4	14	20	9	9	10	12	2	5	3	5	1	1	140	93.33	8.31

nedpsdlc.d08

Table 53. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Carnico.

	Length group					
Species	8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in	
	N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth Bass	48	85.2 (1.1)	19	86.4 (1.9)	10	79.7 (8.3)

nedwrslc.d08

Table 54. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.50 hour of nocturnal electrofishing (4-7.5 minute runs) for largemouth bass at Clear Creek Lake (Bath Co.) on 12 May 2008.

	Inch class																	Std.
Species	3	4	5	6	7	8	9	10	11	12	14	17	18	19	20	Total	CPUE	error
Largemouth bass	13	59	38	24	55	36	29	13	3	4	2	1	1	1	2	281	562.00	55.08

nedpsdcc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 55. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Clear Creek Lake.

	Length group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std.err	CPUE	Std. err	CPUE	Std. err.	CPUE	Std. err.
2008	378.00	66.40	162.00	13.22	12.00	5.16	10.00	2.31	562.00	55.10
2007	197.30	23.20	149.30	11.60	46.70	19.20	16.00	8.00	405.30	35.30
2006	136.00	20.10	189.30	13.30	10.70	7.10	13.30	7.10	349.30	16.20
2005	168.00	42.30	80.00	28.80	13.30	7.10	5.30	2.70	266.70	65.70
2004	122.70	27.10	109.30	26.30	16.00	8.00	13.30	2.70	261.30	34.70

nedpsdcc.d08 - 04

Table 56. PSD and RSD values for largemouth bass collected while electrofishing Clear Creek Lake; 95% confidence limits are in parentheses.

Species	No. ≥8.0 in	PSD (± 95%)	RSD_{15} (± 95%)
Largemouth bass	92	12 (± 7)	5 (± 5)

nedpsdcc.d08

Table 57. Length frequency and CPUE (fish/hr) of sunfish collected in 0.50 hour of electrofishing (4-7.5 minute runs) for sunfish at Clear Creek Lake on 20 May 2008.

	Inch class											Std.
Species	1	2	3	4	5	6	7	8	9	Total	CPUE	error
Bluegill	139	50	25	17	14	20	16			281	562.00	138.15
Redear sunfish	17	12	39	24	22	9	2	1	1	127	254.00	43.74
Warmouth		5	6	11	32	15	1			70	140.00	23.21
Longear sunfish	1	1	5	2	1					10	20.00	12.00
Green sunfish			3	1	1	2				7	14.00	6.83
Bluegill hybrids		2			2	1				5	10.00	3.83

nedsuncc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 58. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Clear Creek Lake.

		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	2008	378.00	162.76	112.00	33.15	72.00	69.36			562.00	138.15
	2007			122.00	16.50	102.00	33.84			224.00	50.28
	2006	164.00	83.40	268.00	54.60	32.00	18.60	2.70	1.70	561.60	139.70
Redear sunfish	2008	58.00	29.64	17.00	26.81	22.00	9.45	4.00	2.31	254.00	43.74
	2007			112.00	14.97	104.00	35.33	44.00	6.93	260.00	52.51
	2006	60.80	18.70	60.80	18.00	24.00	10.40	4.80	2.00	150.40	23.40

nedsuncc.d08-d06

Table 59. Age frequencies and CPUE (fish/hr) of bluegill collected during spring electrofishing in Clear Creek Lake.

	Inch class										Std.
Age	1	2	3	4	5	6	7	Total	%	CPUE	error
1	139	50	13	6	3			210	75	420.56	157.75
2			13	11	11	16	5	55	20	110.16	60.99
3						4	10	14	5	28.09	27.50
4							2	2	1	3.20	3.20
Total	139	50	25	17	14	20	16	281	100		
%	49	18	9	6	5	7	6	100			

nedaagcc.d02; nedsuncc.d08

Table 60. PSD and RSD values obtained from bluegill collected at Clear Creek Lake during May 2008 compared to 2007; confidence intervals are in parenthesis.

Year	No. ≥3.0 in	PSD (±95%)	RSD_8 (±95%)
2008	92	39 (±10)	*
2007	112	45 (± 9)	*

* = No 8.0" fish captured to calculate RSD_8

nedsuncc.d08 - d07

Table 61. Population assessment of bluegill based on samples collected at Clear Creek Lake.

	2006		2007		2008	
Parameter	Actual Value	Assessment Score	Actual Value	Assessment Score	Actual Value	Assessment Score
Mean length age-2 at capture	5.1	4	5.1	4	5.1	4
Years to 6.0 in	3-3+	3	3-3+	3	3-3+	3
CPUE ≥ 6.0 in	35.60	2	102.00	4	72.00	3
CPUE ≥ 8.0 in	1.30	2	0.00	0	0.00	0
Instantaneous Mortality (z)		-1.93		-1.77		-1.66
Annual Mortality (A)		86.00%		83.00%		80.90%
Total score		11		11		10
Assessment rating		Good		Good		Good

nedsunlc.d08 - d06; nedaagcc.d02

Table 62. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6-15 minute runs) for black bass at Greenbo Lake (Greenup Co.) on 24 April 2008.

	Inch class																						
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	Total	CPUE	Std. error
Largemouth bass	1	12	9	2	1	11	9	7	10	15	14	12	3	4	2	2	1	1	3	1	120	80.00	15.21

nedpsdgb.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 63. 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%)	RSD_{15} (±95%)
2008	84	51 (± 11)	9 (± 8)
2007	188	47 (± 7)	7 (± 4)

nedpsdgb.d08 - d07

Table 64. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake.

	Inch class																		Std
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	error
1	1	0														1	2	0.98	0.87
2	1	1	11	9	4		2									27	29	18.05	4.70
3					3	10	12	3								27	29	18.22	3.53
4							2	10	4	1						16	17	10.97	1.61
5									8	1	2	1				12	13	7.91	2.20
6								1		1	2	1				5	6	3.47	1.22
7										1			2		1	4	4	2.40	0.74
8														1		1	1	0.67	0.67
Total	2	1	11	9	7	10	16	14	12	4	4	2	2	1	1	94	100		
%	2	1	12	10	7	11	16	15	13	3	4	2	2	1	1	100			

nedaaggb.d07, nedpsdgb.d08

Table 65. 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		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2008	24.0	7.23	27.33	5.79	19.33	2.81	9.33	3.04	80.00	15.21
2007			39.33	11.84	48.67	13.32	8.67	2.40	164.67	21.45
2006	28.00	5.27	66.00	12.17	50.00	7.78	18.67	4.70	162.67	19.83
2005	42.00	20.34	58.67	9.56	28.00	3.43	13.33	3.53	142.00	22.46
2004	14.00	2.88	116.80	9.87	58.80	7.45	16.80	2.97	206.40	14.09
2003	101.33	20.57	76.00	18.68	45.33	4.34	10.67	3.37	233.33	41.37
2002					*No data collected*					
2001	79.00	8.06	64.00	3.27	42.00	8.08	5.00	1.00	190.00	4.76
2000	41.00	9.00	90.00	15.71	26.00	2.58	4.00	1.63	161.00	24.84
1999	88.00	14.33	84.00	5.66	26.00	8.08	6.00	3.83	204.00	17.44
1998	77.00	26.65	119.00	16.68	57.00	8.06	7.00	2.52	260.00	27.18

nedpsdgb.d08 - d98

Table 66. Population assessment for largemouth bass based on spring sampling at Greenbo Lake from 2004 through 2008.

	2004		2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	11.7	4	11.7	4	11.7	4	10.7	2	10.7	2
Spring CPUE age 1	33.60	2	46.70	3	35.60	2	16.00	2	0.98	1
Spring CPUE 12.0-14.9 in	58.80	4	28.00	2	50.00	4	48.70	3	19.33	1
Spring CPUE ≥15.0 in	16.80	2	13.30	2	18.70	3	8.70	2	9.33	2
Spring CPUE ≥20.0 in	4.00	4	3.30	3	7.30	4	1.30	2	2.67	3
Instantaneous mortality (z)		-0.557		-0.493		-0.521		-0.687		-0.642
Annual mortality (A)		42.7		39.0		40.7		49.7		47.4
Total score:		16		14		17		11		9
Assessment rating:		Good		Good		Excellent		Fair		Fair

nedpsdgb.d08 - d04; nedaaggb.d08, d04

Table 67. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Greenbo Lake from 2000 - 2008.

	Year							
Age	2000	2001	2003	2004	2005	2006	2007	2008
1	52.87	83.87	105.33	33.63	46.71	35.64	2.10	.98
2	66.13	34.13	31.33	87.17	19.96	35.69	50.35	18.05
3	29.00	56.00	71.33	28.80	51.33	50.67	42.73	18.22
4	6.00	6.67	9.78	26.67	7.11	14.22	27.22	10.97
5	4.00	5.33	7.56	17.73	6.89	8.44	16.04	7.91
6	2.00	1.00	3.33	3.20	2.67	6.67	6.09	3.47
7	1.00	1.00	2.67	5.20	4.00	3.33	4.13	2.40
8							0.67	0.67

nedpsdgb.d08 - d03; d01-d00

nedaaggb.d07,03

Note: Did not sample in 2002 due to lake draw down.

Table 68. Species composition, relative abundance and CPUE (fish/hr) of sunfish collected in 1.25 hours of electrofishing (10-7.5 minute runs) in Greenbo Lake on 21 May 2007.

	Inch class										Std.
Species	1	2	3	4	5	6	7	8	Total	CPUE	error
Bluegill	18	82	128	74	45	26	25	7	405	324.00	56.61
Longear sunfish	2	21	53	26	15	1			118	94.40	19.88
Redear sunfish			4	4	1	5	2	1	17	13.60	5.73
Green sunfish		3	1	3	3	1	2	1	14	11.20	2.13
Hybrid sunfish		1							1	0.80	0.80

nedsungb.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 69. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Greenbo Lake.

		Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥ 8.0 in		> 10.0 in		Total	
Species	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Bluegill	2008	80.00	15.23	196.80	51.28	40.80	7.58	6.40	2.00			324.00	56.61
	2007	286.40	50.78	191.20	47.35	45.60	15.09	7.20	2.78			530.40	80.36
	2006	94.40	28.01	159.20	37.27	46.40	5.03	9.60	3.92			309.60	61.57
	2005	116.00	25.53	44.40	59.22	46.40	8.83	3.20	1.77			580.00	89.33
	2003	366.00	41.71	187.00	29.41	11.00	4.73	11.00	5.00	1.00	1.00	575.00	26.10
Redear sunfish	2008			7.20	3.67	5.60	3.38	0.80	0.80			13.60	5.73
	2007	2.40	1.17	12.00	6.11	1.60	1.07					16.00	6.85
	2006	15.20	4.04	7.20	2.78	0.80	0.80	0.80	0.80			24.00	5.84
	2005	2.40	1.71	2.40	1.22	1.60	1.07	4.80	3.20			11.20	3.99
	2003	9.00	5.26	1.00	1.00							10.00	5.77

nedsungb.d08 - d05, d03

Table 70. Bluegill PSD and RSD_8 values from spring electrofishing at Greenbo Lake ; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD_8 (±95%)
2008	305	19 (± 4)	2 (± 2)
2007	305	22 (± 5)	3 (± 2)

nedpsdgb.d08 - d07

Table 71. 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	6
2007	15	2.5					
2006	32	2.3	4.7				
2005	9	2.4	4.6	6.9			
2004	10	2.7	4.8	6.4	7.6		
2003	2	2.5	4.6	6.3	7.4	8.2	
2002	3	2.6	3.6	6.0	7.4	8.0	8.6
Mean		2.4	4.6	6.5	7.5	8.1	8.6
Number		71	56	24	15	5	3
Smallest		1.0	2.2	5.3	6.5	7.5	8.2
Largest		4.0	6.4	7.4	8.3	8.8	8.8
Std Error		0.1	0.1	0.1	0.2	0.3	0.2
95% CI (±)		0.3	0.4	0.5	0.4	1.0	0.7

Otoliths were used for age determination; Intercept = 0
nedaaggb.d08

Table 72. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Greenbo Lake.

	Inch class											Std.
Age	1	2	3	4	5	6	7	8	Total	%	CPUE	error
1	18	74	35	41					126	31	101.15	18.52
2		8	92	74	45	8			227	56	181.89	43.86
3						13	10	5	23	6	18.40	3.39
4						5	13	3	21	5	16.56	3.00
5							3	1	4	1	2.80	0.58
6								3	3	1	2.40	0.73
Total	18	82	127	74	45	26	25	7	404	100		
%	4	20	31	18	11	6	6	2	100			

nedaaggb.d08; nedsungb.d08

Table 73. Population assessment for spring collected bluegill sampled from Greenbo Lake.

Parameter	2005 Actual value	2005 Assessment score	2006 Actual value	2006 Assessment score	2007 Actual value	2007 Assessment score	2008 Actual value	2008 Assessment score
Mean length age-2 at capture	5.2	4	5.2	4	5.2	4	4.9	4
Years to 6.0 in	3	3	3	3	3	3	3	3
CPUE ≥ 6.0 in	49.60	2	28.00	2	52.80	3	47.20	3
CPUE ≥ 8.0 in	3.20	2	4.80	2	7.20	2	6.40	2
Instantaneous mortality		1.270		1.310		-1.350		-0.865
Annual mortality		71.9%		73.2%		74.2%		57.9%
Total score:		11		11		12		12
Assessment rating:		Good		Good		Good		Good

nedaaggb.d03, d08; nedsungb.d05 - d08

Table 74. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6-15 minute runs) for black bass at Greenbo Lake on 11 September 2008.

Species	Inch class 2	32	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. error
Largemouth bass	25	67	28	2	30	16	7	6	11	10	12	7	4	4	3	1	233	155.33	12.79

nedwrsgb.d08

Table 75. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Greenbo Lake by nocturnal electrofishing. Standard error in parentheses.

Year	Length group 8.0-11.9 in No.	8.0-11.9 in W_r (se)	12.0-14.9 in No.	12.0-14.9 in W_r (se)	≥ 15.0 in No.	≥ 15.0 in W_r (se)
2008	34	84.8 (1.2)	23	84.2 (1.5)	8	123.5 (37.8)
2007	30	88 (1.5)	29	88 (0.9)	5	96 (5.3)

nedwrsgb.d08 - d07

Table 76. Indices of year class strength at age 0 and age 1, and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing at Greenbo 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
2008	3.5	0.06	82.00	7.57	2.00	1.37		
2007	3.9	0.09	44.70	11.29	3.33	1.19	0.98	0.87
2006	3.6	0.10	45.30	9.16	2.67	1.69	2.10	1.03
2005	3.8	0.12	32.00	7.00	4.00	1.03	35.60	5.45
2004	3.6	0.17	20.00	6.02	2.67	1.33	46.70	21.20
2003	4.4	0.12	45.00	7.72	14.00	3.46	33.60	2.11

nedwrsgb.d08 - d03; nedpsdgb.d08 - 04; and nedaaggb.d03,07

Table 77. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1 hour of nocturnal electrofishing (4 - 15 minute runs) at Mill Creek Lake (Powell/Wolfe Co.) on 7 May 2008.

	Inch class																				Std.
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE	Error
Largemouth bass	2	1	7	22	18	19	30	29	5	4	4	1		2	2	1	1	1	149	149.00	11.00

nedpsdmc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 78. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth lass collected at Mill Creek Lake from 2000, 2001, 2004 and 2006-2007.

	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.
2008	10.00	3.46	89.00	10.75	38.00	3.46	12.00	3.65	3.00	1.91	149.00	11.00
2007	31.00	5.30	84.00	15.90	31.00	9.00	7.00	2.50			153.00	22.29
2006	45.00	18.50	108.00	10.90	22.00	2.00	7.00	4.40			182.00	28.70
2004	50.40	16.10	52.00	68.00	17.60	2.00	5.60	1.60			141.60	18.00
2001*	36.00	8.50	59.00	10.60	13.00	3.00	7.00	2.50			115.00	17.50
2000*	39.00	11.40	70.00	11.50	12.00	3.30	4.00	0.00			125.00	21.60

nedpsdmc.d07, d06, d04, d01, d00

* All Species Sampled

Table 79. Largemouth bass PSD and RSD values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD_{15} (±95%)
2008	139	36 (± 8)	9 (± 5)
2007	122	31 (± 8)	6 (± 4)
2006	137	21 (± 7)	5 (± 4)
2004	114	25 (± 8)	6 (± 4)

nedpsdmc.d08 - d06, d04

Table 80. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Mill Creek Lake, including size range at each age and 95% confidence intervals.

		Age														
Year	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2007	2	5.4														
2006	25	4.3	8.3													
2005	19	4.4	8.2	10.5												
2004	8	4.2	7.9	10.0	11.6											
2003	8	4.6	7.9	10.3	11.8	12.9										
2002	7	4.5	7.7	9.9	11.1	12.1	13.0									
2000	5	5.9	9.2	11.6	12.8	13.7	14.3	15.0	15.7							
1998	1	4.9	9.9	12.3	13.6	14.8	15.8	16.8	17.5	18.0	18.5					
1997	1	5.0	8.7	12.4	13.6	14.9	15.8	16.8	17.3	18.1	18.6	19.8				
1993	1	8.0	11.9	14.3	15.1	15.9	16.5	16.9	17.5	17.9	18.1	18.3	18.5	18.7	18.9	19.1
Mean		4.6	8.3	10.5	12.0	13.1	14.1	15.7	16.3	18.0	18.4	19.1	18.5	18.7	18.9	19.1
Number		77	75	50	31	23	15	8	8	3	3	2	1	1	1	1
Smallest		2.9	6.5	8.8	10.5	11.3	12.0	14.4	15.1	17.9	18.1	18.3	18.5	18.7	18.9	19.1
Largest		9.5	11.9	14.3	15.1	15.9	16.5	16.9	17.5	18.1	18.6	19.8	18.5	18.7	18.9	19.1
Std Error		0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.0	0.1	0.7				
95% CI (±)		0.5	0.4	0.5	0.8	1.0	1.3	1.4	1.5	0.2	0.6	2.9				

Otoliths were used for age determination; Intercept = 0
nedaagmc.d08

Table 81. Age frequency and CPUE (fish/hr) of largemouth bass captured during one hour of elctrofishing from Mill Creek Lake.

Age	Inch class														Total	%	CPUE	Std. Error
	5	6	7	8	9	10	11	12	13	14	15	16	18	19				
1	2														2	1	2.00	2.00
2		1	7	22	10										40	27	39.82	8.18
3					8	15	20								43	30	43.38	6.17
4						4	10	7							21	15	21.05	1.92
5								15	1	2					18	12	17.75	1.70
6								7	4	2					13	9	13.00	1.68
8											4	1			5	3	5.00	1.91
10													2		2	1	2.00	2.00
11														1	1	1	1.00	0.58
Total	2	1	7	22	18	19	30	29	5	4	4	1	2	1	145	100		
%	1	1	5	15	12	13	21	20	3	3	3	1	1	1	100			

nedpsdmc.d08; nedaagmc.d08

Table 82. Population assessment of largemouth bass based on samples collected at Mill Creek Lake in 2008 as compared to previous years.

	2004		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	10.5	2	10.5	2	10.5	2	10.5	2
Spring CPUE age 1	16.90	2	19.60	2	14.10	1	2.00	1
Spring CPUE 12.0 - 14.9 in	17.60	1	22.00	1	31.00	2	38.00	3
Spring CPUE ≥ 15.0 in	5.60	2	7.00	2	7.00	2	12.00	2
Spring CPUE ≥ 20.0 in	1.60	2	1.60	2	0.00	0	3.00	3
Instantaneous Mortality (z)		-0.315		-0.425		-0.825		-0.312
Annual Mortality (A)		27.10%		34.90%		56.20%		26.80%
Total score		9		9		7		11
Assessment rating		Fair		Fair		Poor		Fair

nedpsdmc.d04, d06, d07, d08

Table 83. Length frequency and CPUE (fish/hr) for sunfish collected in 0.5 hours of diurnal electrofishing (4 - 7.5 minute runs) at Mill Creek Lake on 14 June 2008.

	Inch class									Std.
Species	3	4	5	6	7	8	9	Total	CPUE	Error
Bluegill	43	31	8	8	2	3	1	96	192.00	10.52
Green Sunfish	2	5	2	4	2			15	30.00	55.62
Longear Sunfish	6	2	2					10	20.00	7.66

nedsunmc.d08

* 2008 Spring data should be interpreted with caution due to shocking boat proble

Table 84. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Mill Creek Lake in 2008, 2007, 2006 and 2005.

		Length group									
		< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		≥ 8.0 in		Total	
Species	Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
Bluegill	2008			164.00	49.91	20.00	10.07	8.00	4.62	192.00	55.62
	2007			76.00	14.74	18.00	6.19	7.00	3.18	101.00	14.02
	2006	123.90	48.90	73.90	16.20	33.00	8.10	9.10	7.90	241.10	73.90
	2005	42.00	8.10	98.30	16.20	77.70	12.30	22.90	7.50	241.10	17.90

nedsunmc.d08 - d05

Table 85. Bluegill PSD and RSD values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD_8 (±95%)
2008	96	15 (± 7)	4 (± 4)
2007	101	24 (± 8)	7 (± 5)
2006	102	36 (± 9)	8 (± 5)

nedpsdmc.d08 - d06

Table 86. Population assessment of bluegill based on samples collected at Mill Creek Lake.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age-2 at capture	4.2	2	4.2	2	4.4	2	4.4	2
Years to 6.0 in	3	3	3	3	3	3	3	3
CPUE ≥ 6.0 in	100.00	4	42.00	2	25.00	2	28.00	2
CPUE ≥ 8.0 in	22.70	4	9.10	3	7.00	2	8.00	2
Instantaneous Mortality (z)		-0.451		-0.691		-1.391		-0.58
Annual Mortality (A)		36.40%		49.90%		75.10%		44.10%
Total score		13		10		9		9
Assessment rating		Good		Fair		Fair		Fair

nedsunmc.d07, d06, d05

Table 87. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.0 hours of nocturnal electrofishing (4 - 15 minute runs) at Mill Creek Lake on 25 September 2008.

	Inch class																
Species	2	3	4	5	7	8	9	10	11	12	13	14	15	22	Total	CPUE	Std.Error
Largemouth bass	11	26	20	4	5	11	3	10	10	12	5	1	1	1	120	120.00	17.36

nedpsdmc.d08

Table 88. 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	
Species	Year	N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	2008	34	84 (1.0)	18	88 (1.4)	2	98 (12.3)
	2005	58	87 (0.8)	12	85 (1.8)	3	90 (1.2)
	2007	42	85 (0.9)	10	82 (2.4)	1	89 (-)

nedwrsmc.d08

Table 89. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Reba (Madison Co.) on 08 May 2008.

	Inch class																			Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Error
Largemouth bass	4	13	36	19	44	107	85	72	48	25	13	13	8	4	4	2	1	498	332.00	47.08

nedpsdlr.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 90. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Reba from 2008 - 1999.

	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.
2008	77.33	18.44	208.00	28.36	34.00	6.26	12.67	2.62	-		332.00	47.08
2007	134.67	20.93	216.67	45.87	60.67	5.21	18.67	4.09	0.67	0.67	430.67	52.20
2006	189.30	18.90	70.70	13.50	26.00	4.90	6.00	4.90	-		292.00	27.10
2005	53.30	9.30	57.30	8.10	45.30	4.30	13.30	2.20	0.70	0.70	169.30	16.40
2004	30.00	8.90	125.30	21.50	51.30	9.20	6.70	2.20	-		213.30	26.00
2003	110.00	17.90	126.00	10.90	52.00	6.10	8.00	2.50	0.70	0.70	296.00	27.30
2002	138.00	33.60	140.00	31.30	31.00	6.60	5.00	1.00	-		314.00	67.00
2001	196.00	25.00	30.70	15.40	9.30	5.30	4.00	2.30	-		240.00	33.60
2000	103.70	17.20	34.90	6.60	4.60	0.60	8.00	3.30	-		151.20	11.00
1999	115.20	34.90	11.20	4.10	8.80	2.30	20.00	5.20	-		155.20	33.10

nedpsdlr.d08 - d99

Table 91. Largemouth bass PSD and RSD values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD_{15} (±95%)
2008	382	18 (± 4)	5 (± 2)
2007	444	27 (± 4)	6 (± 2)
2006	154	31 (± 7)	6 (± 4)
2005	174	51 (± 15)	12 (± 10)
2004	275	32 (± 6)	4 (± 3)
2003	279	32 (± 6)	4 (± 3)
2002	176	20 (± 6)	3 (± 2)
2001	33	30 (± 32)	9 (± 22)
2000	43	36 (± 17)	22 (± 15)

nedpsdlr.d08 - d00

Table 92. Population assessment of largemouth bass based on samples collected at Lake Reba in 2008 as compared to previous years.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	10.1	2	11.2	3	11.2	3	11.2	3
Spring CPUE age 1	41.20	2	192.00	4	183.67	4	113.00	4
Spring CPUE 12.0 - 14.9 in	45.30	3	26.00	2	60.67	4	34.00	2
Spring CPUE ≥ 15.0 in	13.30	3	6.00	2	18.67	3	12.67	2
Spring CPUE ≥20.0 in	0.70	1	0.00	0	0.67	1	0.00	0
Instantaneous Mortality (z)		-0.25		-0.79		-1.04		-1.03
Annual Mortality (A)		22.00%		55.00%		65.00%		64.30%
Total score		11		11		15		11
Assessment rating		Fair		Fair		Good		Fair

nedpsdlr.d08 - d02, nedaaglr.d06

Table 93. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hours of diurnal electrofishing (8 - 7.5 minute runs) at Lake Reba on 19 May 2008.

Species	Inch class							Total	CPUE	Std. Error
	2	3	4	5	6	7	8			
Bluegill	188	108	41	45	59	12		453	453.00	59.10
Redear Sunfish	10	18	37	79	188	37	1	370	370.00	32.98
Warmouth	6	23	17	38	46	20	2	152	152.00	24.80
Green Sunfish	3	15	6	3				27	27.00	4.48
Hybrid Bluegills			1	2	2	2		7	7.00	2.80

nedsunlr.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 94. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Reba in 2008 - 2003.

	Length group							
	< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2008	188.00	41.90	194.00	41.09	71.00	11.66	453.00	59.10
2007			73.00	10.84	29.00	7.70	102.00	10.88
2006	843.20	140.70	228.80	22.90	79.20	20.30	1151.20	158.50
2005	279.20	37.00	308.00	42.70	97.60	19.40	684.80	74.40
2004	191.50	37.90	180.00	25.90	22.30	6.70	393.90	56.00
2003	178.40	27.90	356.00	49.70	49.60	20.10	584.00	75.30

nedsunlr.d08 - d03

Table 95. Bluegill PSD and RSD values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD8 (±95%)
2008	265	27 (± 5)	*not enough large bluegills to determine RSD8*
2007	102	28 (± 9)	
2006	385	26 (± 4)	
2005	211	24 (± 7)	
2004	263	11 (± 11)	
2003	507	12 (± 3)	

nedpsdlr.d08 - d03

Table 96. Mean back-calculated lengths (in) at each annulus for bluegill collected from Lake Reba, including size range at each age and 95% confidence intervals.

		Age					
Year	No.	1	2	3	4	5	6
2007	12	2.6					
2006	17	2.2	4.0				
2005	15	2.7	4.4	5.5			
2004	6	2.7	4.5	5.5	6.3		
2003	9	2.4	3.8	5.1	5.9	6.5	
2002	2	2.3	4.0	5.1	5.9	6.6	7.1
Mean		2.5	4.1	5.4	6.0	6.5	7.1
Number		61	49	32	17	11	2
Smallest		1.2	2.7	4.0	4.4	4.8	7.0
Largest		3.7	5.6	6.5	6.9	7.1	7.2
Std Error		0.1	0.1	0.1	0.2	0.2	0.1
95% CI (±)		0.2	0.3	0.4	0.6	0.8	0.4

Otoliths were used for age determination; Intercept = 0
nedaaglr.d08

Table 97. Age frequency and CPUE (fish/hr) of bluegill captured during one hour of electrofishing from Lake Reba.

Age	Inch class						Total	%	CPUE	Std. Error
	2	3	4	5	6	7				
1	167	43					210	46	210.31	40.04
2	21	65	34	22	10		120	26	119.86	22.45
3			3	34	27	15	64	14	63.98	16.14
4				8	16	2	25	6	25.31	4.88
5			3	4	16	7	30	7	30.11	3.99
6						3	3	1	3.43	1.14
Total	188	108	41	45	59	12	453	100		
%	42	24	9	10	13	3	100			

nedsunlr.d08; nedaaglr.d08

Table 98. Population assessment of bluegill based on samples collected at Lake Reba.

	2005		2006		2007		2008	
Parameter	Actual Value	Assessment Score	Actual Value	Assessment Score	Actual Value	Assessment Score	Actual Value	Assessment Score
Mean length age-2 at capture	4.1	2	4.1	2	4.1	2	4	2
Years to 6.0 in	3-3+	3	3-3+	3	3-3+	3	3-3+	3
CPUE ≥ 6.0 in	97.60	4	79.20	4	29.00	2	71.00	3
CPUE ≥ 8.0 in	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)		-0.601		-1.149		-0.662		-0.81
Annual Mortality (A)		45.10%		68.30%		48.40%		55.70%
Total score		9		9		7		8
Assessment rating		Fair		Fair		Fair		Fair

nedsunlr.d08 - d04; nedaaglr.d03; nedaaglr.d08

Table 99. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Reba in 2008 - 2003.

	Length group									
	< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		> 8.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2008	10.00	4.96	134.00	18.31	225.00	18.00	1.00	1.00	370.00	32.98
2007			122.00	16.34	33.00	5.94	2.00	1.30	157.00	20.28
2006	111.20	30.70	121.60	17.20	205.60	44.70	0.80	0.80	439.20	51.50
2005	16.80	5.90	39.20	5.50	196.00	33.40			252.00	30.70
2004	16.90	4.40	56.90	17.60	64.60	13.20			138.90	29.20
2003	13.60	5.70	119.20	19.80	178.40	68.80			311.20	82.90

nedsunlr.d08 - d03

Table 100. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Lake Reba, including size range at each age and 95% confidence intervals.

		Age						
Year	No.	1	2	3	4	5	6	7
2007	12	2.9						
2006	18	2.9	4.6					
2005	24	3.1	5.1	6.2				
2004	2	3.2	5.0	6.0	6.9			
2003	4	3.0	4.7	6.0	6.7	7.4		
2002	2	3.0	4.4	5.3	6.0	6.5	7.2	
2001	1	4.4	5.4	5.9	6.3	6.8	7.3	7.7
Mean		3.0	4.8	6.1	6.5	7.0	7.2	7.7
Number		63	51	33	9	7	3	1
Smallest		1.9	3.6	4.8	5.8	6.2	7.1	7.7
Largest		5.1	6.8	7.9	6.9	7.4	7.3	7.7
Std Error		0.1	0.1	0.1	0.1	0.2	0.1	
95% CI (±)		0.3	0.3	0.5	0.5	0.7	0.2	

Otoliths were used for age determination; Intercept = 0
nedaaglr.d08

Table 101. Age frequency and CPUE (fish/hr) of redear sunfish captured during one hour of elctrofishing from Lake Reba.

Age	Inch class							Total	%	CPUE	Std. Error
	2	3	4	5	6	7	8				
1	10	14						24	6	24.00	7.75
2	21	4	31	36		10		71	19	71.22	10.23
3			6	43	172	12	1	234	63	234.45	17.40
4				8	16	3		19	5	18.75	1.50
5						12		12	3	12.33	2.01
6						6		6	2	6.17	1.01
7						3		3	1	3.08	0.50
Total	10	18	37	79	188	37	1	370	100		
%	3	5	10	21	51	10	0	100			

nedsunlr.d08; nedaaglr.d08

Table 102. Population assessment of redear sunfish based on samples collected at Lake Reba.

	2005		2006		2007		2008	
Parameter	Actual Value	Assessment Score	Actual Value	Assessment Score	Actual Value	Assessment Score	Actual Value	Assessment Score
Mean length age-3 at capture	6.6	4	6.6	4	6.6	4	6.3	3
Years to 8.0 in	>5+	1	>5+	1	>5+	1	>5+	1
CPUE ≥ 8.0 in	0.00	0	0.80	1	2.00	1	1.00	1
CPUE ≥ 10.0 in	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)		-0.165		-0.335		-1.046		-0.719
Annual Mortality (A)		15.20%		28.50%		64.90%		51.30%
Total score		5		6		6		5
Assessment rating		Poor		Poor		Poor		Poor

nedsunlr.d08 - d04; nedaaglr.d03; nedaaglr.d08

Table 103. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Reba on 18 September 2008.

	Inch class																Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	Error
Largemouth bass	7	25	39	15	8	43	66	34	72	47	20	8	4	1	389	259.33	26.70

nedwrslr.d08

Table 104. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Reba.

Species	Year	Length group					
		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in	
		N	Wr (se)	N	Wr (se)	N	Wr (se)
Largemouth Bass	2008	219	84 (0.6)	32	86 (1.3)	1	81
	2007	142	91 (5.5)	17	83 (1.9)	18	93 (3.3)
	2006	243	91 (0.1)	75	93 (1.1)	8	101 (1.8)

nedwrslr.d08 - d06

Table 105. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass while nocturnal 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
2008	Total	4.2	0.1	58.67	15.55	11.33	8.13		
2007	Total	4.3	0.1	44.00	11.20	5.30	2.20	113.00	27.17
2006	Total	4.3	0.0	175.30	35.90	30.00	8.70	183.70	22.10
2005	Total	5.2	0.1	225.00	48.60	133.00	30.20	192.00	19.50
2004	Total	4.2	0.1	76.70	9.60	15.30	1.90	61.00	10.40
2003	Total	3.7	0.2	23.30	4.80	0.67	0.67	47.30	14.00

nedwrslr.d08 - d03, d03

Table 106. Management objective results for 2008 at Lake Reba that can be determined through routine sampling.

		2008	
Largemouth bass		Result	Met
Objective 1	> 125.00 f/h Age 1	113.00	No
Objective 2	> 40.00 f/h 12.0 - 14.9 in	34.00	No
Objective 3	> 11.00 f/h ≥ 15.0 in	12.67	Yes
Objective 4	> 0.50 f/h ≥ 20.0 in	0.00	No
Bluegill			
Objective 1	>75.00 f/h ≥ 6.0 in	71.00	No
Objective 2	> 1.0 f/h ≥ 8.0 in	0.00	No

Table 107. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.375 hours of nocturnal electrofishing (3-7.5 minute runs) for largemouth bass at Rebel Trace (Meniffee Co.) on 12 May 2008.

	Inch class												Std.
Species	5	6	7	8	9	10	11	12	13	17	Total	CPUE	error
Largemouth bass	6	3	2	8	8	1	4	11	1	1	45	120.00	4.62

nedpsdrt.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 108. PSD and RSD values for largemouth bass collected while electrofishing Rebel Trace Lake; 95% confidence limits are in

Species	No. > 8.0 in	PSD (± 95%)	RSD_{15} (± 95%)
Largemouth bass	34	38 (± 17)	3 (± 5)

nedpsdrt.d08

Table 109. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Rebel Trace.

	Length group									
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in		Total	
Year	CPUE	Std. err.	CPUE	Std.err	CPUE	Std. err	CPUE	Std. err.	CPUE	Std. err.
2008	29.33	5.33	56.00	9.24	32.00	9.24	2.67	2.67	120.00	4.62
2007	42.67	7.06	109.33	32.77	40.00	8.00	10.67	5.33	202.67	30.75
2006	69.30	13.30	88.00	8.00	32.00	9.20			189.30	23.70
2005	61.30	37.60	90.70	25.40	24.00	9.20	2.70	2.70	178.70	62.70
2004	50.70	16.20	50.70	17.50	2.70	2.70	5.30	5.30	109.30	39.30

nedpsdrt.d08 - d04

Table 110. Length frequency and CPUE (fish/hr) of sunfish collected in .625 hours of electrofishing (5-7.5min runs) for sunfish at Rebel Trace on 20 May 2008.

	Inch class										Std.
Species	1	2	3	4	5	6	7	8	Total	CPUE	error
Bluegill	80	244	156	28	27	7	3		545	872.00	62.38
Redear sunfish	8	36	109	154	26	17	9		359	574.40	41.83
Warmouth		3	2	3	11	24	3	1	47	75.20	22.71
Sunfish hybrids	1	2			2	2	1		8	12.80	10.91
Green sunfish			1		2				3	4.80	3.20

nedsunrt.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 111. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Rebel Trace.

		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	2008	518.40	41.21	337.60	49.15	16.00	7.16			872.00	62.38
	2007			348.00	89.10	40.00	13.50			388.00	101.20
	2006	124.00	27.00	246.00	72.80	50.00	34.60			420.00	87.70
Redear sunfish	2008	70.40	11.14	432.40	47.63	41.60	12.50			574.40	41.83
	2007			544.00	107.80	84.00	14.10	4.00	2.30	632.00	99.10
	2006	172.00	60.30	282.00	53.70	22.00	19.40	18.00	6.80	494.00	47.80

nedsunrt.d08 - 06

Table 112. PSD and RSD values obtained for bluegill and redear sunfish collected at Rebel Trace; 95% confidence intervals are in parentheses.

Species	No. ≥ stock size	PSD (±95%)	RSD (±95%)
Bluegill	221	5 (± 3)	*
Redear sunfish	221	4 (± 3)	*

nedsunrt.d08

Table 113. Population assessment of bluegill based on samples collected at Rebel Trace.

	2008	
Parameter	Actual value	Assessment score
Mean length age-2 at capture	4.3	2
Years to 6.0 in	3-3+	3
CPUE ≥ 6.0 in	16.00	1
CPUE ≥ 8.0 in	0.00	0
Instantaneous Mortality (z)		-1.919
Annual Mortality (A)		85.30%
Total score		6
Assessment rating		Poor

nedsunrt.d08; nedaagrt.d02

Table 114. Length frequency and CPUE (fish/hr) of largemouth bass collected in 1 hour of nocturnal electrofishing (4- 15 min runs) at Smoky Valley Lake (Carter Co.) on 05 May 2008.

	Inch class													
Species	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std.Error
Largemouth bass	7	38	56	35	19	28	28	65	78	36	10	400	400.00	62.14

nedpsdsv.d08

Table 115. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Smoky Valley Lake in 2008 compared to past years findings.

	Length groups									
	< 8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2008	155.00	23.29	199.00	34.42	46.00	7.75			400.00	62.14
2007	119.00	21.75	229.00	32.51	37.00	6.40	2.00	1.15	387.00	42.56
2006	112.00	12.80	256.00	33.80	62.00	8.70	4.00	1.60	434.00	45.70
2005	54.40	10.20	190.40	22.70	63.20	9.10	0.80	0.80	308.80	30.80
2001	117.30	11.60	180.00	14.10	46.70	12.70	2.70	2.70	346.70	11.60
2000	68.00	13.00	218.00	22.10	69.00	13.70	1.00	1.00	356.00	46.80

nedpsdsv.d08 - d05; d01 - d00

Table 116. PSD and RSD values for largemouth bass collected while electrofishing Smoky Valley Lake; 95% confidence intervals in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD_{15} (±95%)
2008	245	19 (± 5)	*
2007	268	15 (± 4)	1 (± 1)
2006	322	21 (± 4)	1 (± 2)
2005	318	25 (± 10)	1 (± 1)

* = Not enough 15" fish to caculate RSD_{15}

nedpsdsv.d08 - d05

Table 117. Population assessment for largemouth bass based on spring sampling at Smoky Valley Lake 2008 compared to past years findings.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	11.0	3	11.0	3	9.6	1	9.6	1
Spring CPUE age 1	19.10	2	70.10	3	7.00	1	56.00	4
Spring CPUE 12.0 - 14.9 in	63.20	4	62.00	4	37.00	3	46.00	3
Spring CPUE ≥ 15.0 in	0.80	1	4.00	4	2.00	1	0.00	0
Spring CPUE ≥ 20.0 in	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)		0.3533		-0.5785		-0.513		-0.255
Annual Mortality (A)		29.80%		43.90%		40.10%		22.50%
Total score		10		14		6		8
Assessment rating		Fair		Good		Poor		Fair

nedpsdsv.d08 - d05; nedaagsv.d07, d05

Table 118. Length frequency and CPUE (fish/hr) of sunfish collected during 1.0 hour electrofishing (8 - 7.5 min runs) at Smoky Valley Lake 15 May 2008.

	Inch class							Std.
Species	3	4	5	6	7	Total	CPUE	Error
Bluegill	25	11	17	16	15	84	84.00	22.70
Green sunfish	14	19	11	11	4	59	59.00	20.10
Warmouth		1	1	5	1	8	8.00	8.00
Hybrid sunfish			1		1	2	2.00	1.20
Longear sunfish			1			1	1.00	1.00

nedsunsv.d08

Table 119. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Smoky Valley Lake compared to previous years findings..

	Length group									
	< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		≥ 8.0 in		Total	
Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2008			53.00	14.40	31.00	13.70			84.00	22.70
2007			89.14	17.14	10.29	5.44	1.14	1.14	100.57	21.16
2006	464.00	116.50	88.00	15.20	16.00	4.30			568.00	114.70
									(281 w/o 1")	
2005	164.00	41.50	169.00	10.30	38.00	9.20	4.00	3.00	375.00	60.00
									(329 w/o 1")	
2004	24.80	6.80	139.30	22.00	25.60	4.60	0.90	0.90	190.60	27.30
2003	200.00	61.10	102.00	30.30	107.00	32.40	4.00	2.10	413.00	99.80
									(213 w/o 1")	

nedsunsv.d08 - d03

Table 120. PSD and RSD values obtained from bluegill collected at Smoky Valley Lake during 2008 as compared to previous years; confidence intervals are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD_8 (±95%)
2008	84	37 (± 10)	*
2007	88	11 (± 7)	1 (± 2)
2006	104	15 (± 7)	*
2005	211	20 (± 11)	2 (± 4)

* = No 8.0 in fish captured to caculate RSD_8

nedsunsv.d08 - d03

Table 121. Mean back-calculated lengths (in) at each annulus for bluegill collected from Smoky Valley Lake, including size range at each age and 95% confidence intervals.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	8	2.6							
2006	21	2.1	3.9						
2005	15	1.9	3.2	5.0					
2004	10	2.0	3.2	4.7	6.5				
2003	2	1.9	3.7	5.5	6.5	7.3			
2002	3	2.2	3.2	4.4	5.7	6.7	7.3		
2001	2	2.3	3.8	5.0	6.4	6.9	7.3	7.6	
2000	2	2.5	4.0	5.4	6.3	6.7	7.1	7.4	7.7
Mean		2.1	3.5	4.9	6.3	6.9	7.2	7.5	7.7
Number		63	55	34	19	9	7	4	2
Smallest		1.3	2.4	3.2	4.5	6.3	6.9	7.1	7.5
Largest		3.2	6.4	6.7	7.5	7..5	7.4	7.7	7.8
Std Error		0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
95% CI (±)		0.2	0.5	0.6	0.6	0.5	0.2	0.5	0.5

Otoliths were used for age determination; Intercept = 0
nedaagsv.d08

Table 122. Age frequency and CPUE (fish/hr) of bluegill captured during one hour of elctrofishing from Smoky Valley.

Age	Inch class					Total	%	CPUE	Std. Error
	3	4	5	6	7				
1	2					2	3	2.27	1.09
2	20	5	4	2		30	36	30.42	10.18
3	2	6	11	3		22	27	22.31	7.61
4		1	2	11	2	16	18	15.51	7.97
5					3	3	4	3.00	0.89
6					5	5	5	4.50	1.33
7					3	3	4	3.00	0.89
8					3	3	4	3.00	0.89
Total	25	11	17	16	15	84	100		
%	30	13	20	19	18	100			

nedsunsv.d08; nedaagsv.d08

Table 123. Population assessment scores and ratings for bluegill sampled at Smoky Valley Lake during the spring of 2008 compared to 2004-2007 findings.

	2004		2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 2 at capture	3.2	1	3.2	1	3.2	1	3.2	1	3.9	2
Years to 6.0 in	4-4+	2	4-4+	2	4-4+	2	4-4+	2	3-3+	3
CPUE ≥ 6.0 in	31.00	2	42.00	2	16.00	1	10.30	1	31.00	2
CPUE ≥ 8.0 in	1.00	2	4.00	2	0.00	0	1.14	2	0.00	0
Instantaneous Mortality (z)		-0.5477		-0.7164		-1.1741		-0.9553		-0.722
Annual Mortality (A)		42.20%		51.10%		69.10%		61.50%		51.50%
Total score		7		7		4		6		7
Assessment rating		Fair		Fair		Poor		Poor		Fair

nedsunsv.d08 - d04; nedaagsv.d08

Table 124. Lenth frequency and CPUE (fish/hr) for largemouth bass collected for 1 hour (4-15 min runs) 24 September 2008 at Smoky Valley Lake.

	Inch class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std.Error
Largemouth bass	1	16	17	1	3	46	34	22	28	20	17	3	208	208.00	23.27

nedpsdsv.d08

Table 125. Number and mean relative weight (W_r) vlaues for length groups of largemouth bass collected in Smoky Valley Lake.

Species	Year	Length group					
		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in	
		N	Wr (se)	N	Wr (se)	N	Wr (se)
Largemouth Bass	2008	104	82.5 (0.7)	20	81.2 (1.3)		
	2007	99	85.2 (0.7)	10	86.5 (3.5)		

nedwrssv.d08 - d07

Table 126. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Wilgreen (Madison Co.) on 06 May 2008.

Species	Inch class																		Total	CPUE	Std. Error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Largemouth bass	1	3	7	1	1	12	13	5	7	12	9	7	3	3	3	4	2		1	94	62.67	9.04

nedpsdlw.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 127. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Wilgreen from 1999 to 2008.

Year	Length group											
	< 8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in		≥ 20.0 in		Total	
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2008	8.67	1.91	24.67	5.88	18.67	3.82	10.67	3.68	0.67	0.67	62.67	9.04
2007	238.70	25.90	194.70	16.10	115.30	15.00	18.70	2.20	2.70	1.30	567.30	31.00
2006	56.70	9.90	195.30	8.60	148.00	15.80	22.00	5.80	2.70	0.80	422.00	29.10
2005	86.70	17.90	170.00	12.80	108.70	23.00	6.00	2.70	0.00		371.30	45.30
2004	*no data collected*											
2003	89.20	11.10	376.80	41.00	48.00	6.30	12.80	2.50	0.00		526.80	50.20
2002	*no data collected*											
2001	*no data collected*											
2000	361.00	51.00	274.00	10.90	58.00	12.30	6.00	1.20	0.00		699.00	57.00
1999	156.00	8.00	234.00	34.00	54.00	14.00	4.00	0.00	0.00		448.00	40.00

nedpsdlw.d08 - d99

Table 128. Largemouth bass PSD and RSD values from spring electrofishing at Lake Wilgreen; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD_{15} (±95%)
2008	81	54 (± 11)	20 (± 9)
2007	493	41 (± 4)	6 (± 2)
2006	548	47 (± 4)	6 (± 2)
2005	427	40 (± 5)	2 (± 1)
2003	1,082	14 (± 2)	3 (± 1)
2000	338	19 (± 4)	2 (± 0.4)

nedpsdlw.d08 - d05; d03; d00

Table 129. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Lake Wilgreen, including size range at each age and 95% confidence intervals.

		Age										
Year	No.	1	2	3	4	5	6	7	8	9	10	11
2007	8	5.5										
2006	27	6.1	9.2									
2005	15	6.3	10.1	12.5								
2004	11	6.1	9.7	12.0	13.8							
2003	4	5.6	8.9	10.6	142.1	13.5						
2002	5	6.0	8.7	10.6	12.2	13.3	14.3					
2001	2	6.4	10.1	11.6	13.2	14.3	15.5	16.5				
2000	4	6.3	9.3	11.1	12.2	13.4	14.4	15.2	16.0			
1999	2	6.6	9.5	11.4	12.9	14.5	15.7	16.6	17.3	18.1		
1997	2	5.7	9.4	12.0	13.5	15.0	16.2	17.6	18.4	19.2	19.7	20.2
Mean		6.1	9.5	11.8	13.0	13.8	14.9	16.2	16.9	18.6	19.7	20.2
Number		80	72	45	30	19	15	10	8	4	2	1
Smallest		4.1	6.6	8.0	9.9	11.0	11.7	12.2	12.7	17.1	18.2	18.7
Largest		8.7	11.8	14.2	15.7	16.3	17.6	18.9	19.7	20.5	21.1	21.6
Std Error		0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.9	0.8	1.4	1.5
95% CI (±)		0.4	0.5	0.8	1.0	1.5	1.8	2.5	3.5	3.0	5.5	5.7

Otoliths were used for age determination; Intercept = 0

nedaaglw.d08

Table 130. Age frequency and CPUE (fish/hr) of largemouth bass captured during one hour of elctrofishing from Lake Wilgreen.

Age	Inch class																Total	%	CPUE	Std. Error
	5	6	7	8	9	10	11	12	12	14	15	16	17	18	19	21				
1	7	1															8	9	5.33	1.69
2			1	12	13	3	1										30	34	20.11	5.64
3						2	4	4	4	3							16	18	10.93	1.43
4							1	3	3	1	3						12	13	7.67	1.43
5							1	1	1			1					4	5	2.88	0.46
6								3		3			2				7	8	4.64	0.96
7												2					2	2	1.33	0.91
8								1	1					2	1		5	6	3.43	0.94
9													2		1		3	3	1.67	0.61
11														2		1	3	3	2.00	1.03
Total	7	1	1	12	13	5	7	12	9	7	3	3	3	4	2	1	90	100		
%	8	1	1	13	14	6	8	13	10	8	3	3	3	4	2	1	100			

nedpsdlw.d08; nedaaglw.d08

Table 131. Population assessment of Largemouth bass based on samples collected at Lake Wilgreen in 2008 as compared to previous years.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age 3 at capture	11.2	3	11.2	3	11.2	3	12.6	4
Spring CPUE age 1	450.20	4	469.40	4	456.80	4	5.33	1
Spring CPUE 12.0 - 14.9 in	108.70	4	148.00	4	115.30	4	18.67	1
Spring CPUE ≥ 15.0 in	6.00	2	22.00	3	18.70	3	10.67	2
Spring CPUE ≥ 20.0 in	0.00	0	2.70	3	2.70	3	0.67	1
Instantaneous Mortality (z)		-0.1273		-0.0686		-0.58		-0.633
Annual Mortality (A)		11.90%		6.60%		32.50%		46.90%
Total score		13		17		17		9
Assessment rating		Good		Excellent		Excellent		Fair

nedpsdlw.d08 - d05; nedaaglw.d03

Table 132. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hours of diurnal electrofishing (6 - 15 minute runs) at Lake Wilgreen on 29 May 2008.

	Inch class										Std.
Species	1	2	3	4	5	6	7	8	Total	CPUE	Error
Bluegill	4	46	52	27	36	34	11		210	210.00	38.83
Green sunfish		1	10	12	6	5			34	34.00	8.52
Redear sunfish		3	5		1	8	3	1	21	21.00	14.42
Warmouth					1		1		2	2.00	1.31

nedsunlw.d08

* 2008 Spring data should be interpreted with caution due to shocking boat problems.

Table 133. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Wilgreen in 2008 - 2005 and 2002.

		Length group											
		< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Species	Year	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
	2008	50.00	17.20	115.00	17.10	45.00	17.30					210.00	38.83
	2007			283.20	26.73	88.80	16.67					372.00	39.38
Bluegill	2006	279.20	51.30	409.60	39.50	64.80	20.40	2.40	1.20			756.00	79.70
	2005	211.20	67.00	576.80	73.20	40.80	10.80	0.80	0.80			829.60	122.70
	2002	354.40	91.60	496.80	99.20	177.60	18.60					1028.80	196.20
	2008	3.00	3.00	6.00	3.30	11.00	7.70	1.00	1.00			21.00	14.42
	2007			0.80	0.80	15.20	4.37	1.60	1.07			17.60	4.59
Redear sunfish	2006			20.00	5.10	4.80	2.10	10.40	8.80	24.00	1.70	35.20	11.00
	2005			4.00	2.50	7.20	3.70	7.20	3.50			18.40	6.00
	2002			20.80	9.90	44.00	11.00	4.80	2.40			69.60	19.50

nedsunlw.d08 - d05; d02

Table 134. Bluegill PSD and RSD values from spring electrofishing at Lake Wilgreen; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD (±95%)	RSD8 (±95%)
2008	160	28 (±7)	*
2007	465	24 (± 4)	6 (± 2)
2006	596	14 (± 2)	1 (± 1)
2005	773	7 (± 3)	0.1 (± 0.3)

* = No 8.0 in fish captured to caculate RSD8

nedpsdlw.d08 - d05

Table 135. Population assessment of bluegill based on samples collected at Lake Wilgreen in 2008 as compared to previous years.

	2005		2006		2007		2008	
Parameter	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score	Actual value	Assessment score
Mean length age-2 at capture	5.5	4	5.5	4	5.5	4	5.5	4
Years to 6.0 in	3-3+	3	3-3+	3	3-3+	3	3-3+	3
CPUE ≥ 6.0 in	41.60	2	67.20	3	88.80	4	45.00	2
CPUE ≥ 8.0 in	0.80	2	2.40	2	0.00	0	0.00	0
Instantaneous Mortality (z)		-0.1273		-0.0686		-0.156		*
Annual Mortality (A)		11.90%		6.60%		10.90%		*
Total score		11		12		11		9
Assessment rating		Good		Good		Good		Fair

nedsunlw.d08 - d05; nedaaglw.d02

*: Not enough fish were captured to run analysis on Instantaneous Mortality and Annual Mortality.

Table 136. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 - 15 minute runs) at Lake Wilgreen on 23 September 2008.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	Std. Error
Largemouth bass	4	28	32	20	7	62	69	50	53	31	28	14	10	5	3		1	417	278.00	23.11

nedpsdlw.d08

Table 137. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Wilgreen.

		Length group					
		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15.0 in	
Species	Year	N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	2008	203	86.7 (4.0)	52	89.0 (1.1)	9	97.5 (3.6)
	2007	232	83.7 (0.7)	54	86.4 (1.8)	4	72.0 (21.6)
	2006	198	90.0 (0.6)	86	90.0 (0.9)	8	96.0 (3.7)
	2005	306	88.0 (0.4)	116	88.0 (1.6)	4	98.0 (4.3)

nedwrswg.d08 - d05

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 (37,680 acres)

Beginning in January 2007, water levels were reduced to 680 msl to make repairs to Wolf Creek Dam. As a result, many sampling locations that were used prior to 2007 were dry and unable to be sampled. Samples in 2007 and 2008 were conducted in areas further downstream in the embayments. Therefore, any comparisons of the 2007 and 2008 data to previous results should be interpreted accordingly.

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Wolf Creek dam, and in the Harmon Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during April and May 2008 to assess the black bass populations. The length-frequency and catch-per-unit-effort (CPUE) of the three black bass species collected in each area is shown in Table 2. The catch-per-hour (by area and length group) of the three black bass species are shown in Tables 3-6. Table 7 compares the catch-per-hour by length group of black bass in Lake Cumberland to other SEFD lakes sampled in 2008.

Largemouth bass met or exceeded three management objectives (Table 8). The catch rate of age-1 largemouth bass (10.00 f/h) greatly exceeded the management objective of 3.00 f/h. The catch rate of 12.0-14.9 in largemouth bass (20.17 f/h) exceeded the management objective of ≥10.00 f/h, and catch rates of largemouth bass ≥15.0 in (18.00 f/h) exceeded the management objective of ≥8.00 f/h. The catch rates of largemouth bass ≥20.0 in (0.17f/h) did not meet the management objective of ≥0.50 f/h.

The catch rates of spotted bass were greater than the management objectives for two length groups (Table 9). The catch rates of 11.0-13.9 in (15.33 f/h) and ≥14.0 in (5.00 f/h) spotted bass were more than twice the management objectives of ≥5.00 f/h and ≥1.50 f/h, respectively. The CPUE of ≥17.0 in (0.00 f/h) spotted bass did not meet the management objective of ≥0.10 f/h. The CPUE of age-1 spotted bass (8.83 f/h) was more than double the management objective of ≥4.00 f/h.

The catch rates of smallmouth bass met two of the three size management objectives (Table 10). The catch rates of ≥14.0 in. (2.67 f/h) and ≥17.0 in. (0.83 f/h) smallmouth bass exceeded the management objectives of ≥2.00 f/h and ≥0.50 f/h, respectively. The catch rates of 11.0-13.9 in (1.17 f/h) smallmouth bass failed to exceed the management objective of ≥2.00 f/h. The CPUE of age-1 smallmouth bass (2.50 f/h) exceeded the management objective of 2.0 f/h.

Largemouth bass exhibited excellent size structure, with a PSD value of 78 and an RSD_{15} value of 37 (Table 11). Spotted bass and smallmouth bass had a moderate size structure, with a PSD value of 35 and an RSD_{14} value of 9 for spotted bass, and a PSD value of 55 and an RSD_{14} value of 38 for smallmouth bass (Table 11). Table 12 compares the size structure values of black bass populations in Lake Cumberland to other SEFD lakes sampled in 2008.

Age-growth for spotted bass collected during 2008 is shown in Table 13. Seven year-classes were represented in the catch, with age 2 bass comprising 53% of the catch (Table 14). Mean length of age-3 bass at capture was 11.0 in, which exceeded the management objective of 8.8 in for the spotted bass fishery. The spotted bass population assessment score was 15 (rating=good; Table 15).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Fishing Creek embayment during September to index the largemouth bass year class strength (Tables 16 and 17). CPUE of age-0 largemouth bass in 2008 was much higher than in previous years. Table 18 compares the CPUE of age-0 largemouth bass in Lake Cumberland to other SEFD lakes sampled in fall 2008. Relative weight (Wr) values for largemouth bass and spotted bass collected during September sampling are shown in Table 19. Table 20 compares Wr values for black bass in Lake Cumberland to other SEFD lakes sampled in fall 2008.

Walleye and White Bass Sampling

Fall gill netting was conducted in the Jamestown/Bugwood (10 net-nights), Conley Bottom (9 net-nights), and Burnside/Waitsboro (12 net-nights) areas of Lake Cumberland during November 2008 to assess the walleye and white bass population. A total of 245 walleye and 26 white bass were collected in 31 net-nights for catch rates of 7.90 and 0.84 f/nn, respectively. Length frequency and CPUE for walleye and white bass from each area are shown in Table 21. Walleye ranged from 9.0-24.0 in with the modes being the 16.0 in and 18.0 in classes (33 fish). None of the catch rate management objectives were met for the walleye population (Table 22). The CPUE of age-1 and older walleye (5.90 f/nn) approached the management objective of 6.00 f/nn. The CPUE of age-1 walleye (2.50 f/nn) did not meet the objective of 3.00 f/nn, and the catch rate of $\geq$ 20.0 in walleye (0.90 f/nn) failed to meet the objective of 1.50 f/nn. Age-growth data for male and female walleye are shown in Tables 23 and 24, respectively. The age-growth for both sexes combined is shown in Table 25. Nine year-classes were represented in the catch, with ages 1-2 comprising 63% of the catch (Table 26). Mean-length of age-2+ walleye at capture (18.5 in) exceeded the growth objective of 18.0 in (Table 27). The walleye assessment score was 12 (rating=good; Table 27). Relative weight (Wr) values for walleye are shown in Table 28.

Age-growth data for white bass is shown in Table 29. Age-0 white bass comprised 96% of the white bass catch (Table 30). Due to the low number of white bass collected, a population assessment was not completed on the white bass. Relative weight (Wr) values for white bass are shown in Table 31.

Striped Bass Sampling

Gill nets were used in December 2008 to evaluate the striped bass population in Lake Cumberland. Twenty net-nights captured 184 striped bass for a catch rate of 9.20 fish/nn. Length-frequency and CPUE of striped bass are shown in Table 32. Striped bass ranged from 9.0 to 33.0 in with the mode being the 23.0 in class (41 fish). The CPUE of age 1+ fish (2.70 f/nn) and the CPUE of age 1+ and older fish (9.15 f/nn) both exceeded the management objectives of 2.00 f/nn and 4.00 f/nn, respectively (Table 33). The catch rate of $\geq$24.0 in fish was 1.50 f/nn, which exceeded the management objective of 1.00 f/nn. The age-growth of striped bass collected during 2008 is shown in Table 34. Eight year-classes were represented in the catch (Table 35). The 2006 (age 2+) year class was the most abundant (55%) year class collected, which coincided with the increased (pulsed) stocking rate of 10.00 fish/acre in 2006. Mean length of age 2+ fish at capture (2006 year class) was 22.1 in, thereby exceeding the growth objective (21.0 in) for the striped bass fishery (Table 36). The striped bass assessment score was 14 (rating=excellent; Table 36). Relative weight (Wr) values were adequate, but condition values decreased slightly as fish grew larger (Table 37).

2008 Daytime Creel Survey

A roving daytime creel survey was conducted on Lake Cumberland (50,250 acres) from 2 April-24 December 2008. The lake was split into two strata (lower and upper) and each stratum was designed as a stand-alone survey. The lower lake (Harmon Creek to Indian Creek; 25,014 acres) contained four areas, and the upper lake (Harmon Creek to the upper reaches of the lake; 25,014 acres) had eight areas. Although lake levels were reduced during the 2008 creel survey, historic acreages used in the creel survey to allow for comparisons to past surveys. Creel data will be presented for two sections: lower lake and upper lake.

Lower Lake Cumberland Creel Survey

Results from the lower lake creel survey are shown in Tables 38-45. Anglers made an estimated 92,076 fishing trips and expended 356,930 hours (14.3 man hours/acre) during the survey period on the lower lake. Striped bass anglers accounted for 42% of all fishing trips to the lower lake, followed by black bass (27%) and panfish (12%) anglers.

Upper Lake Cumberland Creel Survey

Results from the upper lake creel survey are shown in Tables 46-53. Anglers made an estimated 47,799 fishing trips and expended 190,849 hours (7.6 man hours/acre) during the survey period on the upper lake. Black bass anglers accounted for 43% of all fishing trips to the upper lake, followed by walleye (25%) and crappie (16%) anglers.

Lower Lake Cumberland Angler Attitude Survey

An angler attitude survey was conducted in conjunction with the creel survey to gather angler opinions about the various fisheries in lower Lake Cumberland (Figure 1). A total of 306 anglers were interviewed in the lower lake. Seventy-one percent of the striped bass anglers were satisfied with the striped bass fishery in the lower lake, with the number of fish being the number one reason for angler dissatisfaction.

Fifty-five percent of the black bass anglers were satisfied with the black bass fishery in the lower lake. The most common response for angler dissatisfaction was the number of fish. Approximately 60% of all anglers interviewed on the lower lake would support a two fish daily creel limit for smallmouth bass at Lake Cumberland.

Only 37% of the crappie anglers were satisfied with the crappie fishing in the lower lake. Sixty-seven percent of the responses listed "number of fish" as the reason for the dissatisfaction with the crappie fishery. Nearly 80% of all anglers would support a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish.

Nearly 60% of the walleye anglers were satisfied with the walleye fishery in the lower lake. The most common response for angler dissatisfaction was the number of fish.

Eighty-one percent of the catfish anglers were satisfied with catfish fishing in lower Lake Cumberland. The number of fish was the only response listed as a reason for angler dissatisfaction.

Upper Lake Cumberland Angler Attitude Survey

An angler attitude survey was conducted in conjunction with the creel survey to gather angler opinions about the various fisheries in upper Lake Cumberland (Figure 2). A total of 245 anglers were interviewed in the upper lake. Approximately 90% of the striped bass anglers were satisfied with striped bass fishing in the upper lake. One hundred percent of the black bass anglers were satisfied with the black bass fishery in the upper lake. Seventy-five percent of all anglers would support a two fish daily creel limit on smallmouth bass on Lake Cumberland.

Eighty-four percent of the crappie anglers were satisfied with the crappie fishing in the upper portion of Lake Cumberland. The most common response for angler dissatisfaction was the "lake drawdown for repairs." Sixty-two percent of all anglers would support a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish.

One-hundred percent of walleye anglers were satisfied with the walleye fishing in the upper lake. One-hundred percent of the catfish anglers were satisfied with the catfish fishing in the upper portion of Lake Cumberland.

Laurel River Lake (5,830 acres)

Black Bass Sampling (Spring)

Nocturnal electrofishing sampling was conducted during April and May 2008 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 54. The catch-per-hour (by area and length group) of the three black bass species is shown in Tables 55-58. Table 7 compares the catch-per-hour by size class of black bass in Laurel River Lake to other SEFD lakes sampled in 2008.

The largemouth bass population met three of the four catch rate objectives (Table 59). The CPUE of ≥15.0 in bass (17.67 f/h) exceeded the management objective of 10.00 f/h, and the CPUE of ≥20.0 in bass (0.67 f/h) met the management objective of 0.50 f/h. CPUE of age 1 fish (36.33 f/h) was well above the management objective of 10.00 f/h. Largemouth bass stocked in fall 2007 had a catch rate of 30.16 f/h and largely influenced the spring age-1 CPUE. The 12.0-14.9 in CPUE of largemouth bass (7.83 f/h) did not meet the objective of 20.00 f/h.

Spotted bass met three of the four management catch rate objectives (Table 60). CPUE of 11.0-13.9 in fish (8.50 f/h) exceeded the management objective of 7.00 f/h, and the CPUE of ≥14.0 in spotted bass (2.33 f/h) was twice the objective value of 1.00 f/h. Age 1 CPUE (4.00 f/h) exceeded the objective of 3.00 f/h. No ≥17.0 in spotted bass were captured; therefore, the objective of 0.10 f/h was not met.

The smallmouth bass population met two of the four management objectives (Table 61). CPUE of ≥14.0 in fish (3.17 f/h) exceeded the management objective of 1.00 f/h, and the CPUE ≥17.0 in (1.83 f/h) surpassed the objective of 0.50 f/h. The two other smallmouth bass catch rate objectives were not met. CPUE of 11.0-13.9 in fish (1.33 f/h) was just below the objective of 1.50 f/h. The CPUE of age-1 smallmouth bass (0.83 f/h) did not meet the management objective of 3.00 f/h.

Largemouth and spotted bass exhibited good size structure, with largemouth bass having a PSD value of 63 and an RSD_{15} value of 44, and spotted bass had a PSD value of 34 and an RSD_{14} value of 7 (Table 62). Smallmouth bass exhibited excellent size structure, having a PSD of 71 and an RSD_{14} of 50 (Table 62).

Age-growth for largemouth bass collected during 2008 is shown in Table 63. Eleven year-classes were represented in the catch, with age-1 fish (2007 year class) comprising 46% of the catch and age-2 fish (2006 year class) comprising an additional 21% of the catch (Table 64). Mean length of age-3 largemouth bass at capture was 13.3 in, which met the management objective of 13.0 in (Table 65). The largemouth bass population assessment score was 13 (rating=good; Table 65).

Age-growth for smallmouth bass collected during 2008 is shown in Table 66. Six year-classes were represented in the catch, with age-2 fish (2006 year class) comprising 33% of the catch and age-3 fish (2005 year class) comprising an additional 21% of the catch (Table 67). Mean length of age-3 smallmouth bass at capture was 13.6 in, which met the management objective of 13.0 in (Table 68). The smallmouth bass population assessment score was 17 (rating=excellent; Table 68).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Laurel River arm during September 2008 to index largemouth bass year class strength (Tables 69 and 70). CPUE of age 0 largemouth bass in 2008 was lower than all previous years of sampling (2002-2007), and no age-0 ≥5.0 in were collected (Table 70). Although the lake had previously been stocked for three consecutive years (2005-2007), additional bass were stocked in fall 2008 at a reduced stocking level (5.0 f/acre) to help bolster the weak 2008 year class. Relative weight (Wr) values for largemouth and spotted bass collected during September sampling are shown in Table 71.

Dale Hollow Lake (6,746 acres; Kentucky portion)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 12 May 2008 in the Illwill Creek and Little Sulphur Creek embayments of Dale Hollow Lake to assess the black bass population. Length frequency and CPUE for largemouth are shown in Table 72. The catch-per-hour by length group of the three black bass species are shown in Tables 73-75. The size structure of largemouth and smallmouth bass is excellent, with largemouth bass having a PSD value of 87 (RSD_{15}=64), and smallmouth bass having a PSD value of 69 (RSD_{14}=31; Table 76). Spotted bass exhibited good size structure, having a PSD value of 48 (RSD_{14}=11; Table 76). Age-growth for smallmouth bass collected during 2008 is shown in Table 77. Eight year-classes were represented, with the ages 2-3 comprising 62% of the catch (Table 78). The smallmouth bass population assessment score was 19 (rating=excellent; Table 79).

Cedar Creek Lake (788 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 29 April 2008 to assess the largemouth bass population in Cedar Creek Lake. The length-frequency and CPUE of largemouth bass is shown in Table 80. Size structure of largemouth bass was good (PSD=42, RSD_{15}=27; Table 81). The catch-per-hour (by area and length group) of largemouth bass for 2003-2008 is shown in Table 82.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 16 September 2008 to index the largemouth bass year-class strength (Tables 83 and 84). Catch rates of age-0 bass had increased over previous years (Table 84). Relative weight (Wr) values are found in Table 85 for largemouth bass. Condition improved as bass length increased.

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 28 May 2008, in conjunction with Black Bass Research (BBR) section, to assess the bluegill and redear sunfish populations in Cedar Creek Lake. Results from the sampling, including length-frequency and PSD values, can be found in the BBR annual performance report.

Chenoa Lake (35 acres; Bell Co.)

Largemouth Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 17 April 2008 at Chenoa Lake to assess the largemouth bass population. Length frequency and CPUE for largemouth bass is shown in Table 86. Catch-per-hour (by length group) for largemouth bass is shown in Table 87. The largemouth bass size structure was good, with a PSD value of 63 (RSD_{15}=15; Table 88).

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 21 May 2008 at Chenoa Lake to assess the bluegill and redear sunfish populations. Length-frequency and CPUE for bluegill and redear sunfish is shown in Table 89. Catch-per-hour (by length group) for bluegill and redear sunfish is in Table 90. The bluegill population exhibited a fair size structure (PSD=39, RSD_8=10; Table 91). The redear sunfish population exhibited a good size structure with a PSD of 40 (RSD_9=30; Table 91).

Age-growth for bluegill is shown in Table 92. Seven year classes were represented in the bluegill catch, with ages 1-3 comprising approximately 79% of the catch (Table 93). The bluegill population assessment score was 11 (rating=good; Table 94). Age-growth for redear sunfish is shown in Table 95. Five year classes were represented in the redear sunfish catch, with the age-2 fish comprising 60% of the catch (Table 96). The redear sunfish population assessment score was 13 (rating=good; Table 97).

Lake Linville (361 acres; Rockcastle Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 5 May 2008 at Lake Linville to assess the black bass population. Length frequency and CPUE for the black bass populations are shown in Tables 98-100. The size structure for the largemouth bass population is fair, with a PSD value of 18 (RSD_{15}=11), while the spotted bass population is comprised of smaller individuals (PSD=8, RSD_{14}=1; Table 101).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 18 September 2008 to index the largemouth bass year-class strength (Tables 102 and 103). Catch rates of age-0 largemouth bass were consistent with 2007 rates (Table 103). Table 18 compares the CPUE of age 0 largemouth bass in Lake Linville to other SEFD lakes sampled in 2008. Relative weight values for largemouth bass and spotted bass are in Table 104.

Wood Creek Lake (625 acres; Laurel Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted in April 2008 in the Dam, 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 105. The size structure for largemouth bass was fair, having a PSD value of 40 (RSD_{15}=19; Table 106). The spotted bass population had a poor size structure (PSD=12, RSD_{14}=2; Table 106). Catch-per-hour (by length group) for largemouth and spotted bass are shown in Tables 107 and 108, respectively.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in September 2008 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to index largemouth bass year class strength (Tables 109 and 110). Catch rates of age-0 largemouth bass in 2008 were consistent with 2007 catch rates (Table 110). Table 18 compares the CPUE of age 0 largemouth bass in Wood Creek Lake to other SEFD lakes sampled in 2008. Relative weight values for largemouth and spotted bass are in Table 111.

Table 1. Summary of sampling conditions by waterbody, species sampled, and date for the Southeastern Fisheries District in 2008.

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Lake Cumberland											all 2008 samples for all species conducted under reduced water levels due to dam repairs, which altered sampling locations
	Dam	Black bass	4/22/2008	2030	shock	clear/warm/80s	67	690	96	good	inexperienced volunteer dipper; fish looked fat
	Harmon Creek	Black bass	4/30/2008	2000	shock	clear/mid 60s	65	686	96	good	last year's shore vegetation holding lots of bass and sunfish
	Lily Creek	Black bass	5/6/2008	2030	shock	nice/70s	69	683	48-54	good	red sores on some largemouth bass
	Fishing Creek	Black bass	5/6/2008	2000	shock	mostly clear/70s	71	684	24-36	fair	water murky; largemouth bass thin and had sores
	Fishing Creek	Black bass	9/17/2008	2000	shock	breezy/ 70s	79	680	18-24	fair	lots of small bass
	Jamestown	WAE/Wh. bass	11/17-11/19		gill net	sunny/cold/30-40s	56	679	48-72	good	
	Conley Bottom	WAE/Wh. bass	11/17-11/20		gill net	breezy/30-40s	56	679	30	good	fifth net set on 11/18
	Waitsboro	WAE/Wh. bass	11/12-11/14		gill net	overcast/50s	59	679	60-72	good	
	Beaver	Striper	12/2-12/4		gill net	cloudy/breezy/sleet	49	679	60	fair	
	Wolf/Lily/Caney	Striper	12/2-12/4		gill net	cloudy/breezy/sleet	51	679	60	good	
Laurel River Lake											
	Spruce Creek	Black bass	4/21/2008	2000	shock	partly cloudy/70s	63	1012	48	good	bass were plump
	Dam	Black bass	4/24/2008	2000	shock	mostly cloudy/70s	73	1012	72	good	water clear; most bass look healthy, but some skinny and sores
	Craig's Creek	Black bass	5/1/2008	2000	shock	cloudy/windy/70s	66	1012	72	fair	fish in average to good condition; wind gusts upto 30 mph
	312 Bridge	Black bass	5/1/2008	2030	shock	clear	67	normal	36	good	murky
	312 Bridge	Black bass	9/17/2008	2000	shock	clear/pleasant/60s	78	5-6' low	84-96	good	slightly murky but clearish for the location
Dale Hollow											
	Illwill Creek	Black bass	5/12/2008	2030	shock	clear/cool 50-60s	68	normal	36-42	good	good, green murky water; largemouth were in cuts and back of coves
	Little Sulphur Cr	Black bass	5/12/2008	2020	shock	clear/breezy/60s	68	651	36-48	fair	water was slightly turbid; bass were average in condition
Cedar Creek Lake		LMB	4/29/2008	2000	shock	cold in the 40s	63	normal	34	fair	Murky, but good visability; some smaller bass (<15") still look thin; no vegetation present
		LMB	9/16/2008	2000	shock	clear and 70s	76	normal	36	good	small and large bass plump, but mid-sized bass skinny
		BLG/redear	5/28/2008	1040	shock	cloudy/cool	72	normal	11	fair	water choppy; water muddy in upper 1770; some fish looked skinny
Chenoa Lake		LMB	4/17/2008	2000	shock	clear, 70s	62	normal	48	good	bass were in average condition; sampled entire shoreline; fish were deep
		BLG/redear	5/21/2008		shock	clear/sunny/70s	67	normal	108	good	lots of watershield; water very clear
Lake Linville		Black Bass	5/5/2008	2030	shock	clear/warm/70s	66	normal	6-12	fair	two crews; water murky; all sizes spotted bass skinny; bass had sores on them
		Black Bass	9/18/2008	2000	shock	clear/60-70s	77	1-2' low	12-18	good	two crews; murky
Wood Creek Lake		Black bass	4/23/2008	2000	shock	clear/warm/80s	69	normal	48-72	good	two crews; green water but clearish
		Black bass	9/11/2008	2000	shock	partly cloudy/80s	79	2' low	54-120	good	two crews; fish look fairly good

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during April and May 2008; standard error is in parentheses.

Area	Species	Inch class																			Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21		
Dam	Largemouth bass			2		1	2	1	1	2	1	1	2	1	1	3	2	3	4		27	18.00 (7.36)
	Spotted bass	3	12	2	14	25	24	27	15	11	14	15	5	12	6	1					186	124.00 (27.36)
	Smallmouth bass		6	4	1	4	4	2	3	5	2	2	1	2		3		1			40	26.67 (6.17)
Harmon	Largemouth bass									1			1						1		3	2.00 (1.37)
Creek	Spotted bass		5	1	7	16	17	8	8	9	4		1	1							77	51.33 (8.67)
	Smallmouth bass		1	2	1	1	1			1		1	1	1	4			1	3		18	12.00 (4.13)
Fishing	Largemouth bass				4	8	17	13	4	13	17	22	36	37	27	16	15	4	2	1	236	157.33 (10.00)
Creek	Spotted bass		2	6		7	6	14	9	5	4	1									54	36.00 (10.28)
	Smallmouth bass																				0	0.00 (0.00)
Lily	Largemouth bass				1	4	5	2	4	2	5	7	6	8	11	6	2	5	5		73	48.67 (9.98)
Creek	Spotted bass		9	3	12	17	20	29	16	9	17	19	12	8	1	1					173	115.33 (12.02)
	Smallmouth bass		1	1	1	1	2		1					1							8	5.33 (2.23)
Total	Largemouth bass			2	5	13	24	16	9	18	23	30	45	46	39	25	19	12	12	1	339	56.50 (13.17)
	Spotted bass	3	28	12	33	65	67	78	48	34	39	35	18	21	7	2					490	81.67 (11.08)
	Smallmouth bass		8	7	3	6	7	2	4	6	2	3	2	4	4	3		2	3		66	11.00 (2.76)

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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 2004-2008.

	Stock					Quality					Preferred				
Species/Area	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Largemouth bass															
Dam	4.70	2.00	1.33	7.20	14.67	3.30	2.00	1.33	6.40	11.33	2.00	2.00	0.66	4.00	8.67
Beaver Creek	23.30	2.00	*	*	*	18.70	2.00	*	*	*	10.00	2.00	*	*	*
Harmon Creek	0.70	1.30	0.00	4.65	2.00	0.70	0.70	0.00	4.00	1.33	0.00	0.70	0.00	3.33	0.67
Fishing Creek	46.00	66.00	76.66	154.00	138.00	30.00	58.70	54.66	111.33	106.67	14.00	13.30	26.66	42.67	43.33
Lily Creek	18.70	13.30	22.66	28.00	42.00	14.70	13.30	20.00	18.00	33.33	6.70	9.30	13.33	9.33	19.33
Mean	18.70	16.90	25.18	48.48	49.17	13.50	15.30	19.00	34.95	38.17	6.50	5.50	10.18	14.80	18.00
Spotted bass															
Dam	36.70	50.00	47.33	78.40	86.67	12.70	25.30	26.66	54.40	35.33	4.00	7.30	9.33	24.00	12.67
Beaver Creek	26.70	21.30	*	*	*	6.70	6.00	*	*	*	0.00	0.00	*	*	*
Harmon Creek	25.30	27.30	33.33	74.67	32.00	4.00	8.00	9.33	20.00	4.00	0.00	0.70	2.00	4.67	0.67
Fishing Creek	18.70	13.30	12.00	18.67	26.00	6.00	5.30	4.00	0.67	3.33	0.00	0.00	0.00	0.00	0.00
Lily Creek	109.30	32.00	80.00	48.00	88.00	32.70	26.70	47.33	12.67	38.67	5.30	7.30	20.66	2.00	6.67
Mean	43.30	28.80	43.18	54.93	58.17	12.40	14.30	21.83	21.93	20.33	1.90	3.10	8.00	7.68	5.00
Smallmouth bass															
Dam	16.70	14.00	4.00	36.80	16.67	3.30	7.30	0.66	12.80	7.33	0.70	3.30	0.66	2.40	4.00
Beaver Creek	0.00	0.00	*	*	*	0.00	0.00	*	*	*	0.00	0.00	*	*	*
Harmon Creek	11.30	18.00	4.00	22.67	8.67	9.30	18.00	2.00	9.33	7.33	6.00	15.30	0.66	3.33	6.00
Fishing Creek	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lily Creek	0.00	0.70	0.66	0.67	2.67	0.00	0.70	0.00	0.00	0.67	0.00	0.70	0.00	0.00	0.67
Mean	5.60	6.50	2.18	15.03	7.00	2.50	5.20	0.68	5.53	3.83	1.30	3.90	0.33	1.43	2.67

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.

* Not sampled.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Cumberland during April and May 2008.

	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.
2008	7.33	2.33	11.00	2.84	20.17	5.73	18.00	3.96	0.17	0.17	56.50	13.17
2007	8.35	3.17	14.09	4.49	20.87	7.13	15.30	4.09	0.52	0.29	58.61	18.06
2006	0.83	0.42	6.17	2.17	8.83	3.06	10.17	2.63	0.50	0.28	26.00	7.61
2005	0.80	0.45	1.60	0.68	9.87	3.60	5.47	1.25	0.00	0.00	17.73	5.21
2004	0.80	0.30	5.20	1.46	6.93	1.38	6.53	1.59	0.00	0.00	19.50	4.00
2003	2.00	0.78	5.71	1.39	6.14	1.86	8.29	1.90	0.14	0.14	22.14	4.31
2002	0.40	0.22	1.87	0.57	7.73	2.52	6.27	0.99	0.13	0.13	16.30	3.30

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Table 5. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at at Lake Cumberland during April and May 2008.

	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.
2008	34.67	4.49	26.67	3.67	15.33	4.03	5.00	2.14	0.00	0.00	81.67	11.08
2007	27.13	6.84	27.48	4.96	13.57	3.56	6.96	2.69	0.35	0.24	75.13	13.48
2006	12.00	2.53	16.50	2.30	13.83	2.97	8.00	2.10	0.17	0.17	50.33	7.09
2005	16.27	3.59	9.47	1.40	11.20	2.02	3.07	1.15	0.00	0.00	40.00	6.29
2004	15.60	2.69	25.47	3.91	10.53	2.08	1.87	0.66	0.00	0.00	53.50	7.80
2003	32.57	5.45	31.60	3.80	9.10	1.50	2.90	0.80	0.00	0.00	76.10	8.60
2002	8.10	1.80	10.30	1.70	5.20	1.10	1.50	0.50	0.00	0.00	25.10	3.70

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Table 6. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Lake Cumberland during April and May 2008.

	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.
2008	5.17	1.79	2.00	0.80	1.17	0.51	2.67	0.95	0.83	0.42	11.00	2.76
2007	6.78	2.64	7.13	2.35	3.83	1.29	1.39	0.60	0.52	0.38	19.13	5.43
2006	2.50	0.86	1.17	0.38	0.33	0.33	0.33	0.23	0.17	0.17	4.33	1.15
2005	2.27	0.87	0.80	0.56	1.33	0.48	3.87	1.50	1.33	0.70	8.27	2.32
2004	2.93	1.83	1.87	0.87	1.20	0.51	1.33	0.65	0.00	0.00	7.33	3.10
2003	2.14	0.95	3.86	1.14	1.57	0.56	3.43	1.12	1.00	0.44	11.00	2.70
2002	2.93	1.10	3.47	1.33	2.40	0.76	0.93	0.46	0.13	0.13	9.70	2.90

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Table 7. Catch-per-hour of black bass captured during spring electrofishing on lakes in the Southeastern Fishery District during 2008.

Species/Lake	Stock*	Quality*	Preferred*
Largemouth bass			
Lake Cumberland	49.17	38.17	18.00
Laurel River Lake	40.50	25.50	17.67
Dale Hollow Lake	26.00	22.67	16.67
Cedar Creek Lake	121.71	50.86	32.57
Chenoa Lake	132.80	83.20	20.00
Linville Lake	175.20	30.80	18.40
Wood Creek Lake	74.33	29.67	14.33
Spotted bass			
Lake Cumberland	58.17	20.33	5.00
Laurel River Lake	32.17	10.83	2.33
Dale Hollow Lake	30.00	14.33	3.33
Linville Lake	115.20	9.60	1.60
Wood Creek Lake	22.00	2.67	0.33
Smallmouth bass			
Lake Cumberland	7.00	3.83	2.67
Laurel River Lake	6.33	4.50	3.17
Dale Hollow Lake	15.00	10.33	4.67
Linville Lake	6.00	0.00	0.00
Wood Creek Lake	1.67	0.33	0.00

*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 1990-2008.

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
2008	Value	13.4	10.00	20.17	18.00	0.17		
	Score	4	1	2	3	1	11	F
2007	Value	13.4	10.26	20.87	15.30	0.52		
	Score	4	1	2	3	2	12	G
2006	Value	13.6	1.17	8.83	10.17	0.50		
	Score	4	1	1	2	2	10	F
2005	Value	13.6	1.20	9.90	5.50	0.00		
	Score	4	1	1	2	0	8	F
2004	Value	13.6	1.10	7.00	6.50	1.00		
	Score	4	1	1	2	2	10	F
2003	Value	13.6	3.00	6.10	8.30	0.14		
	Score	4	1	1	2	1	9	F
2002	Value	13.6	0.40	7.60	6.40	0.13		
	Score	4	1	1	2	1	9	F
2001	Value	13.5	2.90	7.70	5.20	0.27		
	Score	4	1	1	2	2	10	F
2000	Value	13.5	2.80	9.50	5.20	0.27		
	Score	4	1	1	2	2	10	F
1999	Value	13.5	9.50	13.30	11.70	0.38		
	Score	4	1	1	2	2	10	F
1997	Value	13.5	2.60	29.50	18.60	0.44		
	Score	4	1	3	3	2	13	G
1996	Value	13.5	1.70	9.60	9.60	0.46		
	Score	4	1	1	2	2	10	F
1995	Value	13.5	1.50	21.70	13.90	0.38		
	Score	4	1	2	3	2	12	G
1993	Value	13.5	1.80	20.50	4.40	0.10		
	Score	4	1	2	2	1	10	F
1992	Value	13.5	3.70	27.10	4.40	0.17		
	Score	4	1	3	2	1	11	F
1991	Value	13.5	5.70	11.80	3.90	0.13		
	Score	4	1	1	1	1	8	F
1990	Value	13.5	19.60	10.10	4.20	0.00		
	Score	4	1	1	2	0	8	F

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Table 9. Population assessment for spotted bass based on spring electrofishing at Lake Cumberland from 1990-2008.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total Score	Assessement rating
2008	Value	11.0	8.83	15.33	5.00	0.00		
	Score	4	3	4	4	0	15	G
2007	Value	11.4	1.30	13.57	6.96	0.35		
	Score	4	2	4	4	3	17	E
2006	Value	11.4	1.83	13.83	8.00	0.17		
	Score	4	2	4	4	2	16	G
2005	Value	11.4	5.10	11.20	3.10	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.4	6.00	10.50	1.90	0.00		
	Score	4	2	4	3	0	13	G
2003	Value	11.4	16.70	9.10	2.90	0.00		
	Score	4	3	4	4	0	15	G
2002	Value	11.4	5.10	5.20	1.50	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.4	2.10	4.70	1.60	0.00		
	Score	4	2	3	3	0	12	G
2000	Value	11.4	1.90	5.60	1.20	0.00		
	Score	4	2	3	3	0	12	G
1999	Value	11.4	3.00	11.20	3.00	0.13		
	Score	4	2	4	4	2	16	G
1997	Value	11.4	6.00	6.70	1.90	0.00		
	Score	4	2	3	3	0	12	G
1996	Value	11.4	1.00	6.60	1.30	0.00		
	Score	4	2	3	3	0	12	G
1995	Value	11.4	1.30	2.30	0.60	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.4	0.70	2.70	0.00	0.00		
	Score	4	1	3	0	0	8	F
1992	Value	11.4	0.70	2.70	0.40	0.00		
	Score	4	1	3	3	0	11	F
1991	Value	11.4	1.30	1.30	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	11.4	3.50	1.20	0.00	0.00		
	Score	4	2	2	0	0	8	F

sedpsdcb.d08

Table 10. Population assessment for smallmouth bass based on spring electrofishing at Lake Cumberland from 1990-2008.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assessement rating
2008	Value	12.2	2.50	1.17	2.67	0.83		
	Score	4	4	3	4	4	19	E
2007	Value	12.2	2.61	3.83	1.39	0.52		
	Score	4	4	4	4	4	20	E
2006	Value	12.2	0.00	0.33	0.33	0.17		
	Score	4	0	2	2	2	10	F
2005	Value	12.2	0.80	1.30	3.90	1.33		
	Score	4	2	3	4	4	17	E
2004	Value	9.6	1.90	1.20	1.30	0.00		
	Score	2	3	3	4	0	12	G
2003	Value	9.6	1.30	1.60	3.40	1.00		
	Score	2	3	3	4	4	16	G
2002	Value	9.6	1.70	2.40	0.90	0.13		
	Score	2	3	3	3	2	13	G
2001	Value	9.6	0.50	0.40	0.90	0.53		
	Score	2	2	2	3	4	13	G
2000	Value	9.6	0.00	1.40	1.10	0.00		
	Score	2	0	3	4	0	9	F
1999	Value	9.6	0.50	2.60	2.50	0.75		
	Score	2	2	4	4	4	16	G
1997	Value	9.6	6.10	3.80	1.30	0.33		
	Score	2	4	4	4	3	17	E
1996	Value	9.6	0.10	3.20	2.50	0.80		
	Score	2	1	4	4	4	15	G
1995	Value	9.6	6.70	7.40	4.00	1.52		
	Score	2	4	4	4	4	18	E
1993	Value	9.6	0.70	2.20	1.10	0.19		
	Score	2	2	3	4	2	13	G
1992	Value	9.6	0.80	4.70	1.80	0.25		
	Score	2	2	4	4	3	15	G
1991	Value	9.6	3.20	5.50	2.30	0.76		
	Score	2	4	4	4	4	18	E
1990	Value	9.6	5.20	4.00	1.30	0.65		
	Score	2	4	4	4	4	18	E

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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 April and May 2008; 95% confidence limits are in parentheses.

Area	Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Dam	Largemouth bass	22	77 (± 18)	59 (± 21)
	Spotted bass	130	41 (± 8)	15 (± 6)
	Smallmouth bass	25	44 (± 20)	24 (± 17)
Harmon Creek	Largemouth bass	3	67 (± 65)	33 (± 65)
	Spotted bass	48	13 (± 9)	2 (± 4)
	Smallmouth bass	13	85 (± 20)	69 (± 26)
Fishing Creek	Largemouth bass	207	77 (± 6)	31 (± 6)
	Spotted bass	39	13 (± 11)	0
	Smallmouth bass	0		
Lily Creek	Largemouth bass	63	79 (± 10)	46 (± 12)
	Spotted bass	132	44 (± 8)	8 (± 5)
	Smallmouth bass	4	25 (± 49)	25 (± 49)
Total	Largemouth bass	295	78 (± 5)	37 (± 6)
	Spotted bass	349	35 (± 5)	9 (± 3)
	Smallmouth bass	42	55 (± 15)	38 (± 15)

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

sedpsdcb.d08

Table 12. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland, Laurel River Lake, Dale Hollow Lake, Cedar Creek Lake, Chenoa Lake, Lake Linville, and Wood Creek Lake during 2008; 95% confidence limits are in parentheses.

	Largemouth bass		Smallmouth bass		Spotted bass	
Lake	PSD	RSD_{15}	PSD	RSD_{14}	PSD	RSD_{14}
Lake Cumberland	78 (±5)	37 (±6)	55 (±15)	38 (±15)	35 (±5)	9 (±3)
Laurel River Lake	63 (±6)	44 (±6)	71 (±15)	50 (±16)	34 (±7)	7 (±4)
Dale Hollow Lake	87 (±7)	64 (±11)	69 (±14)	31 (±14)	48 (±10)	11 (±7)
Cedar Creek Lake	42 (±5)	27 (±4)				
Chenoa Lake	63 (±7)	15 (±5)				
Lake Linville	18 (±4)	11 (±3)	0 (0)	0 (0)	8 (±3)	1 (±1)
Wood Creek Lake	40 (±6)	19 (±5)	20 (±39)	0 (0)	12 (±8)	2 (±3)

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Table 13. Mean back calculated lengths (in) at each annulus for spotted bass collected from Lake Cumberland during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2007	4	5.3						
2006	44	4.1	7.5					
2005	11	4.8	8.4	11.0				
2004	18	4.5	7.4	10.3	12.2			
2003	18	4.0	6.4	9.1	11.2	12.4		
2002	7	4.6	8.1	11.7	13.6	14.4	15.2	
2001	4	3.8	6.2	8.2	10.7	12.3	13.1	13.7
Mean		4.3	7.4	10.1	11.9	12.9	14.4	13.7
Number		106	102	58	47	29	11	4
Smallest		3.0	5.2	6.7	8.1	8.6	11.4	11.9
Largest		6.8	10.5	13.2	14.7	15.4	16.1	15.0
Std error		0.1	0.1	0.2	0.2	0.3	0.4	0.7
95% CI ±		0.2	0.3	0.5	0.5	0.6	0.8	1.3

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbp.d08

Table 14. Age-frequency and CPUE (fish/hr) of spotted bass collected during 6.00 hours of nocturnal electrofishing at Lake Cumberland in April and May 2008.

	Inch class																		Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	%	CPUE	error
1	3	28	12	4	6											53	10.8	8.83	
2				29	59	67	70	27	9							261	53.2	43.50	(5.12)
3								11	12	8	13					44	9.0	7.33	(1.45)
4								11	9	4	18	10	3			55	11.2	9.17	(2.00)
5							8		3	23	4	7	11			56	11.4	9.33	(2.10)
6													5	6	2	13	2.6	2.17	(1.05)
7										4		1	3	1		9	1.8	1.50	(0.47)
	3	28	12	33	65	67	78	49	33	39	35	18	22	7	2	491	100.0	81.83	
%	0.6	5.7	2.4	6.7	13.2	13.6	15.9	10.0	6.7	7.9	7.1	3.7	4.5	1.4	0.4	100.0			

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Table 15. Population assessment for spotted bass collected from Lake Cumberland in April and May 2008.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	11.0	4
Spring CPUE age 1	8.83	3
Spring CPUE 11.0-13.9 in	15.33	4
Spring CPUE ≥14.0 in	5.00	4
Spring CPUE ≥17.0 in	0.00	0
Instantaneous mortality (Z)	0.585	
Annual mortality (A)	44.3	
Total score		15
Assessment rating		G

sedpsdcb.d08

Table 16. 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 17 September 2008; standard error is in parentheses.

Species	Inch class																	Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19		
Largemouth bass	18	22	88	73	35	11	2		10	2	2	3	3	5	3	1	2	280	186.67 (40.50)
Spotted bass		4	1	1	7	8	6	2	4	4	2	1						40	26.67 (5.43)

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Table 17. 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 Lake Cumberland.

Year Class	Area	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥5.0 in CPUE	Age 0 ≥5.0 in Std. error	Age 1 CPUE	Age 1 Std. error
	Lake Cumberland								
2008	Fishing Creek	5.0	0.08	166.00	40.12	80.67	31.30		
2007	Fishing Creek	5.0	0.29	4.67	3.17	2.67	1.33	24.92	5.50
2006	Fishing Creek	6.3	0.17	22.00	3.06	20.67	2.40	32.00	8.20
2005	Fishing Creek	6.2	0.16	14.00	4.47	13.30	4.09	3.30	
2004	Fishing Creek	6.2	0.14	50.70	8.18	41.30	7.35	4.00	
2003	Fishing Creek	5.8	0.42	6.00	2.68	4.00	2.53	1.30	0.80
2002	Fishing Creek	6.0	0.07	192.70	36.67	160.70	36.32	4.00	1.46

sedyoycb.d08

Table 18. Year class strength at age 0 and mean lengths (in) of largemouth bass collected in September 2008 in electrofishing samples at Lake Cumberland, Laurel River Lake, Wood Creek Lake, Cedar Creek Lake, and Lake Linville.

		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	5.0	0.08	166.00	40.12	80.67	31.30
Laurel River Lake	Laurel River Arm	3.2	0.30	1.33	0.84	0.00	-
Wood Creek Lake		3.8	0.12	13.33	3.24	1.00	0.72
Cedar Creek Lake		4.7	0.06	55.71	8.58	24.86	5.38
Lake Linville		5.1	0.06	49.60	12.82	29.60	8.62

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Table 19. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Fishing Creek of Lake Cumberland during 17 September 2008. 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
	14	91 (3)	8	89 (3)	11	89 (3)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	19	98 (3)	7	92 (3)	0	-

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Table 20. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Cumberland, Laurel River Lake, Wood Creek Lake, Cedar Creek Lake, and Lake Linville during September 2008. Standard error is in parentheses.

Species	Location	Length group					
		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)	14	91 (3)	8	89 (3)	11	89 (3)
	Laurel River Lake (Laurel River Arm)	24	98 (2)	15	104 (3)	2	97 (8)
	Wood Creek Lake	51	87 (1)	19	88 (2)	5	93 (7)
	Cedar Creek Lake	207	89(1)	64	89 (1)	18	98 (3)
	Lake Linville	190	86 (1)	27	90 (1)	5	95 (4)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	Lake Cumberland (Fishing Creek)	19	98 (3)	7	92 (3)	0	-
	Laurel River Lake (Laurel River Arm)	36	105 (2)	6	111 (4)	2	116 (7)
	Wood Creek Lake	51	93 (1)	7	90 (2)	0	-
	Lake Linville	174	90 (1)	14	88 (2)	2	88 (3)

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Table 21. Length frequency and CPUE (fish/nn) of walleye and white bass collected from the Jamestown/Bugwood (10 net-nights), Conley Bottom (9 net-nights), and Burnside/Waitsboro (12 net-nights) areas of Lake Cumberland in November 2008.

		Inch class																			
Area	Species	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE	Std. error
Jamestown/Bugwood																					
	Walleye						1	1	5	16	15	21	15	9	8	2	1		94	9.40	1.54
	White bass																		0	0.00	0.00
Conley Bottom																					
	Walleye			1	7	6	2	6	7	8	8	9	5	1	1			1	62	6.89	1.46
	White bass		1		7														8	0.89	0.51
Burnside/Waitsboro																					
	Walleye			1	22	23	1	11	13	9		3	2	2		2			89	7.42	1.42
	White bass	1		4	12				1										18	1.50	0.42
Total																					
	Walleye			2	29	29	4	18	25	33	23	33	22	12	9	4	1	1	245	7.90	0.85
	White bass	1	1	4	19				1										26	0.84	0.24

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Table 22. Population assessment for walleye based on fall gill netting at Lake Cumberland from 1991-2008.

Year		Parameters: CPUE of ≥ age 1+	Mean length of age 2+ at capture	CPUE of ≥ 20.0 in	CPUE of Age 1+	Total Score	Assessment Rating
2008	Value	5.90	18.5	0.87	2.48		
	Score	3	4	2	3	12	G
2006	Value	14.80	19.1	3.90	3.10		
	Score	4	4	4	4	16	E
2004	Value	8.85	18.8	1.80	4.55		
	Score	4	4	3	4	15	E
2002	Value	12.14	19.1	2.48	6.38		
	Score	4	4	4	4	16	E
2000	Value	4.30	18.6	1.50	1.60		
	Score	3	4	3	2	12	G
1998	Value	7.93	18.5	2.40	1.90		
	Score	4	4	4	2	14	E
1996	Value	5.32	18.5	0.90	3.64		
	Score	3	4	2	4	13	G
1994	Value	3.46	18.5	0.90	0.67		
	Score	2	4	2	1	9	F
1991	Value	5.10	18.5*	0.18	2.70		
	Score	3	4	1	3	11	G

sedgncbw.d08

* Data from 1994 used for age-growth

Table 23. Mean back calculated lengths (in) at each annulus for male walleye collected from Lake Cumberland during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	10	11.8							
2006	32	11.0	16.3						
2005	2	11.4	16.5	19.1					
2004	4	11.1	16.3	18.0	19.5				
2003	5	10.6	15.4	17.7	19.0	20.0			
2002	5	10.8	16.0	18.1	19.3	20.0	20.7		
2001	1	11.2	17.0	18.9	19.7	20.5	20.8	21.2	
2000	1	10.6	15.5	17.6	18.8	19.6	20.5	21.3	22.1
Mean		11.1	16.2	18.1	19.2	20.0	20.7	21.3	22.1
Number		60	50	18	16	12	7	2	1
Smallest		6.3	11.5	16.6	17.3	18.1	19.5	21.2	22.1
Largest		13.4	18.3	19.7	21.1	21.2	21.6	21.3	22.1
Std error		0.2	0.2	0.2	0.2	0.3	0.3	0.0	
95% CI ±		0.3	0.3	0.4	0.5	0.5	0.5	0.1	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwm.d08

Table 24. Mean back calculated lengths (in) at each annulus for female walleye collected from Lake Cumberland during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age					
Year	No.	1	2	3	4	5	6
2007	1	12.2					
2006	11	12.0	17.4				
2005	1	9.0	16.1	19.6			
2004	1	12.2	18.3	20.4	21.7		
2003	2	13.0	18.7	21.3	22.8	23.7	
2002	2	11.3	16.3	18.7	19.9	20.5	21.2
Mean		11.9	17.4	20.0	21.4	22.1	21.2
Number		18	17	6	5	4	2
Smallest		9.0	15.1	17.6	18.7	19.0	20.1
Largest		13.7	19.1	21.4	23.2	24.1	22.4
Std error		0.3	0.3	0.6	0.8	1.1	1.2
95% CI ±		0.5	0.6	1.1	1.5	2.2	2.3

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwf.d08

Table 25. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Lake Cumberland during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	34	11.6							
2006	44	11.3	16.6						
2005	3	10.6	16.3	19.3					
2004	5	11.3	16.7	18.5	19.9				
2003	7	11.3	16.4	18.7	20.1	21.1			
2002	7	11.0	16.1	18.3	19.5	20.2	20.8		
2001	1	11.2	17.0	18.9	19.7	20.5	20.8	21.2	
2000	1	10.6	15.5	17.6	18.8	19.6	20.5	21.3	22.1
Mean		11.3	16.5	18.6	19.8	20.5	20.8	21.3	22.1
Number		102	68	24	21	16	9	2	1
Smallest		6.3	11.5	16.6	17.3	18.1	19.5	21.2	22.1
Largest		13.7	19.1	21.4	23.2	24.1	22.4	21.3	22.1
Std error		0.1	0.2	0.3	0.3	0.4	0.3	0.0	
95% CI $\pm$		0.3	0.3	0.6	0.7	0.8	0.6	0.1	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbw.d08

Table 26. Age-frequency and CPUE (fish/nn) of walleye gill netting for 31 net-nights at Lake Cumberland during November 2008. Standard error is in parentheses.

	Inch class																		
Age	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	Total	%	CPUE	
0	2	29	29	3												63	25.6	2.03	(0.47)
1				1	16	25	30	5								77	31.3	2.48	(0.33)
2					2		3	18	31	16	6	1				77	31.3	2.48	(0.50)
3										2	1	1				4	1.6	0.13	(0.03)
4										5		1	1			7	2.8	0.23	(0.06)
5									2		1	3		1	1	8	3.3	0.26	(0.07)
6											4	3	1			8	3.3	0.26	(0.06)
7													1			1	0.4	0.03	(0.02)
8													1			1	0.4	0.03	(0.02)
Total	2	29	29	4	18	25	33	23	33	23	12	9	4	1	1	246	100.0	7.94	
%	0.8	11.8	11.8	1.6	7.3	10.2	13.4	9.3	13.4	9.3	4.9	3.7	1.6	0.4	0.4				

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Table 27. Walleye population assessment for walleye gill netted at Lake Cumberland in November 2008.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	5.90	3
Growth rate (Mean length age 2+ at capture)	18.5	4
Size structure (CPUE ≥20.0 in)	0.87	2
Recruitment (CPUE age 1)	2.48	3
Total score		12
Assessment rating		G
Instantaneous mortality (Z)	0.593	
Annual mortality (A)	44.7	

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Table 28. Number of fish and mean relative weight (Wr) for each length group of walleye collected in Lake Cumberland during November 2008. 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
76	89 (1)	134	88 (0)	27	84 (1)

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Table 29. Mean back calculated lengths (in) at each annulus for white bass collected from Lake Cumberland during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age		
Year	No.	1	2	3
2006	1	9.0	12.4	
2005	1	9.9	12.7	14.4
Mean		9.4	12.6	14.4
Number		2	2	1
Smallest		9.0	12.4	14.4
Largest		9.9	12.7	14.4
Std error		0.4	0.1	
95% CI ±		0.9	0.3	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwb.d08

Table 30. Age-frequency and CPUE (fish/nn) of white bass collected during gill netting for 31 net-nights at Lake Cumberland during November 2008. Standard error is in parentheses.

	Inch class								
Age	7	8	9	10	15	Total	%	CPUE	
0	1	1	4	19		25	96.2	0.81	(0.24)
3					1	1	3.8	0.03	(0.03)
Total	1	1	4	19	1	26	100.0	0.84	
%	3.8	3.8	15.4	73.1	3.8				

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Table 31. Number of fish and mean relative weight (Wr) for each length group of white bass collected in Lake Cumberland during November 2008. Standard error is in parentheses.

Length group					
6.0-8.9 in		9.0-11.9 in		≥12.0 in	
No.	Wr	No.	Wr	No.	Wr
2	96 (4)	23	99 (1)	1	88 (-)

sedgncbw.d08

Table 32. Length frequency and CPUE (fish/nn) of striped bass collected at Lake Cumberland in 20 net-nights on 3-4 December 2008.

	Inch class																					
Species	9	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	31	33	Total	CPUE	Std. error
Striped bass	1	3	3	8	22	11	12	5	20	28	41	9	4	7	2	3	1	2	2	184	9.20	2.45

sedgncbs.d08

Table 33. Population assessment for striped bass based on fall gill netting at Lake Cumberland from 1994-2007.

Year		CPUE ≥age 1	Mean length age 2 at capture	CPUE ≥24.0 in	CPUE Age-1	Total Score	Assessement rating
2008	Value	9.15	22.1	1.50	2.70		
	Score	4	4	3	3	14	E
2007	Value	5.27	23.7	1.23	3.87		
	Score	3	4	3	4	14	E
2006	Value	3.90	22.8	1.60	1.30		
	Score	2	4	3	2	11	G
2005	Value	3.40	23.3	1.50	1.20		
	Score	2	4	3	2	11	G
2004	Value	4.40	23.4	2.10	1.80		
	Score	3	4	4	2	13	G
2003	Value	4.10	21.9	1.20	1.70		
	Score	3	3	3	2	11	G
2002	Value	3.50	22.9	1.25	1.80		
	Score	2	4	3	2	11	G
2001	Value	3.10	21.0	0.11	2.70		
	Score	2	3	1	3	9	F
2000	Value	3.40	23.3	0.70	2.50		
	Score	2	4	2	3	11	G
1999	Value	3.40	22.4	0.30	2.70		
	Score	2	4	1	3	10	G
1998	Value	5.30	21.5	0.40	4.80		
	Score	3	3	1	4	11	G
1997	Value	1.90	21.5	1.10	0.40		
	Score	1	3	3	1	8	F
1996	Value	2.70	22.2	0.90	1.00		
	Score	2	4	2	2	10	G
1995	Value	3.50	22.7	1.50	1.50		
	Score	2	4	3	2	11	G
1994	Value	4.30	21.7	0.80	2.70		
	Score	3	3	2	3	11	G

sedgncbs.d07

Table 34. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2008, 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
2007	53	11.0								
2006	56	10.0	18.4							
2005	22	12.7	19.1	23.5						
2004	8	11.0	19.3	23.4	26.6					
2003	5	11.7	20.3	24.3	27.0	29.3				
2002	1	15.4	22.1	24.8	28.8	30.8	32.5			
1999	1	11.4	18.7	23.2	26.7	28.1	29.8	31.2	31.9	33.0
Mean		10.9	18.8	23.6	26.9	29.4	31.2	31.2	31.9	33.0
Number		146	93	37	15	7	2	1	1	1
Smallest		4.9	15.0	21.1	23.6	25.6	29.8	31.2	31.9	33.0
Largest		15.9	22.9	27.7	30.6	33.1	32.5	31.2	31.9	33.0
Std error		0.2	0.2	0.2	0.5	0.9	1.3			
95% CI ±		0.4	0.4	0.5	1.0	1.8	2.6			

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbs.d08

Table 35. Age-frequency and CPUE (fish/nn) of striped bass gill netted for 20 net-nights at Lake Cumberland in December 2008. Standard error is in parentheses.

	Inch class																					
Age	9	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	31	33	Total	%	CPUE	
0+	1																			1	0.5	0.05	(0.05)
1+		3	3	8	22	10	8													54	29.3	2.70	(0.57)
2+						1	4	5	20	28	38	5								101	54.9	5.05	(1.72)
3+											3	4	4	5	1	1				18	9.8	0.90	(0.35)
4+														1	1	1	1	1		5	2.7	0.25	(0.11)
5+														1		1		1		3	1.6	0.15	(0.05)
6+																			1	1	0.5	0.05	(0.03)
9+																			1	1	0.5	0.05	(0.03)
Total	1	3	3	8	22	11	12	5	20	28	41	9	4	7	2	3	1	2	2	184	100.0	9.20	
%	0.5	1.6	1.6	4.3	12.0	6.0	6.5	2.7	10.9	15.2	22.3	4.9	2.2	3.8	1.1	1.6	0.5	1.1	1.1				

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sedagcbs.d08

Table 36. Striped bass population assessment for striped bass gill netted at Lake Cumberland in December 2008.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	9.15	4
Growth rate (Mean length age 2+ at capture)	22.1	4
Size structure (CPUE ≥24.0 in)	1.50	3
Recruitment (CPUE age 1)	2.70	3
Instantaneous mortality (Z)	0.623	
Annual mortality (A)	46.4	
Total score		14
Assessment rating		E

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sedagcbs.d08

Table 37. Number of fish and mean relative weight (Wr) for each length group of striped bass collected in Lake Cumberland during November and December 2008. 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
107	92 (1)	169	84 (0)	9	79 (1)

sedwrcbs.d08

Table 38. Fishery statistics derived from a creel survey on lower Lake Cumberland (25,014 acres) from 2 April - 24 December 2008.

Fishing trips	
Number of fishing trips (per acre)	92,076 (3.68)
Average trip length	3.88
Fishing pressure	
Total man-hours (S.E.)a	356,930 (7,849)
Man hours/acre	14.27
Catch/harvest	
Number of fish caught (S.E.)	249,209 (31,845)
Number of fish harvested (S.E.)	122,249 (20,296)
Pounds of fish harvested	270,224
Harvest rates	
Fish/hour	0.30
Fish/acre	4.89
Pounds/acre	10.80
Catch rates	
Fish/hour	0.63
Fish/acre	9.96
Miscellaneous characteristics (%)	
Male	88
Female	12
Resident	75
Non-resident	25
Method (%)	
Still fishing	44
Casting	23
Trolling	33
Mode (%)	
Boat	90
Bank	9
Dock	1

aS.E. = standard error

Table 39. Fish harvest statistics derived from a creel survey at lower Lake Cumberland (25,014 acres) from 2 April - 24 December 2008.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Illegal bass	Illegal Smallmouth bass	Crappie group	White crappie	Black crappie	Illegal White crappie	Striped bass	Illegal Striped bass	Walleye	Sauger
No. caught	55,014	8,216	31,362	15,437	119	203	11,822	3,333	8,489	229	35,153	115	2,596	382
(per acre)	2.20	0.33	1.25	0.62	0.00	0.01	0.47	0.13	0.34	0.01	1.41	0.00	0.10	0.02
No. harvested	13,508	1,323	9,489	2,696	119	203	6,519	948	5,571	229	18,147	115	2,354	382
(per acre)	0.54	0.05	0.38	0.11	0.00	0.01	0.26	0.04	0.22	0.01	0.73	0.00	0.09	0.02
% of total no. harvested	11.0	1.1	7.8	2.2	tr	tr	5.3	0.8	4.6	tr	14.8	tr	1.9	tr
Lbs. harvested	20,791	3,346	7,848	9,597	148		6,829	864	5,964	86	197,158	719	6,500	252
(per acre)	0.83	0.13	0.31	0.38	0.01		0.27	0.03	0.24	0.00	7.88	0.03	0.26	0.01
% of total lbs harvested	7.7	1.2	2.9	3.6	tr		2.5	0.3	2.2	tr	73.0	tr	2.4	tr
Mean length (in)		16.9	12.3	19.4	13.5	14.0		11.8	11.7	9.0	30.1	23.0	20.7	12.8
Mean weight (lb)		2.55	0.81	3.45	1.24			0.88	0.91	0.37	10.84	6.28	3.07	0.66
Number of fishing trips for that species	25,158						4,642				38,512		5,175	
Percent of all trips	27.4						5.1				41.9		5.6	
Hours fished for that species	97,523						17,993				149,289		20,061	
Hours fished for that species (per acre)	3.90						0.72				5.97		0.80	
Number harvested fishing for that species	10,902						6,255				16,962		2,019	
Lb harvested fishing for that species	15,736						6,482				182,541		5,076	
No./hr harvested fishing for that species	0.11						0.42				0.09		0.14	
Percent success fishing for that species	20.3						27.4				24.6		16.5	

Table 39. Continued

	Catfish group	Channel catfish	Flathead catfish	Panfish group	Bluegill	Longear sunfish	Green sunfish	Redear sunfish	Rock bass	Buffalo	Freshwater drum	Gar	Carp
No. caught	8,568	6,188	2,380	133,449	125,797	3,104	2,015	443	2,090	573	216	687	83
(per acre)	0.34	0.25	0.10	5.33	5.03	0.12	0.08	0.02	0.08	0.02	0.01	0.03	0.00
No. harvested	5,161	3,248	1,913	74,862	70,452	3,104	629		677	573	76		
(per acre)	0.21	0.13	0.08	2.99	2.82	0.12	0.03		0.03	0.02	0.00		
% of total no. harvested	4.2	2.7	1.6	61.2	57.6	2.5	0.5		0.6	tr	tr		
Lbs. harvested	22,301	6,860	15,442	9,992	9,666	101	38		188	5,241	207		
(per acre)	0.89	0.27	0.62	0.40	0.39	0.00	0.00		0.01	0.21	0.01		
% of total lbs harvested	8.3	2.5	5.7	3.7	3.6	tr	tr		tr	1.9	tr		
Mean length (in)		18.4	26.9		6.4	3.6	5.5		7.2	25.4	19.0		
Mean weight (lb)		2.04	9.05		0.18	0.03	0.13		0.26	9.15	2.70		
Number of fishing trips for that species	6,750			11,300						319			
Percent of all trips	7.3			12.3						tr			
Hours fished for that species	26,166			43,803						1,237			
Hours fished for that species (per acre)	1.05			1.75						0.05			
Number harvested fishing for that species	2,430			65,990						573			
Lb harvested fishing for that species	8,978			8,727						5243			
No./hr harvested fishing for that species	0.09			2.28						0.52			
Percent success fishing for that species	15.9			35.6						66.7			

Table 40. Length distribution for each species of fish harvested and released at lower Lake Cumberland (25,014 acres) during 2 April - 24 December 2008.

	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
Largemouth bass																							
Harvested													265	66	463	397	132						
Released						1190	297	744	149	744	1190	1189	331	331	199	331	132			66			
Spotted bass																							
Harvested					144	144	216	1222	719	2013	2229	1725	647	288	142								
Released						5872	367	7193	1468	3743	1174	1395	514	146									
Smallmouth bass																							
Harvested																809	944	202	337	270	134		
Released						863	72	719	72	1078	503	1366	2085	1654	1582	874	1436	312		62		62	
Illegal smallmouth bass																							
Harvested											102		101										
Illegal bass																							
Harvested											59	60											
Striped bass																							
Harvested																						947	868
Released				150						449		449	374	673	299	4113	449	3963	897	2841	821	556	347
Illegal striped bass																							
Harvested																					115		
Walleye																							
Harvested															74	956	294	147	147	147	294	221	
Released												89	76		77								
Sauger																							
Harvested										153	153	76											
White crappie																							
Harvested								365	73		146	219	145										
Released					682	454	1136	56	56														
Black crappie																							
Harvested								628	863	2040	628	1177	78	78	79								
Released						1973	683	262															
Illegal white crappie																							
Harvested							229																
Channel catfish																							
Harvested								342		171		171	85	256	85	342	342	171	85	513	85	342	
Released				163	327	653		163		163	82	82	82			245		163				572	82
Flathead catfish																							
Harvested											80	80					80	80		80	80	159	159
Released				78								78		78	78	78							
Bluegill																							
Harvested		2917	20154	30408	11138	5392	443																
Released	9131	27766	9690	7547	186	745		280															
Longear sunfish																							
Harvested	1330	1774																					
Redear sunfish																							
Released		74	222	74	73																		
Green sunfish																							
Harvested		524			105																		
Released		1300	86																				
Rockbass																							
Harvested					423	254																	
Released		67			67	605	674																
Buffalo																							
Harvested																			115		115		
Carp																							
Released																		83					
Gar																							
Released																						86	
Freshwater drum																							
Harvested																	76						
Released													70							70			

Table 40. Continued

	Inch class																		
	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	42	43	45	47
Largemouth bass																			
Harvested																			
Released																			
Spotted bass																			
Harvested																			
Released																			
Smallmouth bass																			
Harvested																			
Released																			
Illegal smallmouth bass																			
Harvested																			
Illegal bass																			
Harvested																			
Striped bass																			
Harvested	1894	1420	1894	868	3314	1183	868	1420	868	947	473	394	237	237	79		79	157	
Released			69		69	278	69	69	71										
Illegal striped bass																			
Harvested																			
Walleye																			
Harvested				74															
Released																			
Sauger																			
Harvested																			
White crappie																			
Harvested																			
Released																			
Black crappie																			
Harvested																			
Released																			
Illegal white crappie																			
Harvested																			
Channel catfish																			
Harvested	171	87																	
Released	163																		
Flathead catfish																			
Harvested	239	159	239	80	80						159					80			79
Released					77														
Bluegill																			
Harvested																			
Released																			
Longear sunfish																			
Harvested																			
Redear sunfish																			
Released																			
Green sunfish																			
Harvested																			
Released																			
Rockbass																			
Harvested																			
Released																			
Buffalo																			
Harvested		115	228																
Carp																			
Released																			
Gar																			
Released	86	86	86		172				86		85								
Freshwater drum																			
Harvested																			
Released																			

Table 41. Black bass catch and harvest statistics derived from a daytime creel survey at lower Lake Cumberland (25,014 acres) for each species of black bass caught and released by all anglers from 2 April - 24 December 2008.

	Largemouth bass				Spotted bass				Smallmouth bass			
		C&R				C&R				C&R		
	Harvest	12.0-14.9 in	>15.0 in	Total	Harvest	12.0-14.9 in	>15.0 in	Total	Harvest	12.0-14.9 in	>15.0 in	Total
Total number of bass	1,323	3,123	1,390	8,216	9,489	6,312	660	31,362	2,696	2,947	8,067	15,437
% of black bass harvested by number	9.8				70.2				20.0			
Total weight of fish (lb)	3,346	2,175	3,547	10,725	7,848	3,326	347	19,369	9,597	3,723	15,579	31,078
% of black bass harvested by weight	16.1				37.7				46.2			
Mean length (in)	16.9				12.3				19.4			
Mean weight (lb)	2.55				0.81				3.45			
Rate (fish/hour)	0.004				0.027				0.008			

Table 42. Monthly black bass angling success at lower Lake Cumberland (25,014 acres) during the 2008 creel survey period; data does not include black bass < 8.0 inches.

Month	Total no. of bass caught	Total no. of bass harvested	Number of 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
Apr	8,262	1,911	4,576	17,739	6,632	0.35	1,405	0.08
May	10,160	3,361	3,617	14,022	7,869	0.58	2,063	0.15
Jun	2,520	458	1,975	7,656	1,032	0.20	115	0.02
Jul	6,385	798	1,294	5,016	3,459	0.92	621	0.16
Aug	865	-	1,166	4,521	733	0.26	-	-
Sep	3,031	773	1,447	5,610	2,554	0.49	534	0.10
Oct	8,098	2,171	3,113	12,069	6,928	0.54	2,170	0.17
Nov	11,502	2,770	5,662	21,950	11,335	0.42	2,771	0.10
Dec	4,191	1,266	2,306	8,938	3,930	0.42	1,223	0.13
Total	55,014	13,508	25,156	97,521	44,472		10,902	
Mean						0.45		0.11

Table 43. Monthly crappie angling success at lower Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of crappie caught	Total no. of crappie harvested	Number 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
Apr	1,461	562	604	2,343	1,011	0.70	506	0.35
May	1,833	382	629	2,439	1,756	0.79	305	0.14
Jun	344	-	494	1,914	344	0.49	-	-
Aug	-	-	175	678	-	-	-	-
Sep	-	-	128	495	-	-	-	-
Oct	4,258	2,838	1,072	4,155	4,257	1.16	2,838	0.77
Nov	3,358	2,519	1,185	4,594	3,359	1.15	2,519	0.86
Dec	567	218	355	1,375	436	0.67	87	0.13
Total	11,821	6,519	4,642	17,993	11,163		6,255	
Mean						0.78		0.42

Table 44. Monthly walleye angling success at lower Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of walleye caught	Total no. of walleye harvested	Number of walleye fishing trips	Hours fished by walleye anglers	Walleye caught by walleye anglers	Walleye caught/hour by walleye anglers	Walleye harvested by walleye anglers	Walleye harvested/hour by walleye anglers
Apr	225	225	173	669	169	0.25	169	0.25
May	229	76	367	1,423	153	0.07	-	-
Jun	344	344	1,536	5,955	229	0.04	229	0.04
Jul	709	621	1,891	7,332	532	0.11	532	0.11
Aug	732	732	816	3,165	732	0.45	732	0.45
Sep	357	357	341	1,320	357	0.21	357	0.21
Total	2,596	2,355	5,175	20,061	2,172		2,019	
Mean						0.15		0.14

Table 45. Monthly striped bass angling success at lower Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of striped bass caught	Total no. of striped bass harvested	Number of striped bass fishing trips	Hours fished by striped bass anglers	Striped bass caught by striped bass anglers	Striped bass caught/hour by striped bass anglers	Striped bass harvested by striped bass anglers	Striped bass harvested/hour by striped bass anglers
Apr	2,304	1,349	6,001	23,262	1,967	0.08	1,349	0.05
May	4,049	1,222	3,775	14,632	3,744	0.19	1,070	0.05
Jun	5,613	4,239	3,456	13,398	5,271	0.25	4,010	0.19
Jul	5,144	2,661	4,479	17,364	4,612	0.21	2,572	0.12
Aug	3,792	1,397	5,890	22,833	3,725	0.13	1,397	0.05
Sep	2,199	1,426	1,788	6,930	2,198	0.24	1,426	0.16
Oct	4,258	1,837	6,635	25,722	4,008	0.15	1,837	0.07
Nov	5,961	3,274	5,201	20,163	4,450	0.26	2,603	0.15
Dec	1,833	742	1,286	4,985	1,571	0.29	698	0.13
Total	35,153	18,147	38,511	149,289	31,546		16,962	
Mean						0.17		0.09

Table 46. Fishery statistics derived from a creel survey on upper Lake Cumberland (25,014 acres) from 2 April - 24 December 2008.

Fishing trips	
Number of fishing trips (per acre)	47,799 (1.91)
Average trip length	3.99
Fishing pressure	
Total man-hours (S.E.)a	190,849 (5,427)
Man hours/acre	7.63
Catch/harvest	
Number of fish caught (S.E.)	181,423 (17,182)
Number of fish harvested (S.E.)	90,402 (11,506)
Pounds of fish harvested	98,573
Harvest rates	
Fish/hour	0.46
Fish/acre	3.61
Pounds/acre	3.94
Catch rates	
Fish/hour	0.98
Fish/acre	7.25
Miscellaneous characteristics (%)	
Male	92
Female	8
Resident	93
Non-resident	7
Method (%)	
Still fishing	21
Casting	46
Trolling	33
Mode (%)	
Boat	97
Bank	1
Dock	2

aS.E. = standard error

Table 47. Fish harvest statistics derived from a creel survey at upper Lake Cumberland (25,014 acres) from 2 April - 24 December 2008.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Illegal bass	Illegal Smallmouth bass	Crappie group	White crappie	Black crappie	Blacknose crappie	Illegal Black crappie	Striped bass
No. caught	72,295	21,644	39,802	10,850	732	88	46,912	7,700	39,126	86	2,205	3,604
(per acre)	2.89	0.87	1.59	0.43	0.03	0.00	1.88	0.31	1.56	0.00	0.09	0.14
No. harvested	9,639	947	8,219	473	732	88	30,219	3,672	26,461	86	2,205	1,880
(per acre)	0.39	0.04	0.33	0.02	0.03	0.00	1.21	0.15	1.06	0.00	0.09	0.08
% of total no. harvested	10.66	1.05	9.09	0.52	0.81	tr	33.43	4.06	29.27	tr	2.44	2.08
Lbs. harvested	10,079	2,146	6,461	1,472	921		24,925	1,895	22,985	45	378	15,240
(per acre)	0.40	0.09	0.26	0.06	0.04		1.00	0.08	0.92	0.00	0.02	0.61
% of total lbs harvested	10.22	2.18	6.55	1.49	0.93		25.29	1.92	23.32	tr	tr	15.46
Mean length (in)		16.3	12.3	18.7	13.5	16.0		10.2	11.5	10.0	8.1	27.1
Mean weight (lb)		2.24	0.80	3.08	1.27			0.50	0.84	0.53	0.23	7.94
Number of fishing trips for that species	20,362						7,534					4,485
Percent of all trips	42.60						15.76					9.38
Hours fished for that species	81,299						30,082					17,908
Hours fished for that species (per acre)	3.25						1.20					0.72
Number harvested fishing for that species	8,009						29,213					1,879
Lb harvested fishing for that species	8,280						23,715					15,234
No./hr harvested fishing for that species	0.09						1.00					0.12
Percent success fishing for that species	8.7						58.6					19.3

t < 0.005 fish/hr or < 0.5%

Table 47. Continued

	Walleye	Illegal Walleye	Catfish group	Channel catfish	Panfish group	Bluegill	Longear sunfish	Green sunfish	Freshwater drum	Muskellunge	Carp
No. caught	22,305	304	7,993	7,993	23,769	22,433	1,212	125	946	90	180
(per acre)	0.89	0.01	0.32	0.32	0.95	0.90	0.05	0.00	0.04	0.00	0.01
No. harvested	18,135	304	5,994	5,994	20,742	19,406	1,212	125	374	90	
(per acre)	0.72	0.01	0.24	0.24	0.83	0.78	0.05	0.00	0.01	0.00	
% of total no. harvested	20.06	tr	6.63	6.63	22.94	21.47	1.34	tr	tr	tr	
Lbs. harvested	33,451	195	9,791	9,791	2,209	2,059	139	11	603	781	
(per acre)	1.34	0.01	0.39	0.39	0.09	0.08	0.01	0.00	0.02	0.03	
% of total lbs harvested	33.94	tr	9.93	9.93	2.24	2.09	tr	tr	0.61	0.79	
Mean length (in)	17.9	13.0		17.2		5.7	5.8	5.0	15.7	33.0	
Mean weight (lb)	1.86	0.64		1.67		0.12	0.12	0.08	1.61	8.68	
Number of fishing trips for that species	12,120		1,651		1,647						
Percent of all trips	25.36		3.45		3.46						
Hours fished for that species	48,390		6,593		6,576						
Hours fished for that species (per acre)	1.93		0.26		0.26						
Number harvested fishing for that species	17,059		3,084		19,980						
Lb harvested fishing for that species	30,787		5,213		2,118						
No./hr harvested fishing for that species	0.38		0.55		2.80						
Percent success fishing for that species	33.3		56.3		83.3				0.0		

t < 0.005 fish/hr or < 0.5%

Table 48. Length distribution for each species of fish harvested and released at upper Lake Cumberland (25,014 acres) during 2 April - 24 December 2008.

	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	29	30	33	34
Largemouth bass																													
Harvested												105	421	421															
Released							362		1629	4162	4162	3461	4647	1582	593	99													
Spotted bass																													
Harvested							238	1072	3693	2621	476	119																	
Released							4801	2881	12377	9816	1494	107	106																
Smallmouth bass																													
Harvested															189	189	95												
Released									240		359	479	3354	2155	1516	2165	108												
Illegal bass																													
Harvested								105		105	522																		
Illegal smallmouth bass																													
Harvested													88																
Striped bass																													
Harvested																					188	94	376	470	282	282	94		94
Released														86		343	257	257	515	86			90			90			
Walleye																													
Harvested												1059	2780	5295	2912	3839	1059	265	397	265	132	132							
Released									131	654	2092	185	554	277		276													
Illegal walleye																													
Harvested										304																			
White crappie																													
Harvested							2714	639	239		80																		
Released			79	553	1817	1580																							
Black crappie																													
Harvested							8950	4086	6421	3794	1654	1459	97																
Released			106	845	6024	5602																							
Blacknose crappie																													
Harvested							85																						
Illegal black crappie																													
Harvested				1187	848	170																							
Channel catfish																													
Harvested									266	400		533	1199	932	1332	533	266		266	133			134						
Released									222		111	222	555	222	444	111	112												
Bluegill																													
Harvested	1357	8957	8142	950																									
Released	1172	1074	684	97																									
Longear sunfish																													
Harvested		404	673	135																									
Green sunfish																													
Harvested		125																											
Freshwater drum																													
Harvested												250		124															
Released															143		286					142							
Muskellunge																													
Harvested																												90	
Carp																													
Released															180														

Table 49. Black bass catch and harvest statistics derived from a daytime creel survey at upper Lake Cumberland (25,014 acres) for each species of black bass caught and released by all anglers from 2 April - 24 December 2008.

	Largemouth bass				Spotted bass				Smallmouth bass			
		C&R				C&R				C&R		
	Harvest	12.0-14.9 in	>15.0 in	Total	Harvest	12.0-14.9 in	>15.0 in	Total	Harvest	12.0-14.9 in	>15.0 in	Total
Total number of bass	947	9,953	10,382	21,644	8,219	23,687	213	39,802	473	599	9,778	10,850
% of black bass harvested by number	9.8				85.3				4.9			
Total weight of fish (lb)	2,145	11,469	21,865	35,897	6,461	17,863	160	30,278	1,472	1,157	23,187	25,817
% of black bass harvested by weight	21.3				64.1				14.6			
Mean length (in)	16.3				12.3				18.7			
Mean weight (lb)	2.24				0.80				3.08			
Rate (fish/hour)	0.005				0.041				0.003			

Table 50. Monthly black bass angling success at upper Lake Cumberland (25,014 acres) during the 2008 creel survey period data does not include black bass < 8.0 inches.

Month	Total no. of bass caught	Total no. of bass harvested	Number of 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
Apr	10,003	513	3,338	13,328	8,377	0.45	256	0.01
May	8,735	1,171	2,499	9,979	8,464	0.86	1,080	0.11
Jun	10,983	874	2,576	10,287	10,360	1.04	500	0.05
Jul	10,285	3,248	3,698	14,765	9,925	0.95	3,068	0.29
Aug	5,802	1,111	1,746	6,969	5,307	0.89	740	0.12
Sep	9,827	673	1,291	5,153	9,693	1.34	539	0.07
Oct	12,853	817	2,812	11,227	12,481	1.06	594	0.05
Nov	3,082	1,233	961	3,835	3,080	0.67	1,232	0.27
Dec	725	-	1,442	5,757	725	0.20	-	-
Total	72,295	9,640	20,363	81,300	68,412		8,009	
Mean						0.83		0.09

Table 51. Monthly crappie angling success at upper Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of crappie caught	Total no. of crappie harvested	Number 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
Apr	8,122	4,959	2,311	9,227	7,693	1.13	4,787	0.70
May	3,692	1,891	1,071	4,277	3,692	0.97	1,891	0.50
Jun	2,122	1,373	485	1,938	1,997	0.74	1,248	0.46
Jul	9,203	5,774	628	2,507	9,022	1.75	5,594	1.08
Aug	2,099	988	116	465	2,099	2.15	988	1.01
Sep	1,346	942	430	1,718	1,346	1.27	942	0.89
Oct	13,373	9,361	1,585	6,328	13,373	1.84	9,361	1.29
Nov	6,955	4,930	427	1,705	5,986	3.35	4,402	2.46
Total	46,912	30,218	7,053	28,165	45,208		29,213	
Mean						1.53		1.00

Table 52. Monthly walleye angling success at upper Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of walleye caught	Total no. of walleye harvested	Number of walleye fishing trips	Hours fished by walleye anglers	Walleye caught by walleye anglers	Walleye caught/hour by walleye anglers	Walleye harvested by walleye anglers	Walleye harvested/hour by walleye anglers
Apr	855	342	514	2,050	171	0.10	171	0.10
May	720	720	714	2,851	630	0.32	630	0.32
Jun	5,741	4,743	2,763	11,032	5,492	0.53	4,618	0.45
Jul	6,496	5,774	3,210	12,815	5,955	0.39	5,233	0.36
Aug	2,716	1,852	1,202	4,801	2,716	0.50	1,852	0.34
Sep	1,346	808	1,162	4,638	1,077	0.34	808	0.25
Oct	2,452	2,006	767	3,062	2,006	0.78	1,857	0.72
Nov	528	440	587	2,344	440	0.21	440	0.21
Dec	1,450	1,450	1,202	4,798	1,450	0.21	1,450	0.21
Total	22,304	18,135	12,121	48,391	19,937		17,059	
Mean						0.45		0.38

Table 53. Monthly striped bass angling success at upper Lake Cumberland (25,014 acres) during the 2008 creel survey period.

Month	Total no. of striped bass caught	Total no. of striped bass harvested	Number of striped bass fishing trips	Hours fished by striped bass anglers	Striped bass caught by striped bass anglers	Striped bass caught/hour by striped bass anglers	Striped bass harvested by striped bass anglers	Striped bass harvested/hour by striped bass anglers
Apr	1,795	940	2,311	9,227	1,795	0.27	940	0.14
May	360	-	446	1,782	360	0.12	-	-
Jul	180	180	488	1,950	180	0.08	180	0.08
Aug	247	123	116	465	246	0.57	123	0.29
Sep	135	135	301	1,202	135	0.10	135	0.10
Oct	446	149	358	1,429	446	0.28	149	0.09
Nov	440	352	427	1,705	440	0.40	352	0.32
Total	3,603	1,879	4,447	17,760	3,602		1,879	
Mean						0.23		0.12

Table 54. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake during April and May 2008; standard error is in parentheses.

Area	Species	Inch class																				Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Dam	Largemouth bass			4	6	4	4	6	1	3	5		4	5	7	4	2	2	3	2		62	41.33 (6.42)
	Spotted bass				1	3	11	5	3	4	1	4	1	1		1						35	23.33 (5.51)
	Smallmouth bass			1	1	2		1	3	3	1	2	2		1	1	1	1		1		21	14.00 (4.93)
Spruce	Largemouth bass				1	2	3	7	13	15	2	2	3	7	10	13	9	4	4			95	63.33 (9.82)
Creek	Spotted bass				2		3	3	1		2	4	3	5								23	15.33 (4.18)
	Smallmouth bass		1		2	2		2	1		2		1	1		5	1	2	5			25	16.67 (5.21)
Laurel	Largemouth bass	1	4	14	73	78	22	8	6	5	4	4	2	14	13	14	5	3	1			271	180.67 (19.14)
River	Spotted bass	1	22	6	2	8	26	22	15	6	6	8	5	1	1							129	86.00 (12.25)
Arm	Smallmouth bass																					0	0.00 (0.00)
Upper	Largemouth bass				9			3	6	5	1	1	2	3	4	2	2			1	1	40	26.67 (7.77)
Craigs	Spotted bass	1		1	14	8	12	9	5	3	8	7	2	4	1							75	50.00 (9.62)
Creek	Smallmouth bass					1				1												2	1.33 (0.84)
Total	Largemouth bass	1	4	18	89	84	29	24	26	28	12	7	11	29	34	33	18	9	8	3	1	468	78.00 (13.81)
	Spotted bass	2	22	7	19	19	52	39	24	13	17	23	11	11	2	1						262	43.67 (6.99)
	Smallmouth bass		1	1	3	5		3	4	4	3	2	3	1	1	6	2	3	5	1		48	8.00 (2.28)

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Table 55. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2004-2008.

	Stock					Quality					Preferred				
Species/Area	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Largemouth bass															
Dam	30.70	49.30	34.00	54.00	29.33	18.70	32.70	22.00	47.33	19.33	12.70	20.70	11.33	34.00	13.33
Spruce Creek	56.00	56.00	45.71	37.33	59.33	48.70	52.00	38.28	34.67	34.67	18.70	31.30	29.14	21.33	26.67
Laurel River Arm	57.30	96.00	95.33	56.00	52.67	43.30	62.00	65.33	40.67	37.33	18.00	28.70	28.66	20.67	24.00
Craigs Cr. headwaters	30.70	22.70	28.00	29.33	20.67	20.00	17.30	20.66	22.67	10.67	7.30	9.30	7.33	11.33	6.67
Mean	43.70	56.00	50.56	44.17	40.50	32.70	41.00	36.64	36.33	25.50	14.20	22.50	19.52	21.83	17.67
Spotted bass															
Dam	48.00	24.70	33.33	36.67	20.67	30.00	17.30	13.33	20.67	5.33	6.00	9.30	4.66	5.33	1.33
Spruce Creek	4.70	6.00	14.85	16.67	14.00	2.70	2.00	5.71	9.33	9.33	0.70	0.00	1.71	1.33	3.33
Laurel River Arm	2.70	8.70	34.00	38.67	60.00	1.30	6.00	9.33	8.67	14.00	0.00	0.70	2.00	0.67	1.33
Craigs Cr. headwaters	50.00	26.00	44.00	36.00	34.00	14.00	20.00	19.33	12.00	14.67	2.00	4.70	2.00	0.67	3.33
Mean	26.30	16.30	30.88	32.00	32.17	12.00	11.30	11.68	12.68	10.83	2.70	3.70	2.56	2.00	2.33
Smallmouth bass															
Dam	6.00	14.00	0.66	6.67	11.33	4.70	10.70	0.66	1.33	6.67	3.30	10.00	0.00	1.33	3.33
Spruce Creek	9.30	15.30	5.14	7.33	13.33	2.70	15.30	3.42	4.00	11.33	1.30	10.70	3.42	2.67	9.33
Laurel River Arm	2.70	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00
Craigs Cr. headwaters	0.00	0.00	0.00	4.00	0.67	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.67	0.00
Mean	4.50	7.80	1.60	4.50	6.33	1.80	7.00	1.12	1.50	4.50	1.20	5.50	0.96	1.18	3.17

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 56. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel River Lake during April and May 2008.

	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.
2008	37.50	11.53	15.00	1.97	7.83	1.47	17.67	2.66	0.67	0.46	78.00	13.81
2007	2.33	0.80	7.83	1.93	14.50	1.86	21.83	2.55	0.50	0.28	46.50	4.03
2006	20.80	5.65	13.92	2.72	17.12	2.86	19.52	2.76	0.64	0.30	71.36	11.44
2005	6.17	1.23	15.00	2.85	18.50	2.67	22.50	2.90	0.17	0.17	62.17	7.54
2004	3.80	1.50	11.00	1.40	18.50	3.00	14.20	1.90	0.00	0.00	47.50	4.80
2003	9.80	2.90	37.00	5.80	29.30	4.10	13.80	2.00	0.00	0.00	90.00	12.30
2002	21.70	5.00	24.00	3.80	23.30	3.30	8.30	1.40	0.00	0.00	77.30	9.70

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Table 57. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Laurel River Lake during April and May 2008.

	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.
2008	20.17	4.23	12.67	2.63	8.50	1.43	2.33	0.63	0.00	0.00	43.67	6.99
2007	12.17	2.32	13.50	2.15	10.67	1.71	2.00	0.64	0.00	0.00	38.33	4.04
2006	15.04	2.39	13.44	1.74	9.12	1.74	2.56	0.73	0.00	0.00	40.16	4.55
2005	4.83	0.83	3.33	0.79	7.67	1.60	3.67	1.13	0.00	0.00	19.50	2.65
2004	3.20	1.00	12.50	2.90	9.80	2.30	2.20	0.70	0.00	0.00	27.70	5.60
2003	23.30	5.30	17.80	3.10	10.20	2.00	0.80	0.50	0.00	0.00	52.20	8.90
2002	13.70	3.20	13.30	1.80	5.50	1.40	0.30	0.20	0.00	0.00	32.80	5.60

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Table 58. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Laurel River Lake during April and May 2008.

	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.
2008	1.67	0.68	1.83	0.72	1.33	0.52	3.17	1.23	1.83	0.64	8.00	2.28
2007	2.83	0.78	1.67	0.68	0.33	0.23	1.17	0.45	0.83	0.42	6.00	1.36
2006	0.48	0.27	0.48	0.35	0.16	0.16	0.96	0.58	0.32	0.22	2.08	0.96
2005	0.17	0.17	0.83	0.42	1.50	0.63	5.50	1.46	2.83	1.09	8.00	1.83
2004	2.00	0.60	1.20	0.40	0.70	0.40	1.20	0.50	0.00	0.00	5.00	1.10
2003	8.30	2.20	7.50	1.80	1.80	0.80	2.20	0.80	0.17	0.17	19.80	4.30
2002	8.20	2.50	4.50	1.50	2.20	0.60	0.70	0.30	0.17	0.17	15.50	3.80

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Table 59. Population assessment for largemouth bass based on spring electrofishing at Laurel River Lake from 1990-2008.

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
2008	Value	13.3	36.33 *	7.83	17.67	0.67		
	Score	4	3	1	3	2	13	G
2007	Value	13.7	2.08	14.50	21.83	0.50		
	Score	4	1	1	4	2	12	G
2006	Value	13.7	18.40	17.12	19.52	0.64		
	Score	4	1	2	3	2	12	G
2005	Value	13.7	4.61	18.50	22.50	0.17		
	Score	4	1	2	4	1	12	G
2004	Value	13.7	2.61	18.50	14.17	0.00		
	Score	4	1	2	3	0	10	F
2003	Value	13.7	7.80	29.33	13.83	0.00		
	Score	4	1	3	3	0	11	F
2002	Value	13.7	18.19	23.33	8.83	0.00		
	Score	4	1	2	2	0	9	F
2001	Value	13.7	17.82	22.13	2.53	0.27		
	Score	4	1	2	1	2	10	F
2000	Value	13.7	2.30	16.29	2.14	0.14		
	Score	4	1	2	1	1	9	F
1999	Value	13.7	8.24	26.00	6.40	0.53		
	Score	4	1	3	2	2	12	G
1998	Value	13.7	5.96	9.17	7.83	1.50		
	Score	4	1	1	2	2	10	F
1997	Value	13.7	14.51	25.38	6.21	0.69		
	Score	4	1	3	2	2	12	G
1996	Value	13.7	8.71	15.43	6.57	0.86		
	Score	4	1	2	2	2	11	F
1995	Value	13.7	1.21	9.33	6.13	1.07		
	Score	4	1	1	2	2	10	F
1994	Value	13.7	5.70	13.86	7.00	1.29		
	Score	4	1	1	2	2	10	F
1993	Value	13.7	5.98	11.41	6.52	1.33		
	Score	4	1	1	2	2	10	F
1992	Value	13.7	9.10	24.42	8.75	1.31		
	Score	4	1	2	2	2	11	F
1991	Value	13.7	22.10	11.60	4.71	0.00		
	Score	4	2	1	2	0	9	F
1990	Value	13.7	17.52	10.20	4.90	1.10		
	Score	4	1	1	2	2	10	F

* Includes largemouth bass stocked in Fall 2007; CPUE of naturally reproduced bass=6.17 fish/hr

Table 60. Population assessment for spotted bass based on spring electrofishing at Laurel River Lake from 1990-2008.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total Score	Assessement rating
2008	Value	10.4	4.00	8.50	2.33	0.00		
	Score	4	2	4	4	0	14	G
2007	Value	10.4	0.83	10.67	2.00	0.00		
	Score	4	1	4	4	0	13	G
2006	Value	11.5	4.25	9.12	2.56	0.00		
	Score	4	2	4	4	0	14	G
2005	Value	11.5	1.52	7.67	3.67	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.5	0.00	9.83	2.17	0.00		
	Score	4	0	4	4	0	12	G
2003	Value	11.5	2.26	10.17	0.83	0.00		
	Score	4	2	4	3	0	13	G
2002	Value	11.5	2.19	5.50	0.33	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.5	5.96	8.27	0.13	0.00		
	Score	4	2	4	2	0	12	G
2000	Value	11.5	2.55	2.29	0.14	0.00		
	Score	4	2	3	2	0	11	F
1999	Value	11.5	1.54	5.60	0.40	0.00		
	Score	4	2	3	3	0	12	G
1998	Value	11.5	6.64	4.83	0.33	0.00		
	Score	4	2	3	3	0	12	G
1997	Value	11.5	1.64	7.45	0.69	0.00		
	Score	4	2	4	3	0	13	G
1996	Value	11.5	0.29	7.86	0.71	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	11.5	1.18	9.87	0.00	0.00		
	Score	4	2	4	0	0	10	F
1994	Value	11.5	4.76	5.43	1.43	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.5	1.21	5.33	0.59	0.15		
	Score	4	2	3	3	2	14	G
1992	Value	11.5	3.36	13.22	0.99	0.00		
	Score	4	2	4	3	0	13	G
1991	Value	11.5	3.99	12.68	0.00	0.00		
	Score	4	2	4	0	0	10	F
1990	Value	11.5	6.74	3.23	2.43	0.00		
	Score	4	2	3	4	0	13	G

Table 61. Population assessment for smallmouth bass based on spring electrofishing at Laurel River Lake from 1990-2008.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE >14.0 in	Spring CPUE >17.0 in	Total Score	Assessement rating
2008	Value	13.6	0.83	1.33	3.17	1.83		
	Score	4	2	3	4	4	17	E
2007	Value	13.6	1.20	0.33	1.17	0.83		
	Score	4	3	2	4	4	17	E
2006	Value	13.6	0.38	0.16	0.96	0.32		
	Score	4	2	2	3	3	14	G
2005	Value	13.6	0.06	1.50	5.50	2.83		
	Score	4	1	3	4	4	16	G
2004	Value	13.6	0.40	0.67	1.17	0.00		
	Score	4	2	2	4	0	12	G
2003	Value	13.6	4.00	1.83	2.17	0.17		
	Score	4	4	3	4	2	17	E
2002	Value	13.6	6.04	2.17	0.67	0.17		
	Score	4	4	3	3	2	16	G
2001	Value	13.6	3.40	2.80	1.07	0.00		
	Score	4	4	4	4	0	16	G
2000	Value	13.6	0.88	1.29	0.57	0.14		
	Score	4	2	3	3	2	14	G
1999	Value	13.6	2.12	1.87	0.53	0.13		
	Score	4	3	3	3	2	15	G
1998	Value	13.6	12.67	0.67	0.67	0.50		
	Score	4	4	2	3	4	17	E
1997	Value	13.6	6.67	2.07	1.52	0.14		
	Score	4	4	3	4	2	17	E
1996	Value	13.6	0.14	2.86	0.43	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	13.6	1.20	0.53	1.07	0.27		
	Score	4	3	2	4	3	16	G
1994	Value	13.6	3.36	1.29	0.71	0.29		
	Score	4	4	3	3	3	17	E
1993	Value	13.6	1.57	0.59	0.44	0.30		
	Score	4	3	2	3	3	15	G
1992	Value	13.6	1.89	1.47	0.15	0.00		
	Score	4	3	3	2	0	12	G
1991	Value	13.6	0.36	0.36	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	13.6	8.63	1.35	1.35	0.54		
	Score	4	4	3	4	4	19	E

Table 62. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April and May 2008; 95% confidence limits are in parentheses.

Area	Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Dam				
	Largemouth bass	44	66 (± 14)	45 (± 15)
	Spotted bass	31	26 (± 16)	6 (± 9)
	Smallmouth bass	17	59 (± 24)	29 (± 22)
Spruce Creek				
	Largemouth bass	89	58 (± 10)	45 (± 10)
	Spotted bass	21	67 (± 21)	24 (± 19)
	Smallmouth bass	20	85 (± 16)	70 (± 21)
Laurel River Arm				
	Largemouth bass	79	71 (± 10)	46 (± 11)
	Spotted bass	90	23 (± 9)	2 (± 3)
	Smallmouth bass	0		
Upper Craigs Creek				
	Largemouth bass	31	52 (± 18)	32 (± 17)
	Spotted bass	51	43 (± 14)	10 (± 8)
	Smallmouth bass	1		
Total				
	Largemouth bass	243	63 (± 6)	44 (± 6)
	Spotted bass	193	34 (± 7)	7 (± 4)
	Smallmouth bass	38	71 (± 15)	50 (± 16)

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

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Table 63. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Laurel River Lake during 2008, 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	10	11
2007	32	6.3										
2006	42	4.2	9.8									
2005	24	5.6	10.1	13.3								
2004	7	4.7	9.6	13.0	15.0							
2003	11	4.4	9.4	13.2	14.6	15.8						
2002	5	6.8	11.6	14.4	15.9	16.7	17.6					
2001	6	7.6	12.1	14.9	16.5	17.6	18.0	18.8				
2000	3	7.2	12.2	14.1	15.7	16.7	17.6	18.2	18.8			
1999	1	4.2	8.3	13.0	14.7	16.6	18.3	19.4	20.2	20.8		
1998	1	8.5	10.4	13.8	15.5	16.9	17.8	18.6	19.2	19.7	20.3	
1997	1	5.2	9.5	11.2	13.0	14.3	14.7	15.6	16.0	16.4	16.9	17.3
Mean		5.4	10.1	13.5	15.3	16.4	17.6	18.4	18.6	19.0	18.6	17.3
Number		133	101	59	35	28	17	12	6	3	2	1
Smallest		2.8	7.3	9.3	13.0	14.1	14.7	15.6	16.0	16.4	16.9	17.3
Largest		8.7	14.2	16.7	17.4	18.1	18.9	19.5	20.2	20.8	20.3	17.3
Std error		0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.7	1.3	1.7	
95% CI ±		0.3	0.3	0.4	0.4	0.5	0.6	0.7	1.3	2.6	3.4	

Otoliths were used for age-growth determinations; Intercept = 0
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Table 64. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 6.0 hours of nocturnal electrofishing at Laurel River Lake in April and May 2008.

	Inch class																						Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	error
1	1	4	18	89	84	13	9													218	46.4	36.33 *	
2						16	15	23	28	7	7	1								97	20.6	16.17	(2.24)
3								3		5		10	13	9						40	8.5	6.67	(0.81)
4													7	17						24	5.1	4.00	(0.73)
5													9	9	20	7				45	9.6	7.50	(1.20)
6															13	4	3			20	4.3	3.33	(0.65)
7																	6	4		10	2.1	1.67	(0.52)
8																4		4		8	1.7	1.33	(0.34)
9																			2	2	0.4	0.33	(0.18)
10																			2	2	0.4	0.33	(0.18)
11																4				4	0.9	0.67	(0.18)
Total	1	4	18	89	84	29	24	26	28	12	7	11	29	35	33	19	9	8	4	470	100.0	42.00	
%	0.2	0.9	3.8	18.9	17.9	6.2	5.1	5.5	6.0	2.6	1.5	2.3	6.2	7.4	7.0	4.0	1.9	1.7	0.9	95.1			

* Includes largemouth bass stocked in Fall 2007; CPUE of naturally reproduced bass=6.17 fish/hr

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Table 65. Population assessment for largemouth bass collected from Laurel River Lake in May 2008.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	13.3	4
Spring CPUE age 1	36.33 *	3
Spring CPUE 12.0-14.9 in	7.83	1
Spring CPUE ≥15.0 in	17.67	3
Spring CPUE ≥20.0 in	0.67	2
Instantaneous mortality (Z)	0.438	
Annual mortality (A)	35.5	
Total score		13
Assessment rating		G

* Includes largemouth bass stocked in Fall 2007; CPUE of naturally reproduced bass=6.17 fish/hr
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Table 66. Mean back calculated lengths (in) at each annulus for smallmouth bass collected from Laurel River Lake during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2007	4	5.1						
2006	13	4.5	8.7					
2005	10	5.5	10.1	13.6				
2004	3	5.1	9.4	13.5	16.1			
2002	3	6.9	10.1	12.9	15.0	16.3	17.2	
2001	6	6.4	11.2	14.1	16.1	17.5	18.2	18.9
Mean		5.4	9.7	13.6	15.9	17.1	17.9	18.9
Number		39	35	22	12	9	9	6
Smallest		3.4	6.1	9.8	13.7	14.7	15.7	17.6
Largest		7.5	12.6	17.2	17.1	18.5	19.5	20.5
Std error		0.2	0.3	0.4	0.3	0.4	0.4	0.4
95% CI ±		0.4	0.6	0.7	0.6	0.8	0.7	0.8

Otoliths were used for age-growth determinations; Intercept = 0
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Table 67. Age-frequency and CPUE (fish/hr) of smallmouth bass collected during 6.0 hours of nocturnal electrofishing at Laurel River Lake in April and May 2008.

	Inch class																			Std
Age	3	4	5	6	8	9	10	11	13	14	15	16	17	18	19	20	Total	%	CPUE	error
1	1	1	3														5	10.4	0.83	
2				5	3	3	4	1									16	33.3	2.67	(0.74)
3						1		2	3	1		2	1				10	20.8	1.67	(0.68)
4											1	4					5	10.4	0.83	(0.43)
6											1		1	1			3	6.3	0.50	(0.17)
7													1	2	5	1	9	18.8	1.50	(0.58)
Total	1	1	3	5	3	4	4	3	3	1	2	6	3	3	5	1	48	100.0	8.00	
%	2.1	2.1	6.3	10.4	6.3	8.3	8.3	6.3	6.3	2.1	4.2	12.5	6.3	6.3	10.4	2.1	100.0			

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Table 68. Population assessment for smallmouth bass collected from Laurel River Lake in April and May 2008.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	13.6	4
Spring CPUE age 1	0.83	2
Spring CPUE 11.0-13.9 in	1.33	3
Spring CPUE ≥14.0 in	3.17	4
Spring CPUE ≥17.0 in	1.83	4
Instantaneous mortality (Z)	0.215	
Annual mortality (A)	19.4	
Total score		17
Assessment rating		E

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Table 69. 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 17 September 2008; 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
Laurel River Arm	Largemouth bass	1	1		3	3	4	4	9	5	6	8	2	5	2	53	35.33 (14.25)
	Spotted bass	1	28	5	5	24	22	6	5	5	1	2	3	1	1	109	72.67 (8.67)

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Table 70. 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	
Year Class	Area	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2008	Laurel River Arm	3.2	0.30	1.33	0.84	0.00	0.00		
2007 [a]	Laurel River Arm	3.5	0.12	5.30	4.58	0.00	0.00	118.91[b]	12.4
2006 [a]	Laurel River Arm	3.7	0.14	12.70	4.89	0.67	0.67	5.39 [c]	2.12
2005 [a]	Laurel River Arm	4.4	0.16	14.00	3.54	3.30	1.61	58.33 [d]	9.18
2004	Laurel River Arm	4.9	0.15	14.00	5.82	8.00	3.43	8.30	2.35
2003	Laurel River Arm	3.4	0.05	36.70	13.99	0.70	0.67	2.60	1.00
2002	Laurel River Arm	4.5	0.11	30.70	5.81	8.70	3.49	10.30	4.05

[a] Age-0 largemouth bass stocked in the fall

[b] Includes bass stocked in fall 2007; CPUE of fin-clipped bass=108.00 f/h

[c] Includes bass stocked in fall 2006; CPUE of fin-clipped bass=2.00 f/h

[d] Includes bass stocked in fall 2005; CPUE of fin-clipped bass=36.00 f/h

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Table 71. Number of fish and mean relative weight (Wr) for each length group of black bass collected at 312 Bridge in Laurel River Lake on 17 September 2008 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
	24	98 (2)	15	104 (3)	2	97 (8)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	36	105 (2)	6	111 (4)	2	116 (7)

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Table 72. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.00 hours of 15-minute nocturnal electrofishing runs for black bass in Dale Hollow Lake during May 2008; standard error is in parentheses.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. error
Illwill Creek																					
Largemouth bass				1	1	1	2	1			1	4	10	9	7	3	1		41	27.33	9.87
Spotted bass				2	1	2	3	1	6	5	4	8							32	21.33	6.08
Smallmouth bass	1	2			3	1	2	1	2	3	3	1	1	1		2	1		24	16.00	4.50
Little Sulphur Creek																					
Largemouth bass				1			2		4	3	3	7	8	2	9	1			40	26.67	6.82
Spotted bass	4	4		4	10	11	7	12	6	7	5		2						72	48.00	4.26
Smallmouth bass	1	1	1	1	3	3	1		2	5	2	2	2	2	1			1	28	18.67	5.81
Total																					
Largemouth bass				2	1	1	4	1	4	3	4	11	18	11	16	4	1		81	27.00	5.72
Spotted bass	4	4		6	11	13	10	13	12	12	9	8	2						104	34.67	5.36
Smallmouth bass	2	3	1	1	6	4	3	1	4	8	5	3	3	3	1	2	1	1	52	17.33	3.53

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Table 73. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Dale Hollow Lake on 12 May 2008.

	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.
2008	1.00	0.52	3.33	1.08	6.00	1.94	16.67	4.23	0.00	0.00	27.00	5.72
2005	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.52	0.00	0.00	2.00	1.35

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Table 74. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Dale Hollow Lake on 12 May 2008.

	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.
2008	8.33	2.58	12.00	3.15	11.00	1.78	3.33	1.96	0.00	0.00	34.67	5.36
2005	6.67	3.63	9.67	4.44	6.00	2.23	3.33	1.38	0.00	0.00	25.67	9.15

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Table 75. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Dale Hollow Lake on 12 May 2008.

	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.
2008	4.33	1.51	2.67	1.02	5.67	1.43	4.67	1.29	1.67	0.92	17.33	3.53
2005	3.00	1.40	3.00	1.00	1.67	0.59	3.33	1.08	2.33	1.15	11.00	1.78

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Table 76. PSD and RSD values obtained for black bass taken in spring electrofishing samples in Dale Hollow Lake on 12 May 2008; 95% confidence levels are in parentheses.

Location	Species	No. ≥stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Illwill Creek				
	Largemouth bass	39	90 (± 10)	77 (± 13)
	Spotted bass	30	77 (± 15)	27 (± 16)
	Smallmouth bass	21	67 (± 21)	29 (± 20)
Little Sulphur Creek				
	Largemouth bass	39	85 (± 11)	51 (± 16)
	Spotted bass	60	33 (± 12)	3 (± 5)
	Smallmouth bass	24	71 (± 19)	33 (± 19)
Total				
	Largemouth bass	78	87 (± 7)	64 (± 11)
	Spotted bass	90	48 (± 10)	11 (± 7)
	Smallmouth bass	45	69 (± 14)	31 (± 14)

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

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Table 77. Mean back calculated lengths (in) at each annulus for smallmouth bass collected from Dale Hollow Lake during 2008, including the 95% confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	2	4.6							
2006	15	4.3	8.3						
2005	17	5.3	8.8	12.3					
2004	5	5.0	9.0	12.5	14.7				
2003	5	5.1	9.3	12.7	14.8	16.0			
2002	2	5.1	9.1	13.3	15.8	17.3	18.0		
2001	1	5.8	9.5	13.3	16.3	17.7	18.4	18.7	
2000	1	4.4	10.2	15.0	17.5	18.3	19.0	19.4	20.1
Mean		4.9	8.8	12.6	15.2	16.7	18.3	19.0	20.1
Number		48	46	31	14	9	4	2	1
Smallest		3.8	6.7	11.1	14.0	15.4	18.0	18.7	20.1
Largest		7.4	10.5	15.0	17.5	18.3	19.0	19.4	20.1
Std error		0.1	0.1	0.2	0.3	0.3	0.2	0.3	
95% CI ±		0.2	0.3	0.4	0.6	0.7	0.5	0.7	

Otoliths were used for age-growth determinations; Intercept = 0
sedagdhs.d08

Table 78. Age-frequency and CPUE (fish/hr) of smallmouth bass collected during 3.0 hours of nocturnal electrofishing at Dale Hollow Lake on the 12 May 2008.

	Inch class																				Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	error
1	2	3	1																6	11.5	2.00	
2				1	6	4	3	1											15	28.8	5.00	(1.78)
3									4	8	5								17	32.7	5.67	(1.43)
4												3	1						4	7.7	1.33	(0.49)
5													2	3					5	9.6	1.67	(0.64)
6																1			1	1.9	0.33	(0.30)
7																1			1	1.9	0.33	(0.15)
8																		1	1	1.9	0.33	(0.33)
Not aged															1		1		2	3.8	0.67	
	2	3	1	1	6	4	3	1	4	8	5	3	3	3	1	2	1	1	52	100.0	17.33	(3.53)
%	3.8	5.8	1.9	1.9	11.5	7.7	5.8	1.9	7.7	15.4	9.6	5.8	5.8	5.8	1.9	3.8	1.9	1.9	100.0			

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sedagdh.d08

Table 79. Population assessment for smallmouth bass collected from Dale Hollow Lake in May 2008.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	12.3	4
Spring CPUE age 1	2.00	3
Spring CPUE 11.0-13.9 in	5.67	4
Spring CPUE ≥14.0 in	4.67	4
Spring CPUE ≥17.0 in	1.67	4
Instantaneous mortality (Z)	0.542	
Annual mortality (A)	41.8	
Total score		19
Assessment rating		E

sedpsddh.d08

Table 80. Length frequency and CPUE (fish/hr) of largemouth bass collected at Cedar Creek Lake in 3.5 hours (30-min runs) of nocturnal electrofishing on 29 April 2008.

		Inch class																				
Area	Species	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	6	46	77	34	20	61	45	25	15	12	3	12	13	10	12	12	5	4	412	206.00	36.74
Upper	Largemouth bass	1	17	35	32	16	34	27	20	21	10	3	5	4	5	16	10	6		262	174.67	1.33
Total	Largemouth bass	7	63	112	66	36	95	72	45	36	22	6	17	17	15	28	22	11	4	674	192.57	20.64

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Table 81. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake on 29 April 2008; 95% confidence levels are in parentheses.

Area	No. ≥8.0 in	PSD	RSD_{15}
Lower	249	39 (± 6)	27 (± 6)
Upper	177	45 (± 7)	26 (± 6)
Total	426	42 (± 5)	27 (± 4)

bbrpsccl.d08

Table 82. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from each section of Cedar Creek Lake from 2003-2008. Numbers in parentheses are standard errors.

		Length group					
Year	Area	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	Total
2008	Lower	81.50	75.50	15.00	34.00	4.50	206.00
		(23.61)	(15.63)	(3.42)	(6.48)	(2.63)	(36.74)
	Upper	56.67	64.67	22.67	30.67	4.00	174.67
		(4.81)	(7.69)	(1.33)	(9.82)	(3.06)	(1.33)
	Total	70.86	70.86	18.29	32.57	4.29	192.57
		(13.70)	(9.11)	(2.45)	(5.12)	(1.82)	(20.64)
2007	Lower	40.00	102.50	23.50	35.00	3.50	201.00
		(9.50)	(28.60)	(6.40)	(3.10)	(0.50)	(38.50)
	Upper	17.33	49.30	12.67	34.67	3.33	114.00
		(13.50)	(8.70)	(2.70)	(3.30)	(1.30)	(21.20)
	Total	30.29	79.71	18.86	34.86	3.43	163.70
		(8.50)	(19.00)	(4.20)	(2.10)	(0.60)	(28.20)
2006	Lower	33.00	76.00	6.00	37.00		152.00
		(9.90)	(23.40)	(2.50)	(5.90)		(36.30)
	Upper	12.00	30.00	7.33	28.67	0.67	78.00
		(3.10)	(1.20)	(1.80)	(2.70)	(0.70)	(4.20)
	Total	24.00	56.30	6.57	33.43	0.29	120.30
		(6.90)	(15.60)	(1.50)	(3.70)	(0.30)	(24.50)
2005	Lower	122.00	19.00	38.50	56.50		236.00
		(11.40)	(7.00)	(5.70)	(12.30)		(25.00)
	Upper	23.33	4.67	18.67	40.00		86.67
		(9.30)	(1.80)	(0.70)	(7.20)		(12.90)
	Total	79.70	12.86	30.00	49.40		172.00
		(21.10)	(4.80)	(5.10)	(7.90)		(33.40)
2004	Lower	37.80	38.30	68.70	6.50		151.30
		(7.30)	(5.70)	(15.10)	(3.10)		(22.50)
	Upper	11.30	28.00	84.70	6.00		130.00
		(3.50)	(7.20)	(11.70)	(2.00)		(24.10)
	Total	27.90	34.50	74.70	6.30		143.30
		(6.60)	(4.60)	(10.20)	(2.00)		(16.10)
2003	Lower	134.40	8.80	19.60	0.80		163.60
		(8.50)	(2.90)	(3.30)	(0.50)		(11.70)
	Upper	218.00	18.70	13.30			250.00
		(51.30)	(9.80)	(2.40)			(54.00)
	Total	165.80	12.50	17.30	0.50		196.00
		(23.30)	(4.10)	(2.40)	(0.30)		(24.70)

bbrpsccl.d08

Table 83. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 3.5 hours of nocturnal electrofishing (2.0 hours in lower end; 1.5 hours upper end) (30 minute runs) at Cedar Creek Lake on 16 September 2008; standard error is in parentheses.

	Inch class																				
Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	Total	CPUE
Lower	2	8	32	43	12	3	32	49	31	22	18	19	5	3	4	1	3	2		289	144.50 (10.50)
Upper	3	25	38	32	5	6	19	31	13	10	10	5	7	1		1	2		1	209	139.33 (12.45)
Total	5	33	70	75	17	9	51	80	44	32	28	24	12	4	4	2	5	2	1	498	142.29 (7.40)

bbrwrccl.d08

Table 84. 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
2008	4.7	0.06	55.71	8.58	24.86	5.38		
2007	5.4	0.04	32.86	7.82	28.57	6.60	72.57	13.45
2006	4.7	0.05	43.71	11.31	17.71	5.28	26.57	7.43
2005	4.8	0.06	55.70	9.51	28.00	7.73	23.14	6.69
2004	4.8	0.04	17.40	3.10	12.90		1.70	

bbrwrccl.d08

Table 85. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected in Cedar Creek on 16 September 2008. 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	134	88 (1)	42	91 (2)	13	98 (4)
	Upper	73	91 (1)	22	87 (3)	5	100 (2)
	Total	207	89 (1)	64	89 (1)	18	98 (3)

bbrwrccl.d08

Table 86. Length frequency and CPUE (fish/hr) of largemouth bass collected at Chenoa Lake in 1.25 hours (7.5-min runs) of nocturnal electrofishing on 17 April 2008.

	Inch class																				
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	21	Total	CPUE	Std. error
Largemouth bass	1	7	6	5	11	13	12	8	29	34	28	17	14	2	4	3	1	1	196	156.80	23.19

sedpsdcl.d08

Table 87. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Chenoa Lake on 17 April 2008.

	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.
2008	24.00	4.46	49.60	14.10	63.20	10.70	20.00	4.34	1.60	1.07	156.80	23.19
2006	28.00	12.84	44.00	5.66	68.00	9.63	16.80	3.44	3.20	1.50	156.80	19.80

sedpsdcl.d08

Table 88. PSD and RSD_{15} values obtained for largemouth bass taken in spring electrofishing samples in Chenoa Lake on 17 April 2008; 95% confidence levels are in parentheses.

Year	No. ≥8.0 in	PSD	RSD_{15}
2008	166	63 (± 7)	15 (± 5)

sedpsdcl.d08

Table 89. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected at Chenoa Lake in 1.25 hours (7.5-min runs) of daytime electrofishing on 21 May 2008.

	Inch class												
Species	1	2	3	4	5	6	7	8	9	10	Total	CPUE	Std. error
Bluegill	21	55	52	29	29	27	26	18			257	205.60	40.13
Redear sunfish					8	4		2	5	1	20	16.00	7.91

sedbgcl.d08

Table 90. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Chenoa Lake on 21 May 2008.

	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		Total	
Species	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
Bluegill	60.80	14.76	88.00	24.64	42.40	7.73	14.40	6.17			205.60	40.13
Redear sunfish			6.40	2.61	3.20	1.31	6.40	6.40	0.80	0.80	16.00	7.91

sedbgcl.d08

Table 91. PSD and RSD_{15} values obtained for bluegill and redear sunfish taken in spring electrofishing samples in Chenoa Lake on 21 May 2008; 95% confidence levels are in parentheses.

Species	No. ≥ stock size	PSD	RSD[a]
Bluegill	181	39 (± 7)	10 (± 4)
Redear sunfish	20	40 (± 22)	30 (± 21)

[a] Bluegill = RSD_8, Redear sunfish = RSD_9

sedbgcl.d08

Table 92. Mean back calculated lengths (in) at each annulus for bluegill collected from Chenoa Lake during May 2008, including the 95 % confidence interval (CI) for each mean length per age group.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2007	9	2.5							
2006	16	2.2	4.0						
2005	21	2.1	3.8	5.5					
2004	9	2.4	4.2	5.8	7.2				
2003	10	2.1	3.9	5.5	6.9	7.8			
2002	5	2.0	3.5	5.0	6.5	7.4	7.9		
2000	1	2.4	3.8	5.3	6.2	7.1	7.8	8.0	8.2
Mean		2.2	3.9	5.5	6.9	7.6	7.9	8.0	8.2
Number		71	62	46	25	16	6	1	1
Smallest		1.2	2.6	3.8	5.2	6.4	7.6	8.0	8.2
Largest		3.3	5.3	6.7	7.9	8.2	8.1	8.0	8.2
Std error		0.1	0.1	0.1	0.1	0.1	0.1		
95% CI ±		0.1	0.2	0.2	0.3	0.3	0.2		

Otoliths were used for age-growth determinations; Intercept = 0
sedagcl.d08

Table 93. Age-frequency and CPUE (fish/hr) of bluegill collected during 1.25 hours of daytime electrofishing at Chenoa Lake in Bell county on 21 May 2008.

	Inch class											Std
Age	1	2	3	4	5	6	7	8	Total	%	CPUE	error
1	21	49							70	27.2	56.00	(13.62)
2		6	46	13	6				71	27.6	56.80	(16.25)
3			6	16	23	16			61	23.7	48.80	(11.27)
4						8	14		22	8.6	17.60	(3.79)
5						3	7	11	21	8.2	16.80	(4.50)
6							5	5	10	3.9	8.00	(2.37)
8								2	2	0.8	1.60	(0.62)
Total	21	55	52	29	29	27	26	18	257	100.0	205.60	
%	8.2	21.4	20.2	11.3	11.3	10.5	10.1	7.0	100.0			

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sedagcl.d08

Table 94. Population assessment for bluegill collected from Chenoa Lake in May 2008.

Parameter	Actual value	Assessment score
Mean length age-2 at capture	4.0	2
Years to 6.0 in	3-3+	3
CPUE ≥6.0 in	56.80	3
CPUE ≥8.0 in	14.40	3
Instantaneous mortality (Z)	0.518	
Annual mortality (A)	40.4	
Total score		11
Assessment rating		G

sedbgcl.d08

Table 95. Mean back calculated lengths (in) at each annulus for redear sunfish collected from Chenoa Lake during spring 2008, including the 95 % confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2006	11	3.0	5.8					
2005	1	3.9	7.1	8.9				
2004	1	3.1	5.9	8.1	9.5			
2002	2	3.1	4.9	7.0	8.2	9.0	9.7	
2001	3	3.2	5.4	6.7	7.7	8.5	9.0	9.8
Mean		3.1	5.7	7.3	8.2	8.7	9.3	9.8
Number		18	18	7	6	5	5	3
Smallest		2.6	4.7	6.2	7.4	8.1	8.7	9.3
Largest		3.9	7.1	8.9	9.5	9.4	9.9	10.2
Std error		0.1	0.2	0.4	0.3	0.2	0.2	0.3
95% CI ±		0.2.	0.3	0.7	0.7	0.4	0.4	0.5

Otoliths were used for age-growth determinations; Intercept = 0
sedagcl.d08

Table 96. Age-frequency and CPUE (fish/hr) of redear sunfish collected during 1.25 hours of daytime electrofishing at Chenoa Lake in Bell county on 21 May 2008.

	Inch class								Std
Age	5	6	8	9	10	Total	%	CPUE	error
2	8	4				12	60.0	9.60	(3.54)
3			2			2	10.0	1.60	(1.60)
4				1		1	5.0	0.80	(0.80)
6				2		2	10.0	1.60	(1.60)
7				2	1	3	15.0	2.40	(2.40)
Total	8	4	2	5	1	20	100.0	16.00	
%	40.0	20.0	10.0	25.0	5.0	100.0			

sedbgcl.d08
sedagcl.d08

Table 97. Population assessment for redear sunfish collected from Chenoa Lake in May 2008.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	8.9 *	4
Years to 8.0 in	3-3+	4
CPUE ≥8.0 in	6.40	2
CPUE ≥10.0 in	0.80	1
Instantaneous mortality (Z)	0.173	
Annual mortality (A)	15.9	
Total score		13
Assessment rating		G

* Based on only 1 fish
sedbgcl.d08

Table 98. Length frequency and CPUE (fish/hr) of black bass collected at Lake Linville in 2.5 hours (15-min runs) of nocturnal electrofishing on 5 May 2008.

Species	Inch class																			Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Largemouth bass	1	13	42	30	49	131	107	74	49	21	3	7	4	8	10	13	4	5	2	573	229.20	28.03
Spotted bass	11	21	18	77	113	85	48	18	10	10		3	1							415	166.00	23.60
Smallmouth bass	1	6	4	2	8	4	3													28	11.20	3.86

sedpsdll.d08

Table 99. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Linville on 5 May 2008.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2008	54.00	13.46	144.40	19.88	12.40	3.89	18.40	4.55	2.80	1.20	229.20	28.03
2007	46.40	15.68	101.60	19.64	13.20	1.89	25.60	3.59	4.80	2.05	186.80	32.00
2006	10.00	2.50	47.30	12.60	22.00	4.00	10.00	2.30	2.70	1.30	89.30	11.20

sedpsdll.d08

Table 100. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Linville on 5 May 2008.

	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.
2008	96.00	14.47	60.40	8.61	8.00	2.15	1.60	0.88	0.00	0.00	166.00	23.60
2007	76.00	26.00	44.80	10.40	15.20	4.45	2.00	1.23	0.40	0.40	138.00	36.50
2006	24.00	7.00	35.30	7.10	10.00	2.70	2.00	1.40	0.00	0.00	71.30	14.50

sedpsdll.d08

Table 101. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Linville on 5 May 2008; 95% confidence limits are in parentheses.

Species	No. fish ≥stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Largemouth bass	438	18 (± 4)	11 (± 3)
Spotted bass	288	8 (± 3)	1 (± 1)

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

sedpsdll.d08

Table 102. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 2.75 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Linville on 18 September 2008; standard error is in parentheses.

	Inch class																
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE
Largemouth bass	6	44	63	15	33	96	80	86	42	17	4	6	1	2	2	497	198.80 (38.94)
Spotted bass	18	83	60	56	83	112	93	44	9	4	1	1	1			565	226.00 (43.12)
Smallmouth bass				5	14	7	5	2								33	13.20 (5.27)

sedyoyll.d08

Table 103. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September) in electrofishing samples at Lake Linville.

	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
2008	5.1	0.06	49.60	12.82	29.60	8.62		
2007	4.8	0.05	45.80	14.90	17.45	7.20	34.80	11.58
2006	5.1	0.05	84.00	33.50	48.00	19.80	39.20	
2005	4.4	0.16	20.70	9.82	6.00	2.00	6.53	1.42

sedyoyll.d08

Table 104. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Linville on 18 September 2008. 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
	190	86 (1)	27	90 (1)	5	95 (4)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	174	90 (1)	14	88 (2)	2	88 (3)

sedyoyll.d08

Table 105. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 23 April 2008; 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	18	19	20	21	22	Total	CPUE
Dam	Largemouth bass	1	1					4	1	6	11	4	1	1			1	2	1	1	1	1	37	37.00 (7.72)
	Spotted bass	4	2		7	1	1	6	9	9	2	1											42	42.00 (8.41)
	Smallmouth bass					1	2	1															4	4.00 (2.31)
Pump	Largemouth bass						1	5	17	17	19	9	6		3	6	1	6	1	1	1	1	94	94.00 (6.22)
Station	Spotted bass				2	6	4	7	5	6	2												32	32.00 (7.83)
	Smallmouth bass				1				1			1											3	3.00 (1.00)
Dock	Largemouth bass		3	4	4	5	1	4	13	15	22	17	3	5	2	3	3	4	4				112	112.00 (23.04)
	Spotted bass		2		1	2	3	4	1	3	1		1	1									19	19.00 (9.85)
	Smallmouth bass																						0	0.00 (0.00)
Total	Largemouth bass	1	4	4	4	5	2	13	31	38	52	30	10	6	5	9	5	12	6	2	2	2	243	81.00 (12.25)
	Spotted bass	4	4		10	9	8	17	15	18	5	1	1	1									93	31.00 (5.37)
	Smallmouth bass				1	1	2	1	1			1											7	2.33 (0.92)

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Table 106. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Wood Creek Lake on 23 April 2008; 95% confidence limits are in parentheses.

Area	Species	No. ≥stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Dam				
	Largemouth bass	35	37 (± 16)	20 (± 13)
	Spotted bass	28	11 (± 12)	0 (± 0)
Pump Station				
	Largemouth bass	93	38 (± 10)	22 (± 8)
	Spotted bass	24	8 (± 11)	0 (± 0)
Dock				
	Largemouth bass	95	43 (± 10)	17 (± 8)
	Spotted bass	14	21 (± 22)	7 (± 14)
Total				
	Largemouth bass	223	40 (± 6)	19 (± 5)
	Spotted bass	66	12 (± 8)	2 (± 3)

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

sedpsdwc.d08

Table 107. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Wood Creek Lake during April 2008.

	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.
2008	6.67	3.60	44.67	6.78	15.33	2.69	14.33	2.38	2.00	0.78	81.00	12.25
2007	6.67	2.27	50.33	8.49	6.00	1.15	18.00	3.32	1.33	0.57	81.00	12.52
2006	30.30	7.00	24.30	6.20	10.00	2.10	20.70	5.00	2.00	1.00	85.30	17.50
2005	4.00	2.00	14.40	3.60	28.00	4.40	12.80	2.30	0.00	0.00	59.20	9.30

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Table 108. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Wood Creek Lake during April 2008.

	Length group									
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2008	11.67	3.28	16.67	2.91	2.33	1.15	0.33	0.33	31.00	5.37
2007	14.67	3.86	20.67	3.84	6.67	1.58	1.67	1.04	43.67	7.52
2006	13.70	2.70	14.00	2.80	10.30	2.20	3.30	1.00	41.30	6.00
2005	8.80	2.90	13.60	5.50	15.20	2.80	4.40	1.30	42.00	10.20

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Table 109. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 11 September 2008; standard error is in parentheses.

Area	Species	Inch class																	Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Dam	Largemouth bass	4	6	2	2		1	1	1	4	1	1	2						25	25.00 (7.19)
	Spotted bass	3	1	6	7	3	7	3	1	4	1	1							37	37.00 (3.79)
	Smallmouth bass						1	1											2	2.00 (2.00)
Pump station	Largemouth bass		9	6		1	2	5	2	1	1	5	2	1	1	1	1		38	38.00 (7.75)
	Spotted bass	8	11	8	8	3	2	5	1	3	2	1							52	52.00 (11.43)
	Smallmouth bass																		0	0.00 (-)
Dock	Largemouth bass		2	8	1	1	4	15	8	7	5	4	1	3			1	1	61	61.00 (9.98)
	Spotted bass		4	1	7	6	13	3	5	4		1	1						45	45.00 (11.70)
	Smallmouth bass																		0	0.00 (-)
Total	Largemouth bass	4	17	16	3	2	7	21	11	12	7	10	5	4	1	1	2	1	124	41.33 (6.27)
	Spotted bass	11	16	15	22	12	22	11	7	11	3	3	1						134	44.67 (5.39)
	Smallmouth bass						1	1											2	0.67 (0.67)

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Table 110. 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
2008	3.8	0.12	13.33	3.24	1.00	0.72		
2007	4.2	0.13	13.33	7.59	2.67	1.24	5.67	3.21
2006 [a]	4.4	0.27	3.70	1.74	0.70	0.45	5.33[b]	2.38
2005	4.0	0.09	23.70	11.90	3.33	1.38	11.83	4.37
2004	4.2	0.13	17.90	4.78	4.30	1.46	2.40	1.22

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[a] Age-0 largemouth bass stocked in the fall

[b] Includes stocked fish; CPUE stocked fish=0.33 fish/hr

Table 111. Number of fish and mean relative weight (Wr) for each length group of black bass collected at Wood Creek Lake during 11 September 2008. 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
	51	87 (1)	19	88 (2)	5	93 (7)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	51	93 (1)	7	90 (2)	0	-

sedyoywc.d08

Figure 1. Angler attitude survey results from Lower Lake Cumberland in 2008.

LOWER LAKE CUMBERLAND ANGLER ATTITUDE SURVEY 2008

1. Upper Lake ☐ Lower Lake ☑

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

3. Name _____ and Phone number _____ **(Optional)**

4. Which species of fish do you fish for at Lake Cumberland (**check all that apply**)? (N=306)
   54% Striped Bass 74% Black Bass 37% Crappie 33% Walleye 31% Catfish 29% Bluegill

5. Which one species do you fish for most at Lake Cumberland (**check only one**)? (N=304)
   19% Striped Bass 51% Black Bass 9% Crappie 7% Walleye 9% Catfish 5% Bluegill

-Answer the following questions for each species you fish for – (see question 3)

Striped Bass Anglers

6. In general, what level of satisfaction do you have with striped bass fishing at Lake Cumberland? (N=172)
   45% Very satisfied 26% Somewhat satisfied 8% Neutral 13% Somewhat dissatisfied 4% Very dissatisfied 5% No opinion

6a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction? (N=28)
   39% Number of fish 18% Size of fish 7% Too many anglers 0% Lake drawdown for repairs 21% Eat too many fish 14% Other

Black Bass Anglers

7. In general, what level of satisfaction do you have with black bass fishing at Lake Cumberland? (N=223)
   22% Very satisfied 33% Somewhat satisfied 12% Neutral 22% Somewhat dissatisfied 8% Very dissatisfied 3% No opinion

7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction? (N=64)
   64% Number of fish 16% Size of fish 2% Too many anglers 13% Lake drawdown for repairs 6% Striped bass eat too many other fish

Crappie Anglers

8. In general, what level of satisfaction do you have with the crappie fishing at Lake Cumberland? (N=113)
   11% Very satisfied 26% Somewhat satisfied 10% Neutral 26% Somewhat dissatisfied 21% Very dissatisfied 7% No opinion

8a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction? (N=51)
   67% Number of fish 14% Size of fish 0% Too many anglers 18% Lake drawdown for repairs 2% Harder to fish

Walleye Anglers

9. In general, what level of satisfaction do you have with the walleye fishing at Lake Cumberland? (N=102)
   30% Very satisfied 29% Somewhat satisfied 14% Neutral 15% Somewhat dissatisfied 5% Very dissatisfied 7% No opinion

9a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction? (N=18)
   61% Number of fish 6% Size of fish 0% Too many anglers 17% Lake drawdown for repairs 17% Don't know how to fish for them

Catfish Anglers

10. In general, what level of satisfaction do you have with the catfish fishing at Lake Cumberland? (N=96)
   51% Very satisfied 30% Somewhat satisfied 5% Neutral 5% Somewhat dissatisfied 1% Very dissatisfied 7% No opinion

10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction? (N=6)
   100% Number of fish 0% Size of fish 0% Too many anglers 0% Lake drawdown for repairs

<continued on back>

All Anglers

11. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? (N=306)

    77% Support 16% Oppose 7% No opinion

12. Would you support or oppose a 2 fish daily creel limit for smallmouth bass at Lake Cumberland? (N=306)

    61% Support 32% Oppose 6% No opinion

13. Are you satisfied with the current size and creel limits on all sport fish at Lake Cumberland? (N=305) 72% Yes 29% No

If NO:

13a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Striped bass size limit (N=15)
- 7% 16 in
- 27% 18 in
- 13% 20 in
- 40% 24 in
- 13% 30 in

Striped bass creel limit (N=15)
- 13% 2
- 7% 3
- 67% 4
- 13% 5

Largemouth bass size limit (N=20)
- 5% keep 12-16 in
- 10% 12 in
- 20% 14 in
- 15% 15 in
- 45% 18 in
- 5% 20 in

Largemouth bass creel limit (N=20)
- 5% 1
- 25% 2
- 15% 3
- 15% 5
- 20% 6
- 20% 8

Smallmouth bass size limit (N=33)
- 6% 1 under 15 in
- 3% keep 12-16
- 3% 14 in
- 36% 15 in
- 12% 16 in
- 3% 17 in
- 24% 18 in
- 6% 20 in
- 3% 21 in
- 3% slot 16-21 in

Smallmouth bass creel limit (N=33)
- 3% 1
- 39% 2
- 9% 3
- 6% 4
- 12% 5
- 27% 6
- 3% 8

Spotted bass size limit (N=11)
- 9% 10 in
- 82% 12 in
- 9% 14 in

Spotted bass creel limit (N=14)
- 7% 3
- 7% 4
- 7% 5
- 64% 6
- 14% 8

Crappie size limit (N=23)
- 4% 8 in
- 9% 9 in
- 83% 10 in
- 4% 12 in

Crappie creel limit (N=23)
- 4% 10
- 4% 12
- 17% 15
- 70% 20
- 4% 30

Walleye size limit (N=8)	Walleye creel limit (N=8)
13% 15 in	13% 2
75% 18 in	13% 5
13% 20 in	63% 6
	13% 10

Catfish size limit (N=2)	Catfish creel limit (N=2)
100% 21 in	100% 10

14. KDFWR would like your opinion of a proposed regulation that would provide limited protection of trophy-size catfish. Would you support or oppose a regulation where the angler could continue to keep the same number of catfish under 34 inches as in the past but could keep only 1 catfish greater than 34 inches per day? (N=207)

66% Support 22% Oppose 12% No opinion

Figure 2. Angler attitude survey results from Upper Lake Cumberland in 2008.

UPPER LAKE CUMBERLAND ANGLER ATTITUDE SURVEY 2008

1. Upper Lake ☑ Lower Lake ☐

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

3. Name _____ and Phone number _____ **(Optional)**

4. Which species of fish do you fish for at Lake Cumberland (**check all that apply**)? (N=245)
   8% Striped Bass 76% Black Bass 45% Crappie 49% Walleye 12% Catfish 1% Bluegill

5. Which one species do you fish for most at Lake Cumberland (**check only one**)? (N=231)
   0.4% Striped Bass 44% Black Bass 19% Crappie 31% Walleye 0.4% Catfish

-Answer the following questions for each species you fish for – (see question 3)

Striped Bass Anglers

6. In general, what level of satisfaction do you have with striped bass fishing at Lake Cumberland? (N=22)
   5% Very satisfied 86% Somewhat satisfied 0% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied 9% No opinion

6a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction? (N=0)
   0% Number of fish 0% Size of fish 0% Too many anglers 0% Lake drawdown for repairs

Black Bass Anglers

7. In general, what level of satisfaction do you have with black bass fishing at Lake Cumberland? (N=182)
   42% Very satisfied 58% Somewhat satisfied 0% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied 0% No opinion

7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction? (N=2)
   0% Number of fish 0% Size of fish 0% Too many anglers 100% Lake drawdown for repairs

Crappie Anglers

8. In general, what level of satisfaction do you have with the crappie fishing at Lake Cumberland? (N=109)
   14% Very satisfied 70% Somewhat satisfied 10% Neutral 6% Somewhat dissatisfied 1% Very dissatisfied 0% No opinion

8a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction? (N=9)
   0% Number of fish 22% Size of fish 0% Too many anglers 67% Lake drawdown for repairs 11% Needs restocked

Walleye Anglers

9. In general, what level of satisfaction do you have with the walleye fishing at Lake Cumberland? (N=116)
   78% Very satisfied 22% Somewhat satisfied 0% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied 0% No opinion

9a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction? (N=0)
   0% Number of fish 0% Size of fish 0% Too many anglers 0% Lake drawdown for repairs

Catfish Anglers

10. In general, what level of satisfaction do you have with the catfish fishing at Lake Cumberland? (N=27)
   15% Very satisfied 85% Somewhat satisfied 0% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied 0% No opinion

10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction? (N=0)
   0% Number of fish 0% Size of fish 0% Too many anglers 0% Lake drawdown for repairs

<continued on back>

All Anglers

11. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? (N=239)

    62% Support 2% Oppose 36% No opinion

12. Would you support or oppose a 2 fish daily creel limit for smallmouth bass at Lake Cumberland? (N=240)

    75% Support 5% Oppose 20% No opinion

13. Are you satisfied with the current size and creel limits on all sport fish at Lake Cumberland? (N=232) 97% Yes 3% No

If NO:

13a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Largemouth bass size limit (N=1)	Largemouth bass creel limit (N=1)
100% 15 in	100% 2
Crappie size limit (N=6)	Crappie creel limit (N=6)
33% 9 in	33% 15
50% 10 in	67% 20
17% 12 in	
Walleye size limit (N=1)	Walleye creel limit (N=1)
100% 18 in	100% 5

14. KDFWR would like your opinion of a proposed regulation that would provide limited protection of trophy-size catfish. Would you support or oppose a regulation where the angler could continue to keep the same number of catfish under 34 inches as in the past but could keep only 1 catfish greater than 34 inches per day? (N=144)

    58% Support 0% Oppose 42% No opinion

EASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Buckhorn Lake

During 2008 the muskellunge population was sampled by daytime electrofishing on February 19, 25, and March 3 (Table 1). Length frequency, catch-per-unit-effort (CPUE), and population assessment are in Tables 2 and 3. Weather related issues and muddy water conditions greatly hindered sampling effectiveness of muskellunge in 2008. The data is likely unrepresentative of actual fish numbers. An assessment rating of "Good" was observed during 2008 (Table 3). The $\log_{10}$ length-weight equation for muskellunge was $-4.41 + 3.55(\log_{10}$ length). A total of 425 muskellunge (13.1 in) were stocked during September 2008. Muskellunge also provide a significant fishery in the tailwater area of Buckhorn Lake. During 2009 muskellunge will be sampled in the spring. Beginning 1 March 2010 musky will change from a size limit of 40.0 in to 36.0 in.

The black bass populations were sampled during the spring and fall (Tables 4-10). Largemouth bass comprise the major black bass species in this lake. Assessment rating has ranged from "Fair" to "Good" from 2003-2008 (Table 8). Spotted and smallmouth bass are present in the lake, but do not comprise any significant numbers. Due to low numbers in recruitment of age-0 to age-1 fish, largemouth bass (4.0 in) have been stocked during October of 2005, 2006, and 2008. Fish stocked in 2005 received a right pectoral fin clip, 2006 fish received a left pectoral fin clip, and 2008 fish received a right pelvic fin clip for future identification. Relative weights and the $\log_{10}$ length-weight equation for largemouth bass are not provided as weights were not taken in the fall. During 2009 black bass will be sampled in the spring and fall with boat electrofishing.

Trap netting was completed for white crappie on 19 and 20 November and this information is presented in Tables 11-15. The majority of fish sampled during 2007 were ages 1 – 2 (Table 14). Although the assessment score improved from "Fair" to "Good", the growth rate remains slow or poor for length of age-2 fish at capture (Table 15). At present there is an over abundance of small fish slowing growth. A minimum length limit of 9.0 in was implemented 1 March 2007 and since this time the growth rate has decreased. This will prevent fishing mortality from reducing smaller fish numbers at present. Future management may require that this regulation be removed to improve growth rates and reduce small fish numbers. Also, there is the possibility of increased natural mortality or poor recruitment years to reduce fish numbers. However, this is uncontrollable and a shot-term fix. Fall trap netting and age and growth information will be collected during 2009 for further evaluation of the fishery.

A day creel survey (2 April-29 October) was conducted at Buckhorn Lake and tailwater area during 2008. The survey was a random roving creel sample (date and time) and the lake and tailwater were both treated as one area. Day start times were at approximate 1 hour intervals with a potential of 9-11 different start times depending on length of day. Each daily creel period would consist of 4 hours on the lake and 2 hours on the tailwater. Angler counts would be conducted in the middle of each respective 4 or 2 hour time period. A 50/50 probability was used to determine which survey occurred first between the lake and tailwater. Data obtained is presented in Tables 16-24.

The 2008 creel survey from 2 April-29 October produced more fishing trips and angler hours than the last survey in 2005 from 13 April-31 October on both the lake and tailwater. This would follow the statewide trend of increasing angling pressure on the available bodies of water. During 2008 the total number of fishing trips was 1,683 at the lake and 875 at the tailwater (Table 16). The total fishing trips in 2005 were 1,423 at the lake and 267at the tailwater. Total angler hours were 11,898 and 4,508 for the lake and tailwater, respectively (Table 16). A total of 7,363 and 2,078 angler hours were observed in 2005 at the lake and tailwater, respectively. Angler success rates at the lake during 2008 were 1.93% for muskellunge, 20.00% for catfish, 40.79% for panfish, 8.72% for black bass, and 38.89% for crappie (Table 17). During the 2005 survey at the lake, angler success rates were 5.00% for muskellunge, 33.33% for catfish, 85.71% for panfish, 2.22% for black bass, and 73.95% for crappie. Comparsion of angler success rates at the tailwater are not meaningful as the number of fish caught in the 2005 survey was too low to be significant. The 2008 tailwater survey had an angler success rate of 52.38% for stocked rainbow trout (Table 18).

Bluegill at the lake and rainbow trout at the tailwater were the most numerous fish caught during 2008 (Tables 17-20). The previous 2005 survey observed white crappie to be the most numerous fish caught at the lake and tailwater.

An angler attitude survey was conducted at the lake to obtain additional angler information.. Anglers were asked to answer a series of questions regarding the fishery at Buckhorn Lake (Appendix A). Anglers were surveyed throughout the creel during 2008 with anglers only being asked the questions once. A total of 202 surveys were completed during the lake creel. Black bass at 54.0% (N=109) were the most popular species fished for on the lake followed by crappie at 35.6% (N=72), bluegill at 20.3% (N=41), catfish at 13.9% (N=28), and muskellunge at 11.9% (N=24). Level of fishing satisfaction was asked for several fish groups or species and all categories exceeded 50.0% being somewhat satisfied to very satisfied except white crappie and flathead catfish (Appendix A). Anglers were dissatisfied with having to many small crappie and not enough flathead catfish. Appendix B presents the additional breakdown of the opinions of muskellunge anglers only. Muskellunge anglers were 62.5% somewhat to very satisfied with the musky fishing at the lake (Appendix B).

Carr Creek Lake

The black bass population was sampled during the spring and fall at Carr Creek Lake (710 acres). Tables 25-37 provide data from the spring and fall sampling. Greater numbers of larger fish acted to improve the assessment score of largemouth bass from 9 in 2007 to 11 in 2008 (Table 33). However, low numbers of larger fish in the spotted bass sampling reduced its assessment score from 10 in 2007 to 4 in 2008 (Table 34). During the fall in 2005-2008, largemouth bass (4.0 in) were stocked to supplement low recruitment numbers of age-0 to age-1 fish. Fish stocked in 2005 received a right pectoral fin clip, 2006 received a left pectoral fin clip, 2007 received a left pelvic fin clip, and 2008 a right pelvic fin clip for future identification. Fertilizer is applied to this lake in the spring to assist with growth and recruitment of age-0 to age-1 fish. In the spring of 2008 there was a gizzard shad die-off and short time period of low oxygen levels. Fall electrofishing was conducted early during high water temperature and very few fish were collected (Table 35). Further investigation into the recruitment of young fish is needed. The $\log_{10}$ length-weight equation for largemouth bass was $-3.51 + 3.14(\log_{10}$ length) and for spotted bass was $-3.28 + 2.93(\log_{10}$ length). During 2009 fertilizing will continue and black bass will be sampled again in the spring and fall. Additionally, hydrilla will be monitored and control measures applied if necessary.

Daytime electrofishing was completed during March for walleye. Tables 38–40 show length frequency, CPUE, population assessment, and relative weights for walleye. The CPUE of walleye was less in 2008 when compared to previous years (Table 38). This can be attributed to utilizing extra sampling time to retrieve more broodfish for the hatchery. In future years if this extra sampling is needed it will not be included with the standardized sampling for population assessments. The fishery and growth rate remains very good. In 2004 there was a fish kill of walleye at Carr Creek (100+ large adults), in 2005 a fish kill of large adult alewife, and in 2008 a fish kill of large gizzard shad. None of these fish kills have seemed to impact the fishery. Mean relative weights are near or exceed 100 for all size groups of walleye examined (Table 40). The $\log_{10}$ length-weight equation for walleye was $-3.74+3.25(\log_{10}$ length). During 2009 walleye will be sampled again in the spring (March).

Black and white crappie were sampled with spring electrofishing and data is presented in Tables 41-44. Due to very poor fall trap netting catches, spring electrofishing was initiated in 2007. This will continue in 2009 and will be used to monitor the population. The $\log_{10}$ length-weight equation for black crappie was $-4.04+3.73(\log_{10}$ length) and for white crappie was $-3.91+3.58(\log_{10}$ length). Approximately 7,100 black nose crappie (3.0 in) were stocked in November 2007. None of the black nose crappie were observed during 2008 sampling. The fishery has a special regulation of a 9.0 in minimum length limit. During the fall of 2009, white crappie will be stocked into the lake and followed in an ongoing research study.

With the completion of a new lake management plan, the 2009 annual performance report will include how the largemouth bass, walleye, and crappie fisheries exceed, meet, or fail to meet plan objectives.

Cranks Creek Lake

Spring electrofishing was completed on 28 April 2008 for black bass (Table 45). Largemouth bass inch class CPUE's were good based on recent data (Table 46). PSD of largemouth bass at 41 (Table 47) is acceptable and age and growth is good (Table 48). Fish to 9 years of age were observed. Assessments from 2005 and 2008 are similar with ratings of "Good" (Table 49). Indices of year class strength are listed in Table 50. Although this data is sporadic with some alternation of annual sampling with bluegill, the data provides an idea of expected population numbers. This lake is very low in fertility and has had periodic problems with low pH. Black bass will be sampled again in 2009.

Additional concerns at this lake are possible aquatic vegetation control and random stockings of various sport fish by local residents. Due to the very clear water, various aquatic plants can be very thick and thorough in coverage of areas. Monitoring of the aquatic vegetation will continue with herbicide application to selected areas of thick stands of brittle naiad. Fisheries and law enforcement staff will continue guidance to public on fish stockings and the possible management implications.

Dewey Lake

During spring and fall, black bass were sampled at Dewey Lake (1,100 acres). Tables 51–58 contain spring and fall sampling data. Although the lake is currently exploited by heavy tournament action and two invasive species, zebra mussels and hydrilla, the spring electrofishing assessment for largemouth bass has been consistently rated "Good" (Table 56). Age and growth data was acquired during spring 2008 (Table 54). Mean length of age 3 fish at capture (11.3 in) in 2008 is greater than the previous average obtained in 2005 (10.5 in) (Table 56). Also, recruitment of young-of-year fish remains consistent (Table 58). Anglers continue to have good success even with the invasive species.

Black and white crappie were sampled by trap netting in December 2008. White crappie continue to be more numerous than black crappie (Table 59). Tables 60-64 list PSD, RSD, age & growth, and age frequency values for both black and white crappie. The historical growth rate of crappie has been slow or poor and this trend continued in 2008 (Tables 61-62). Assessment scores based mostly on CPUE's can be misleading for crappie at this lake due to the overabundance in numbers of stunted small fish. However, black crappie did rate "Poor" and white crappie "Fair" during 2008 (Tables 65-66). Future sampling will occur in 2011 to re-evaluate the fishery.

White bass were sampled during March by electrofishing and in November by gill netting. This was in coordination with the Lake Fisheries Research (LFR) project. A summary of the data collected can be found in the LFR annual report. The last stocking of white bass (1.5 in) during this study ended in 2007. White bass will continued to be sampled through 2010 and a creel survey will also be conducted in 2010.

Fishpond Lake

Largemouth bass were sampled at Fishpond Lake (32 acres) on 23 April 2008 (Table 67). Due to the water clarity of this lake, nocturnal electrofishing was utilized. Comparison of recent years showed the 2008 sample produced CPUE's with the lowest catch of fish less than 8.0 in and the highest catch of fish greater than 20.0 in (Table 68). A PSD value of 42 was obtained (Table 69) and is in the recommended range of 40-60 for management of largemouth bass in a bluegill/bass fishery. Additional management at Fishpond, entails fertilization of the lake during the spring for increasing zooplankton density for young-of-year fishes. 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. Due to the low number of fish less than 8.0 in, largemouth bass will again be sampled in 2008.

Fishtrap Lake

Black bass spring and fall sampling data for Fishtrap Lake (1,143 acres) is shown in Tables 70-78. Largemouth, smallmouth, and spotted bass all provide significant fisheries at this lake. Smallmouth bass CPUE in 2008 was down slightly (Table 71). This could be expected periodically with some years not providing summertime cool water habitat in the lower lake for smallmouth bass. The population assessment rating for largemouth bass remains "Good" (Table 75) and dropped from "Excellent" to "Good" for smallmouth bass (Table 76). Due to a reductioned in age-0 numbers in the fall of 2008 (Table 78), a supplemental stocking of 5,687, 4.5 in, largemouth bass occurred in October 2008. These stocked fish received a right pelvic fin clip for future identification. During March 2009 some smallmouth bass will be collected for brood fish for the hatchery to produce fingerlings for stocking. Additional sampling during 2009 will occur in the spring and fall for black bass.

Trap netting was completed in November for white crappie. A total of 18 net-nights were used for the information in Tables 79–83. An assessment rating of "Good" for white crappie was achieved in 2008 (Table 83). White crappie provide a popular fishery with anglers at Fishtrap Lake and a new 9.0 in minimum length limit will be implemented 1 March 2010. This new regulation is intended to level out the traditional up-and-down crappie numbers to prevent poor harvest years by anglers.

A lake management plan has been written for Fishtrap Lake and contains management objectives for largemouth and smallmouth bass, white crappie, and hybrid striped bass. During 2008, largemouth bass met three of the spring electrofishing assessment value objectives (mean length of age-3 at capture, CPUE age-1, and CPUE 12.0-14.9 in) and failed to meet two objectives (CPUE $\geq$ 15.0 in of a "3" and CPUE $\geq$ 20.0 in of a "2"). Smallmouth bass exceeded two of the spring electrofishing assessment value objectives (CPUE $\geq$ 14.0 in of a "2", CPUE $\geq$ 17.0 in of a "2"), met two objectives (mean length of age 3 at capture, and CPUE 11.0-13.9 in), and failed to meet one objective (CPUE age-1 of a "3"). White crappie exceeded four of the fall trap netting assessment value objectives (total CPUE of a "2", CPUE of age 1 of a "2", CPUE of age 0 of a "3", CPUE $\geq$ 8.0 in fish of a "2") and failed to meet one objective (mean length age 2+ at capture).

Martin County Lake

A spring electrofishing sample was completed during April. Largemouth bass were sampled. Bluegill, redear sunfish, and black crappie were also collected (Table 84). The largemouth bass CPUE at 101.94 fish/hr and bluegill at 152.47 fish/hr were approximately half the historical catch rate. Due to low catch rates resulting from collection of both bass and panfish at the same time, no assessments are presented. During 2009, only bluegill and redear sunfish will be sampled for assessment.

Martin County Reservoir

This lake has recovered slowly since the Martin County coal slurry spill of October 2000. Current fish stockings occur with a total of 4,500 rainbow trout stocked annually during April, May, and October and channel catfish on an every other year rotation. Spring daytime electrofishing was conducted at this lake for largemouth bass on 25 April 2008. Length frequency and CPUE is presented in Table 85. The length frequency is representative of bass populations in small lakes in the eastern district with the statewide minimum size limit. Distribution and numbers are good up to 12.0 in. Total CPUE during 2008 was lower than 2007, but similar to other years (Table 86) and fish up to 19.0 in were sampled. A PSD value of 28 was observed for largemouth bass (Table 87), which does not coincide with the recommended range of 40-70 for bass to have a balanced bass and bluegill fishery. This value is expected to increase as good numbers of small fish recruit to larger sizes. With re-establishment of largemouth bass numbers in the lake, future sampling in 2010 will look at age and growth of bass and in 2009 of bluegill age and growth.

Martins Fork Lake

Martins Fork Lake (330 acres) was sampled for black bass in the spring and fall and walleye were also sampled in the spring. Walleye numbers continue to decrease greatly with the elimination of their annual stocking from 2005 - 2008. Assessment scores for largemouth bass have been at their highest levels in 2007 and 2008 (Table 92). The smaller coosa bass (redeye bass) continues to maintain a viable population in the lake, however, the black bass fishery is dominated in numbers by largemouth bass and spotted bass. Tables 88-95 contain further information on black bass and walleye sampling at Martins Fork Lake. The $\log_{10}$ length-weight equation for fall sampled largemouth bass was $-3.49 + 3.13(\log_{10}$ length) and spotted bass was $-3.32+2.92(\log_{10}$ length). Relative weights are good for largemouth bass greater than 15.0 in and poor for fish less than 8.0 in (Table 94). Largemouth bass age and growth will be looked at in 2009.

An additional fishery furnished by Martins Fork Lake that continues to be popular with anglers is the tailwater rainbow trout fishery. Occasionally walleye are also caught in this area. A new lake management plan will be finalized in the future. Objectives from this plan will be referenced with sampling data to see if management goals are being met.

Paintsville Lake

During 2008, black bass were sampled in both the spring and fall (Tables 96–102). In 2002, a 12.0-15.0 in protective slot length limit was implemented on largemouth and smallmouth bass. Anglers do not seem to be making an impact in the numbers of 8.0-12.0 in largemouth bass and fish numbers are decreasing in the protected 12.0-15.0 in slot (Table 97). Removal of this regulation has been discussed, but no suitable alternatives are available. The assessment rating of the largemouth bass fishery is "Fair" (Table 100). During 2006 smallmouth bass were removed from the 12.0-15.0 in protective slot length limit and placed under an 18.0 in minimum length limit. Also, water quality parameters have been detrimental to development of a good smallmouth bass fishery in the 1,150 acre lake. During 2006 water withdrawals from the lake were altered to avoid pulling water from the preferred smallmouth bass cool water habitat. Stocking of smallmouth bass will be initiated in 2009 to supplement low lake numbers of smallmouth bass and the possible establishment of a smallmouth bass fishery.

During 2006 the method of summer-time water discharges were changed to prevent the loss of the cool water habitat preferred by smallmouth bass, trout, and walleye. This sustained the cool water habitat during 2006 and in succeeding years through 2008. This trend is expected to provide similar results in most future years. Also, this will aid in regenerating the good trout and walleye fisheries once present in the late 1980's to early 1990's. The lake receives an annual stocking of approximately 18,500 rainbow trout (8.0 in) in January and approximately 30,000 walleye fry (1.5 in) in May. Additional fisheries provided by the lake are the brown and rainbow trout fisheries found in the tailwater area below the dam.

Walleye and white crappie were sampled in March with daytime electrofishing. Walleye data is presented in Tables 103-106. The growth rate of walleye is good with a mean length of 17.5 in at age 3 (Table 104). Relative weights of walleye were greatest for fish $\geq$ 20.0 in, but no length group was exceptional (Table 106). The walleye assessment rating in 2008 was "Fair" (Table 105). White crappie data is presented in Tables 107-111. Black crappie are present, but rare in angler catches and electrofishing samples. The growth of white crappie at 6.1 in at age-2 (Table 110) is typical for most eastern reservoirs with mean length of age 2 fish ranging from 6.0-8.5 in.

Black bass, white crappie, and walleye will be sampled via electrofishing during the spring and black bass will be sampled during the fall of 2009. With the completion of a new lake management plan, the 2009 annual performance report will include how the largemouth bass, walleye, and crappie fisheries exceed, meet, or fail to meet plan objectives.

Pan Bowl Lake

Largemouth bass were sampled in April for CPUE and length frequency at Pan Bowl Lake (Table 112). The slow growth rate and sometimes cyclic high recruitment of young-of-the-year makes the fishery difficult to manage for continuous angler satisfaction. CPUE of fish greater than 12.0 in during 2008 was greater than most other years (Table 113). During 2008 the lake was overgrown with Eurasian milfoil. This may lead to an abundance of fish less than 8.0 inches in 2009. Largemouth bass are regulated by the statewide 12.0 in minimum length limit at this lake. The PSD value improved from 19 during 2007 to 31 in 2008 (Table 114), but is still much lower than the normal 50-60 value at Pan Bowl Lake. This was influenced by the very high numbers of small fish and their success recruiting during 2006-2007 (Tables 113 and 115). The assessment rating continued at "Good" during 2008 (Table 116).

Management at this 98 acre lake also includes an every other year stocking of channel catfish (9.0 in) and spring electrofishing for bluegill and redear sunfish. Sampling for 2009 will look at largemouth bass again and evaluate coverage of the eurasian milfoil.

Pikeville City Lake

Pikeville City Lake (20 acres) has primary fisheries of largemouth bass, bluegill, crappie, carp, and catfish. This lake has high fertility, which is not common in most lakes of the eastern district. During the summer, oxygen is added to the lake by 1 to 4 aerators as needed to prevent fish kills. The largemouth bass fishery has been very good for big fish for many years. On 1 March 2006 a regulation of catch-and-release-only for largemouth bass went into effect on this lake. During 2008, Pikeville stocked crappie and hybrid striped bass. An increase in crappie numbers was not noted during 2008 spring electrofishing and no hybrid striped bass were observed. Electrofishing was conducted 18 April 2007 for largemouth bass data. Tables 117-119 contain information from the April daytime electrofishing sample for bass. Total CPUE of largemouth bass has gradually increased since 2004, but various length groups have been cyclic (Table 118). A strong 2007 year class of fish is recruiting well to the fishery and is important with a catch-and-release-only regulation. Largemouth bass PSD and RSD values (Table 119) are very high and to remain at these levels with angling pressure would need to continue under catch-and-release-only regulation. During 2009, sampling will be conducted again in the spring for largemouth bass.

Yatesville Lake

Black bass (largemouth and spotted bass) were sampled during the spring and fall (Tables 120-126). Smallmouth bass are present in the lake as verified by angler catches during tournaments and by department creel survey data, but none were collected in the spring or fall samples. The largemouth bass population at Yatesville Lake (2,280 acres) receives a great amount of fishing pressure (resident and nonresident) through tournaments on the weekends. However, largemouth bass continue to do very well and sampling data shows no dramatic declines in the CPUE of various length groups (Table 121). Tournament anglers practice primarily catch-and-release and many weigh-ins have started using accessory kits and hold tanks to reduce stress on caught fish. Also, fishing pressure on week days appears to be down in comparison with past years. This could possibly be attributed to higher fuel prices. In the fall of 2006, fingerling largemouth bass were stocked at several locations in Yatesville Lake. This was in response to a small decrease in age-0 numbers (Table 126). The fish stocked in 2006 received a left pectoral fin clip for future identification. The largemouth bass assessment rating has rated "Good" to "Excellent from 2005-2008 (Table 124).

Table 1: Summary of 2008 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)	Conditions	Pertinent sampling comments[a,b]
Buckhorn Lake	Muskie	2/19	1100	shock	cloudy / snow	41.00	758.70	30	fair	lower lake; used 1 boat, muddy in places
Buckhorn Lake	Muskie	2/25	1030	shock	cloudy / snow	43.00	758.70	32	good	lower lake; used 1 boat, cold
Buckhorn Lake	Muskie	3/3	1100	shock	windy / cool	50.00	760.50	18	poor	lower lake; used 1 boat, muddy after flooding
Buckhorn Lake	LMB	5/6	2100	shock	cloudy/warm	69.00	782.00	54	good	whole lake; used 2 boats
Buckhorn Lake	LMB	9/29	2100	shock	cloudy/shower	73.50	780.50		fair	bp: 30.12; whole lake, used 2 boats
Buckhorn Lake	WC	11/18	1030	trap net	cloudy / snow	45.00	767 70	20	fair	bp: 30.35; mid - upper lake, set 9 nets
Buckhorn Lake	WC	11/19	1030	trap net	cloudy / snow	46.00			fair	mid - upper lake; used 9 nets
Buckhorn Lake	WC	11/20	1030	trap net	sunny/warm	46.00			fair	mid - upper lake; used 9 nets
Carr Creek Lake	WE/WC	3/13	900	shock	windy/cloudy	46.00	1022.00	48	fair	whole lake; used 2 boats; rough water
Carr Creek Lake	WE/WC	3/17	900	shock	overcast/ windy	47.50			fair	whole lake; used 2 boats
Carr Creek Lake	LMB	4/24	2100	shock	cloudy/humid	67.25	1027.00		good	cond: 405; whole lake; used 2 boats; gizzard shad die-off occurring
Carr Creek Lake	LMB	9/23	2100	shock	clear/calm	76.50	1026.50		poor	cond: 603; pH 8.67; whole lake; used 2 boats; fish not on banks
Cranks Crk Lake	LMB	5/12	2100	shock	cloudy/cool	65.00	normal	108	good	whole lake; used 1 boat
Dewey Lake	WB	4/9	1100	shock	cloudy/cool					upper lake - Johns Creek; used 2 boats
Dewey Lake	LMB	4/22	2100	shock	cloudy/calm	64.00	650.73	60	good	whole lake; used 2 boats
Dewey Lake	LMB	9/22	2100	shock	clear/hot	76.00	650.30	45	poor	whole lake; used 2 boats
Dewey Lake	WB	10/27	1100	gill net	cloudy/cool				fair	whole lake; used 2 boats; set 10 nets
Dewey Lake	WB	10/28	1000	gill net	cloudy/cool				fair	whole lake; used 2 boats; run 10 nets; hydrilla in nets
Dewey Lake	WB	10/29	1000	gill net	sunny/cool				fair	whole lake; used 2 boats; run 10 nets; hydrilla in nets
Dewey Lake	WB	10/30	1000	gill net	sunny/cool				fair	whole lake; used 2 boats; run 10 nets; hydrilla in nets
Dewey Lake	WC/BC	12/1	900	trap net	cloudy/snow		646.00		good	upper lake; set 10 nets
Dewey Lake	WC/BC	12/2	900	trap net	cloudy/snow	41.00			good	upper lake; used 9 nets
Dewey Lake	WC/BC	12/3	900	trap net	cloudy/cold				good	upper lake; used 10 nets
Fishpond	LMB	4/23	2100	shock	cloudy/hot	63.00	normal		good	whole lake; used 1 boat
Fishtrap Lake	SMB	3/24-4/2	1000	shock	cloudy/cool		735.00		fair	lower lake; smallmouth bass broodfish acquisition; several days
Fishtrap Lake	LMB	4/30	2100	shock	cloudy/warm	64.00	757.37		good	upper lake; used 1 boat
Fishtrap Lake	LMB	5/1	2100	shock	cloudy/warm	64.00	757.29	78	good	cond: 350; lower lake; used 1 boat
Fishtrap Lake	LMB	9/18	2100	shock	clear/calm	77.50	756.50	60	fair	whole lake; used 2 boats
Fishtrap Lake	WC	11/18	1000	trap net	cloudy / snow				fair	mid - upper lake, set 9 nets
Fishtrap Lake	WC	11/19	1000	trap net	cloudy / snow	46 00	740 65		fair	mid - upper lake, used 9 nets
Fishtrap Lake	WC	11/20	1000	trap net	sunny/warm		739.97		fair	mid - upper lake, used 9 nets
Martin Co Lake	LMB	4/22	1030	shock	cloudy/windy	62.00	0.50 high	36	good	whole lake; used 1 boat; sampled all species (cpue questionable)
Martin Co Res	LMB	4/25	1100	shock	cloudy/humid	65.00	normal	240	good	cond: 290; whole lake; used 1 boat; trouble shocking fish

Table 1 cont.

Water body	Species	Date (2007)	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Martins Fk Lake	LMB	4/28	2100	shock	cloudy/humid	65.00	1310.10		good	whole lake; used 1 boat
Martins Fk Lake	LMB	9/25	2100	shock	cloudy/rain	73.00	1308.50	54	good	whole lake; used 1 boat
Paintsville Lake	WE/WC/BC	3/18	930	shock	cloudy/windy	46.00	709.00	22	good	upper lake, used 1 boat
Paintsville Lake	WE/WC/BC	3/20	900	shock	cloudy/calm	46.00	709.00	96	good	lower lake, used 1 boat
Paintsville Lake	LMB	4/29	2100	shock	cloudy/cool	60.50	709.10		good	cond: 85; whole lake; used 2 boats
Paintsville Lake	LMB	9/30	2100	shock	cloudy/rain	73.00	707.80	204	good	cond: 105; bp: 29.87; pH 8.21; whole lake; used 2 boats
Pan Bowl Lake	LMB	4/17	1100	shock	clear/windy	59.00	normal	72	good	whole lake; used 1 boat
Pikeville City Lake	LMB	4/18	1100	shock	sunny/windy	63.00	normal	42	good	cond: 410; whole lake; used 1 boat
Yatesville Lake	LMB	4/21	2100	shock	cloudy/warm	64.00	630.10	36	fair	whole lake, used 2 boats
Yatesville Lake	LMB	10/2	2100	shock	clear/cool	69.75	628.25	30	good	upper lake; used 1 boat
Yatesville Lake	LMB	10/6	2100	shock	cloudy/cool	70.00	628.10	42	good	lower lake; used 1 boat

[a] cond = conductivity in µS/cm

[b] bp = barometric pressure in inches

Table 2. Length frequency and electrofishing CPUE (fish/hr) of muskellunge collected during spring sampling on Buckhorn Lake from 1998-2008; numbers in parentheses are standard errors. Results from 2002 are from fall electrofishing.

Year	Inch class																																					Total	CPUE
	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		
1998	1	1	2	7	4	1	1				1	4	3	1	1	1						1		1	1			1	1									33	6.60 (2.90)
1999		1	1	2	3	3	1			1	3	6	6	11	4	4	3				3	2	1		2	1		1										59	10.90 (4.40)
2000		1	3	2	3	1								4				1	2		7	1		1	1			2	1				1					31	8.20 (0.50)
2001					4	1	1				1			1									1		1	1		1									1	13	3.20 (0.70)
2002							1							2	1						3	1		1			2				1							12	6.00 (0.80)
2003	1		5	2	1	1									2	1	1		1	1	2	1	1				1									1		22	7.10 (1.90)
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	16.70 (2.10)
2005					4	5	2					1		2	2							1			1			2	1	1	3		1				1	27	6.30 (1.70)
2006			1	8	10	6								1	2	3						1	1		1	3	2	1	1	1	1	1	1					45	14.20 (2.20)
2007					1	1	2	1					2	3	6	2		1			1		2		1	2		1	2		1	1				1		32	13.66 (4.51)
2008				2	6	10	6	1						1	1	3				1		1	5	2			1				1			1			1	43	8.27 (1.61)

EFDBLMSS.D98-D08

Table 3. Population assessment for muskellunge from Buckhorn Lake (1,230 acres) captured during spring electrofishing from 1998-2008. Assessment scores for 2002 were derived from fall electrofishing data. Actual values are in parentheses.

	Assessment Scores										
Parameter	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CPUE age 1 muskellunge	2 (3.50)	2 (2.03)	2 (2.70)	1 (1.50)	1 (0.50)	2 (3.30)	3 (5.90)	2 (2.50)	3 (7.90)	1 (1.71)	3 (4.81)
CPUE ≥ 20.0 in	2 (3.20)	3 (8.50)	3 (5.40)	1 (1.70)	3 (5.50)	2 (3.90)	4 (11.10)	2 (3.70)	3 (6.30)	4 (11.98)	2 (3.83)
CPUE ≥ 30.0 in	1 (0.90)	2 (1.80)	3 (3.80)	1 (1.20)	4 (4.00)	2 (2.00)	4 (6.30)	3 (2.60)	4 (4.40)	4 (5.32)	2 (2.17)
CPUE ≥ 36.0 in	1 (0.30)	1 (0.20)	3 (1.00)	2 (0.50)	4 (1.50)	2 (0.65)	4 (2.80)	4 (2.10)	4 (2.50)	4 (2.45)	2 (0.60)
CPUE ≥ 40.0 in	0 (0.00)	0 (0.00)	2 (0.20)	3 (0.30)	3 (0.50)	3 (0.30)	3 (0.30)	4 (1.10)	4 (1.00)	4 (1.55)	3 (0.48)
Total Score	6	8	13	8	15	11	18	15	18	17	12
Assessment Rating	Poor	Fair	Good	Fair	Good	Fair	Excellent	Good	Excellent	Excellent	Good

EFDBLMSS.D98 - EFDBLMSS.D08

Table 4. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.525 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 6 May 2008; 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
Upper																					
	LMB		1	2	7	13	12	2	14	19	11	14	7	7	5	4	2	3		123	98.40 (18.49)
Lower																					
	LMB			1	1				5	8	9	7	9	10	11	6	3		1	71	55.54 (8.41)
Total																					
	LMB		1	3	8	13	12	2	19	27	20	21	16	17	16	10	5	3	1	194	76.97 (11.95)

SMB = smallmouth bass
LMB = largemouth bass
SB = spotted bass
EFDBLLSS.D08

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	22.67	3.53	18.67	2.33	28.33	3.76	6.33	1.15	0.00		76.00	6.89
2004	38.00	6.20	51.67	6.52	29.33	4.19	4.33	1.51	0.00		123.33	11.55
2005	17.00	3.49	45.00	5.12	38.33	5.49	8.33	1.15	0.33	0.33	108.67	7.86
2006	14.17	2.18	35.24	4.62	40.51	5.06	15.22	3.40	0.33	0.33	105.14	10.97
2007	14.50	4.27	26.00	2.73	20.50	3.33	14.00	2.39	0.50	0.50	75.00	6.04
2008	14.79	5.47	27.01	7.24	21.35	3.31	13.82	1.75	0.00		76.97	11.95

EFDBLLSS.D03-D08

Table 6. PSD and RSD values for largemouth bass taken in spring electrofishing samples in each area of Buckhorn Lake (1,230 acres) on 6 May 2008; 95% confidence intervals are in parentheses.

Area	Species	No.≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
Upper	Largemouth bass	88	48 (37-58)	16 (8-24)
Lower	Largemouth bass	69	68 (57-79)	30 (20-41)
Total	Largemouth bass	157	57 (49-65)	22 (16-29)

EFDBLLSS.D08

Table 7. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Buckhorn Lake (1,230 acres) from 2003-2008.

	Year					
Age	2003	2004	2005	2006	2007	2008
1	19.17	35.50	16.25	11.19	13.00	11.19
2	19.92	53.33	42.42	36.41	25.25	28.73
3	17.80	17.38	30.13	24.14	13.83	14.12
4	9.81	9.75	9.56	14.66	7.87	7.74
5	4.93	4.73	5.83	9.41	7.58	7.22
6	1.71	1.64	2.15	5.02	3.47	4.41
7	1.33	0.67	2.00	3.65	2.50	3.18

EFDBLLSS.D03-D08
EFDBLLAS.D04

Table 8. Population assessments for largemouth bass collected during spring at Buckhorn Lake (1,230 acres). Actual values are in parentheses.

Parameter	Year					
	2003	2004	2005	2006	2007	2008
Mean length age 3 at capture	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)
Spring CPUE age 1	1 (19.20)	2 (35.50)	1 (16.30)	1 (11.20)	1 (13.00)	1 (11.19)
Spring CPUE 12.0-14.9 in	3 (28.30)	3 (29.30)	4 (38.30)	4 (40.50)	2 (20.50)	2 (21.35)
Spring CPUE ≥ 15.0 in	2 (6.30)	2 (4.30)	2 (8.30)	3 (15.20)	3 (14.00)	3 (13.82)
Spring CPUE ≥ 20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.30)	2 (0.50)	0 (0.00)
Total score	10	11	13	14	12	10
Assessment rating	Fair	Fair	Good	Good	Good	Fair
Instantaneous mortality (z)	0.61	0.85	0.67	0.48	0.45	0.42
Annual mortality (A)	45.60	57.20	48.70	38.00	36.40	34.20

EFDBLLSS.D03-D08
EFDBLLAS.D04

Table 9. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 2.520 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 29 September 2008; numbers in parentheses are standard errors.

Area/	Inch class																	Total	CPUE	
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Upper																				
LMB		3	18	8	3	5	6	10	5	9	6	5	2					80	63.95	(9.71)
SB																		0	0.00	(0.00)
Lower																				
LMB	2	3	3	9	5	3	4	9	5	1	4	5	4	2	2	1	1	63	49.50	(7.75)
SB		1	3			1	1	2	1									9	7.09	(0.79)
Total																				
LMB	2	6	21	17	8	8	10	19	10	10	10	10	6	2	2	1	1	143	56.72	(6.33)
SB		1	3			1	1	2	1									9	3.55	(1.24)

SMB = smallmouth bass
LMB = largemouth bass
SB= spotted bass
EFDBLLSF.D08

Table 10. 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/hour,

	Age 0		Age 0		Age 0 ≥ 5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	4.50	0.10	99.30	7.40	38.70	2.60	19.20	3.30
2003	4.70	0.50	106.00	13.80	39.70	4.60	35.50	5.40
2004	3.60	0.04	176.70	34.00	9.30	4.60	16.25	3.50
2005	4.00	0.20	44.70	6.60	10.00	3.50	11.19	2.10
2006	4.20	0.20	17.60	4.10	5.30	1.90	13.00	3.74
2007	4.54	0.20	18.78	6.43	9.59	3.44	11.19	3.77
2008	4.93	0.14	21.44	3.68	9.91	2.31		

EFDBLLSF.D02-D08
EFDBLLAS.D04
EFDBLLSS.D03-D08

Table 11. Length frequency and CPUE (fish/nn) of white crappie collected by trap net at Buckhorn Lake (1,230 acres) in 18 net-nights from 19-20 November 2008. Standard errors are in parentheses.

Inch class													
3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	
8	82	209	481	215	70	18	13	3	1	1	1,101	61.17	(11.17)

EFDBLCTF.D08

Table 12. PSD and RSD values calculated for white crappie collected in trap nets at Buckhorn Lake (1,230 acres) during November 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ stock size	PSD	RSD_{10}
White crappie	1,011	10 (9-12)	2 (1-3)

EFDBLCTF.D08

Table 13. Mean back-calculated length (in) at each annulus for white crappie collected from Buckhorn Lake (1,230 acres) in November 2008, including 95% confidence intervals.

Year		Age						
Class	No.	1	2	3	4	5	6	7
2007	22	4.0						
2006	21	3.9	5.4					
2005	17	4.2	5.8	7.0				
2004	43	4.2	6.0	7.2	8.1			
2003	9	4.2	5.9	7.4	8.5	9.5		
2001	1	5.2	6.6	7.9	8.8	10.1	11.3	12.8
Mean		4.1	5.8	7.2	8.2	9.5	11.3	12.8
Smallest		3.3	4.5	5.9	6.5	7.4	11.3	12.8
Largest		5.5	7.3	8.7	10.3	11.3	11.3	12.8
STD error		0.0	0.1	0.1	0.1	0.3		
95% CI LO		4.1	5.7	7.0	7.9	8.9		
95% CI HI		4.2	5.9	7.3	8.4	10.2		

Intercept = 0
EFDBLCAF.D08

Table 14. Age frequency and CPUE (fish/nn) of white crappie collected by trap netting for 20 net-nights at Buckhorn Lake (1,230 acres)in November 2008; numbers in parentheses are standard errors.

	Inch class														
Age	3	4	5	6	7	8	9	10	11	12	13	Total	Age%	CPUE	
0	8											8	1	0.44	(0.20)
1		82	129	51								261	24	14.51	(3.35)
2			80	354	25							460	42	25.56	(4.44)
3				51	101	13	3	1				169	15	9.38	(1.64)
4				25	76	57	14	6	3			181	16	10.07	(1.65)
5					13		1	6		1		21	2	1.14	(0.26)
7											1	1	0	0.06	(0.06)
Total	8	82	209	481	215	70	18	13	3	1	1	1101			
%	1	7	19	44	20	6	2	1	0	0	0				

CPUE of ≥8 in (quality size) = 5.89

CPUE of ≥10 in (preferred size) = 1.

EFDBLCAF.D08

EFDBLCTF.D08

Table 15. Population assessment scores for white crappie collected from Buckhorn Lake (1,230 acres). Actual values are in parantheses.

	Year					
Parameter	2003	2004	2005	2006	2007	2008
CPUE of crappie (excluding age 0)	4 (31.40)	2 (5.50)	3 (14.80)	4 (191.42)	4 (32.50)	4 (60.73)
CPUE age 1	4 (17.40)	1 (0.70)	3 (7.40)	4 (58.60)	1 (2.99)	4 (14.51)
CPUE age 0	4 (28.20)	1 (0.75)	1 (0.40)	4 (29.80)	1 (0.55)	1 (0.44)
CPUE $\geq$ 8.0 in	2 (4.20)	2 (2.20)	2 (4.10)	4 (17.78)	3 (5.50)	3 (5.89)
Mean length age 2 at capture	1 (8.2)	1 (8.1)	1 (8.3)	1 (7.1)	1 (6.3)	1 (6.3)
Instantaneous mortality (z)	1.32	1.37	1.30	1.52	1.74	1.03
Annual Mortality (A)	73.20	74.70	72.80	78.00	82.50	64.40
Total score	15	7	10	17	10	13
Assessment rating	Good	Poor	Fair	Good	Fair	Good

EFDBLCTF.D03-D08
EFDBLCAF.D03-D08

Table 16. Fish harvest statistics derived from a creel survey at Buckhorn Lake (1,230 acres) and tailwater (1 acre) from 2 April through 29 October 2008. Standard errors are in parentheses.

	Lake	Tailwater
Fishing trips		
No. of fishing trips	1,683	875
No. of fishing trips per acre	1.37	875
Fishing pressure		
Total angler hours	11,898 (358)	4,508 (199)
Man-hours/acre	9.67	4,508
Catch/harvest		
No. of fish caught	15,256 (2,160)	5,521 (987)
No. of fish harvested	3,918 (669)	3,492 (862)
Lb of fish harvested	1,860	1,315
Harvest rates		
Fish/hour	0.22	0.85
Fish/acre	3.19	3,491.80
Lb/acre	1.51	1,314.50
Catch rate		
Fish/hour	1.09	1.30
Fish/acre	12.40	5,520.50
Miscellaneous characteristics (%)		
Male	95.86	90.23
Female	4.14	9.77
Resident	98.82	100.00
Non-resident	1.18	0.00
Method (%)		
Still fishing	35.16	85.06
Casting	59.82	14.94
Fly fishing	0.15	
Trolling	4.87	
Mode (%)		
Boat	93.65	12.64
Bank	6.06	87.36
Dock	0.30	

Table 17. Fish harvest statistics derived from a creel survey at Buckhorn Lake (1,230 acres) from 2 April through 29 October 2008.

	White bass	Muskellunge	Redear Sunfish	Channel catfish	Warmouth	Bluegill	Smallmouth bass	Spotted bass	Largemouth bass	White Crappie
No. caught	47	153	86	100	113	5822	6	199	3481	5073
(per acre)	(0.04)	(0.13)	0.07	(0.08)	(0.09)	(4.73)	(0.01)	(0.16)	(2.83)	(4.12)
No. harvested		12	74	43	35	2455		41	319	856
(per acre)		(0.01)	(0.06)	(0.04)	(0.03)	(2.00)		(0.03)	(0.26)	(0.70)
% of total no. harvested		0.3	1.9	1.09	0.90	62.65		1.05	8.14	21.86
Lb harvested		231.5	5.6	72.9	2.5	410.2		38.7	677.6	410.1
(per acre)		(0.19)	(0.01)	(0.06)	(0.00)	(0.33)		(0.03)	(0.55)	(0.33)
% of total lb harvested		12.45	0.30	3.92	0.13	22.06		2.08	36.43	22.05
Mean length (in)		42.0	4.5	17.4	4.7	6.3		13.5	16.0	9.9
Mean w eight (lb)		19.60	0.07	1.71	0.07	0.16		1.03	2.15	0.45

	Muskellunge	Catfish group	Panfish group	Black bass group	Crappie group	Anything
No. of fishing trips for that species	126	25	34	523	703	45
% of all trips	7.49	1.54	11.01	50.49	14.38	14.83
Hours fished for that species	891.02	128.45	175.52	2703.41	3635.16	234.39
(per acre)	(0.72)	0.10	(0.14)	(2.20)	(2.96)	(0.19)
No. harvested fishing for that species	12	36	493	29	4500	
Lb harvested fishing for that species	235.20	123.20	83.70	60.80	1643.00	
No./hour harvested fishing for that species	0.013	0.280	2.809	0.011	1.238	
% success fishing for that species	1.93	20.00	40.79	8.72	38.89	2.00

t < 0.01

Table 18. Fish harvest statistics derived from a creel survey at Buckhorn Lake tailwater (1 acre) from 2 April through 29 October 2008.

	Drum	Common carp	Muskellunge	Flathead Catfish	Channel catfish	Warmouth	Bluegill	Spotted bass	Largemouth bass	White Crappie	Rainbow trout
No. caught	439	90	20	247	381	31	1,149	52	116	504	2,293
(per acre)	(439.4)	(89.6)	(20.5)	(247.4)	(381.1)	(30.5)	(1148.5)	(51.8)	(115.8)	(503.6)	(2293.0)
No. harvested	409			227	290		507			159	1,772
(per acre)	(408.9)			(227.0)	(289.6)		(507.3)			(159.3)	(1772.2)
% of total no. harvested	11.71			6.50	8.30		14.52			4.55	50.74
Lb harvested	243.4			399.9	178.8		57.9			57.5	9.5
(per acre)	(243.4)			(399.9)	(178.8)		(57.9)			(57.5)	(9.5)
% of total lb harvested	18.52			30.42	13.60		4.40			11.72	21.34
Mean length (in)	10.9			15.5	12.3		6.5			9.2	9.0
Mean w eight (lb)	0.62			1.56	0.63		0.18			0.34	0.30

	Muskellunge	Drum	Catfish group	Panfish group	Black bass group	Crappie group	Trout group	Anything
No. of fishing trips for that species	42	16	102	9	37	21	216	417
% of all trips	4.88	1.86	11.86	1.05	4.30	2.44	25.12	48.49
Hours fished for that species	214.61	82.74	523.41	47.87	191.91	105.77	1,110.84	2,145.28
(per acre)	(214.61)	(82.74)	(523.41)	(47.87)	(191.91)	(105.77)	(1,110.84)	(2145.28)
No. harvested fishing for that species		61	280	280		225	1,502	1,064
Lb harvested fishing for that species		25.6	375.0	31.8		133.8	246.6	423.1
No./hour harvested fishing for that species		0.67	0.53	5.85		1.27	1.35	0.20
% success fishing for that species		33.33	44.44	50.00		25.00	52.38	21.18

t < 0.01

Table 19. Species composition and length distribution of each species of fish harvested (H) and released (R) from a creel survey on Buckhorn Lake (1,230 acres) from 2 April to 29 October 2008.

		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	27	28	30	31	32	36	42
Muskellunge	H																															12
	R																	11							21	11	11	21	11	11	21	12
Channel catfish	H												9		9		9	9	7													
	R							12	12		12						12		10													
Redear Sunfish	H		37	37																												
	R			12																												
Bluegill	H	112	144	337	674	915	273																									
	R	27	1046	1054	993	134	13																									
Warmouth	H		12	23																												
	R			10	29	19	20																									
Spotted bass	H		21																													
	R	10																														
Largemouth bass	H													114	139	49	8		9													
	R						62	44	639	9	1180	169	576	116	206	143	9	9														
Smallmouth bass	H																															
	R															6																
White crappie	H							311	301	85	122	27	37																			
	R		39	1020	958	1246	880	32	31		10	9																				

Table 20. Species composition and length distribution of each species of fish harvested (H) and released (R) from a creel survey on Buckhorn Lake tailwater (1 acre) from 2 April to 29 October 2008.

		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	28	30	32	34	38	42	46
Common carp	H																														
	R												22				68														
Drum	H							41	204		164																				
	R								31																						
Muskellunge	H																														
	R																														20
Channel catfish	H								58		145		58			29															
	R				30		30		31																						
Flathead catfish	H										25		25	25	25	50	50			27											
	R															20															
Bullhead	H																														
	R			80	40	79																									
Bluegill	H			240	214	53																									
	R		139	251	223	28																									
Warmouth	H																														
	R				31																										
Spotted bass	H																														
	R								26				26																		
Largemouth bass	H																														
	R						58				29		29																		
Rainbow trout	H				44	421	1041	222	22	22																					
	R			50	50	99	198	124																							
White crappie	H							82	61	61	83																				
	R				72	72	48			25																					

Table 21. Monthly black bass angling success at Buckhorn Lake during the 2008 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
Apr	592	42	125	881	437	0.523	42	0.051
May	812	200	180	1,273	793	0.515	193	0.126
Jun	340	23	88	621	294	0.493	24	0.039
Jul	413	20	94	667	355	0.492	20	0.027
Aug	509	25	96	676	483	0.664	25	0.035
Sep	453	14	178	1,259	445	0.281	13	0.009
Oct	567	35	89	631	496	0.670	24	0.032
Total	1144	360	850	6008	3303		341	
Mean						0.413		0.046

Table 22. Monthly white crappie angling success at Buckhorn Lake during the 2008 creel survey period.

	Total no. of white crappie caught	Total no. of white crappie harvested	No. of white 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
Apr	1311	296	75	528	1297	2.217	296	0.506
May	3139	342	66	469	3140	5.703	342	0.621
Jun			23	159				
Jul	79	39	25	176	78	0.541	39	0.270
Aug	127	51	19	135	127	0.962	51	0.385
Sep	31	10	10	73	31	1.098	10	0.366
Oct	413	118	24	170	413	2.333	118	0.667
Total	6916	856	242	1711	5086		856	
Mean						3.731		0.537

Table 23. Monthly muskellunge angling success at Buckhorn Lake during the 2008 creel survey period.

	Total no. of musky caught	Total no. of musky harvested	No. of musky fishing trips	Hours fished by musky anglers	Musky caught by musky anglers	Musky caught/hour by musky anglers	Musky harvested by musky anglers	Musky harvested/hour by musky anglers
Apr	28		11	75	14	0.153	0	
May	19		31	218	19	0.128	0	
Jun	12		0					
Jul	20		15	105	20	0.091	0	
Aug	0		0					
Sep	3		0					
Oct	71	12	27	187	71	0.261	12	0.043
Total	153	12	126	891	124		12	
Mean						0.115		0.010

Table 24. Catch and harvest statistics derived from a creel survey at Buckhorn Lake (1,230 acres) in 2008 for largemouth bass and muskellunge.

	Largemouth bass				White crappie				Muskellunge			
		Catch & release				Catch & release				Catch & release		
	Harvest	12-14.9 in	≥15.0 in	Total	Harvest	<8.9 in	≥9.0 in	Total	Harvest	< 30.0 in	≥30.0 in	Total
Total number	319	1,925	483	2727	856	4,143	73	5,073	12	54	87	153
Total weight (lb)	677.6	1551.0	1039.0	3267.6	410.1	439.0	25.3	874.4	231.5	309.0	890.3	1430.8
Mean length (in)	16.0				9.9				42.0			
Mean weight (lb)	2.14				0.45				19.60			
Rate (fish/hour)	0.028				0.066				0.001			

Table 25. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.021 hours of 15-minute electrofishing samples at Carr Creek Lake (710 acres) on 24 April 2008; 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	
Upper	Smallmouth bass																			0	0.00	
	Spotted bass			1	1	1	2	1	3	2	1									12	12.00	(4.32)
	Largemouth bass	1	3			1	5	7	3	5	5	4	12	7	8	2	1	1	1	66	66.00	(17.17)
Lower	Smallmouth bass				1			1												2	1.91	(1.91)
	Spotted bass			1	2	1		2	2	1										9	8.91	(3.40)
	Largemouth bass					1	2	8	1	2	9	10	10	11	7	6	4			71	69.55	(5.94)
Total	Smallmouth bass				1			1												2	0.95	(0.95)
	Spotted bass			2	3	2	2	3	5	3	1									21	10.45	(2.61)
	Largemouth bass	1	3			2	7	15	4	7	14	14	22	18	15	8	5	1	1	137	67.78	(8.44)

EFDCLLSS.D08

Table 26. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carr Creek Lake (710 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
2002	116.33	14.24	16.89	1.71	12.33	1.57	7.11	1.16	0.00		152.67	13.32
2003	67.56	11.32	15.89	2.18	11.11	1.46	10.67	1.50	0.44	0.26	105.22	14.37
2004	135.00	17.73	24.44	5.31	8.44	1.37	9.00	1.16	0.22	0.15	176.89	18.81
2005	20.00	2.70	19.80	1.60	24.80	2.40	14.00	1.80	0.33	0.30	78.60	4.90
2006	22.26	6.95	30.90	4.80	27.92	3.34	29.90	3.11	0.67	0.45	111.00	10.20
2007	7.95	1.85	20.78	4.65	18.59	3.42	15.72	3.64	0.49	0.49	63.03	5.49
2008	2.99	1.25	16.36	2.57	24.72	5.39	23.71	3.31	0.50	0.50	67.78	8.44

BBRPSCFL.D02-D05
EFDCLLSS.D06-D08

Table 27. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Carr Creek Lake (710 acres). SE=standard error.

	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
Year	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2007	5.41	1.97	5.82	2.65	1.91	1.00	1.41	0.98	0.00		14.55	4.48
2008	3.48	0.90	4.98	1.46	2.00	1.07	0.00		0.00		10.45	2.61

EFDCLLSS.D07-D08

Table 28. PSD and RSD values for each species of black bass in each area of Carr Creek Lake (710 acres) on 24 April 2008. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Smallmouth bass			Spotted bass		
Area	No.	PSD	RSD_{15}	No.	PSD	RSD	No.	PSD	RSD_{14}
Lower	70	81 (72-91)	40 (28-52)	1			6	17 (0-49)	0
Upper	61	67 (55-79)	33 (21-45)	0			10	30 (0-60)	0
Total	131	75 (67-82)	37 (28-45)	1			16	25 (3-47)	0

EFDCLLSS.D08

Table 29. Mean back-calculated length (in) at each annulus for largemouth bass collected from Carr Creek Lake (710 acres) on 24 April 2008, including 95% confidence intervals.

Year		Age										
Class	No.	1	2	3	4	5	6	7	8	9	10	11
2007	6	5.8										
2006	18	5.3	9.3									
2005	22	5.9	9.8	12.6								
2004	14	6.2	10.2	12.9	15.1							
2003	5	5.8	10.1	13.3	15.7	17.4						
2002	3	7.6	11.5	14.3	15.9	17.1	18.1					
1996	1	5.8	10.2	12.8	14.4	15.7	16.7	17.8	18.3	18.8	19.4	19.9
Mean		5.9	9.8	12.9	15.3	17.1	17.8	17.8	18.3	18.8	19.4	19.9
Smallest		3.2	7.4	10.1	12.8	15.7	16.7	17.8	18.3	18.8	19.4	19.9
Largest		8.6	12.3	15.1	17.4	19.4	18.5	17.8	18.3	18.8	19.4	19.9
STD error		0.1	0.1	0.2	0.2	0.4	0.4					
95% CI LO		5.6	9.6	12.5	14.8	16.4	17.0					
95% CI HI		6.1	10.1	13.2	15.8	17.9	18.6					

Intercept = 0

EFDCLLAS.D08

Table 30. Mean back-calculated length (in) at each annulus for spotted bass collected from Carr Creek Lake (710 acres) on 24 April 2008 including 95% confidence intervals.

Year Class	No.	Age 1	2	3	4	5	6	7
2007	1	3.8						
2006	5	3.6	6.3					
2005	7	4.8	7.3	9.1				
2004	5	4.6	7.0	8.6	9.8			
2003	2	4.2	7.4	9.3	10.9	11.8		
2001	1	3.9	6.4	7.7	9.0	9.8	10.6	11.6
Mean		4.3	6.9	8.9	10.0	11.1	10.6	11.6
Smallest		2.8	5.1	7.2	8.8	9.8	10.6	11.6
Largest		6.5	9.0	10.3	11.5	12.5	10.6	11.6
STD error		0.2	0.2	0.3	0.3	0.8		
95% CI LO		4.0	6.5	8.3	9.3	9.6		
95% CI HI		4.7	7.4	9.4	10.6	12.7		

Intercept = 0
EFDPBLAS.D08

Table 31. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carr Creek Lake (710 acres) from 1999-2008.

Age	Year 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	129.60	66.90	160.40	114.40	66.20	133.70	18.84	21.10	7.61	2.43
2	31.80	21.20	16.10	17.30	17.10	25.20	20.82	31.70	21.07	13.11
3	17.00	17.30	13.40	11.90	6.90	5.40	14.27	14.20	11.97	20.12
4	16.10	18.30	20.10	7.20	6.90	5.70	13.24	21.30	9.95	21.11
5	12.00	10.60	8.20	1.30	3.20	2.50	4.44	8.90	3.91	6.41
6	2.70	4.00	2.70	0.40	0.00	0.00	0.00	0.00	0.00	3.60
7	0.60	0.30	0.70		2.10	1.80	2.73	5.30	3.48	
8	0.40				2.00	2.00	3.66	6.50	3.95	
9	0.30				0.10	0.00	0.00	0.30	0.00	
10					0.80	0.60	0.56	0.40	1.07	
11										
12										0.50

BBRPSCFL.D99-D05
EFDCLLSS.D06-D08
BBRSCCFL.D03

Table 32. Spring electrofishing catch rate (fish/hr) for each age of spotted bass collected from Carr Creek Lake (710 acres) from 1999-2007.

	Year	
Age	2007	2008
1	0.50	
2	2.94	2.48
3	4.86	4.07
4	2.78	2.28
5	0.71	0.75
6		
7	0.35	0.37

EFDCLLSS.D07-D08
EFDCLLAS.D08

Table 33. Population assessments for largemouth bass collected from Carr Creek Lake (710 acres). Actual values are in parentheses.

	Year						
Parameter	2002	2003	2004	2005	2006	2007	2008
Mean length age 3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (12.6)
Spring CPUE age 1	4 (114.40)	3 (66.20)	4 (133.70)	2 (18.84)	2 (21.10)	1 (7.61)	1 (2.43)
Spring CPUE 12.0-14.9 in	1 (12.33)	1 (11.11)	1 (8.44)	2 (24.80)	2 (27.92)	1 (18.59)	2 (24.72)
Spring CPUE $\geq$ 15.0 in	2 (7.11)	2 (10.67)	2 (9.00)	2 (14.00)	3 (29.90)	2 (15.72)	3 (23.71)
Spring CPUE $\geq$ 20.0 in	0 (0.00)	1 (0.44)	1 (0.22)	1 (0.33)	1 (0.67)	1 (0.49)	1 (0.50)
Total score	11	11	12	11	12	9	11
Assessment rating	Fair	Fair	Good	Fair	Good	Fair	Fair
Instantaneous mortality (z)		0.52	0.54	0.47	0.43	0.37	0.41
Annual mortality (A)		40.30	42.00	37.50	35.10	30.90	33.5

BBRPSCFL.D02-D05
BBRSCCFL.D03
EFDCLLSS.D06-D08
EFDCLLAS.D08

Table 34. Population assessments for spotted bass collected from Carr Creek Lake (710 acres). Actual values are in parentheses.

Parameter	Year 2007	2008
Mean length age 3 at capture	1 (9.1)	1 (9.1)
Spring CPUE age 1	2 (0.50)	0 (0.00)
Spring CPUE 11.0-13.9 in	3 (1.91)	3 (2.00)
Spring CPUE ≥ 14.0 in	4 (1.41)	0 (0.00)
Spring CPUE ≥ 17.0 in	0 (0.00)	0 (0.00)
Total score	10	4
Assessment rating	Fair	Poor
Instantaneous mortality (z)		0.48
Annual mortality (A)		38.10

EFDCLLAS.D08
EFDCLLSS.D07-D08

Table 35. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 2.054 hours of 15-minute nocturnal electrofishing samples at Carr Creek Lake (710 acres) on 23 September 2008; 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	19	20	Total	CPUE	
Lower	Spotted bass				3	1	4	7	8	3	4		2								32	30.80	(1.57)
	Largemouth bass		1	4	3		1	3	3	2			2	1	3		1		1		25	24.04	(5.52)
Upper	Spotted bass				1		2	7	2	5	3		2								22	22.22	(6.89)
	Largemouth bass	1	11	7	3	2		2	5	5	1	2			2	1	1	3	1	1	48	46.01	(13.35)
Total	Spotted bass				4	1	6	14	10	8	7		4								54	26.51	(3.65)
	Largemouth bass	1	12	11	6	2	1	5	8	7	1	2	2	1	5	1	2	3	2	1	73	35.02	(7.87)

EFDCLLSF.D08

Table 36. 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/hour, SE=standard

	Age 0		Age 0		Age 0 ≥ 5.0 in		Age 1	
Year class	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	4.37	0.14	14.00	5.40	5.78	2.30	67.56	11.32
2004	5.17	0.01	132.00	17.30	88.22	12.70	18.84	2.60
2005	4.70	0.10	15.80	6.70	5.60	1.70	21.30	6.70
2006	4.20	0.20	11.00	4.10	3.00	1.00	7.61	2.03
2007	3.72	0.47	4.98	2.24	0.99	0.65	2.43	1.16
2008	4.30	0.17	15.23	6.63	3.77	1.68		

BBRWRCFL.D03-D05
BBRSCCFL.D03
EFDCLLSN.D06-D08
EFDCLLAS.D08

Table 37. Number of fish and relative weight (Wr) for each length group of black bass collected at Carr Creek Lake (710 acres) on 23 September 2008. Standard errors are 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	8	94.4 (3.6)	3	91.7 (3.9)	5	77.3 (18.7)
	Upper	11	91.9 (1.7)	2	92.3 (8.3)	9	105.7 (7.1)
	Total	19	93.0 (1.7)	5	92.0 (3.4)	14	95.5 (8.5)
		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
		No.	Wr	No.	Wr	No.	Wr
Spotted bass	Lower	22	98.1 (2.7)	6	91.7 (4.0)		
	Upper	14	86.7 (1.5)	4	91.9 (5.9)		
	Total	36	93.7 (2.0)	10	91.7 (3.2)		

EFDCLLSF.D08

Table 38. Length frequency and CPUE (fish/hr) of walleye collected at Carr Creek Lake (710 acres) during daytime spring electrofishing.

	Inch Class																						
Year	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	20.80	4.60
2001						2	4	3	14	8	6	2	2	1				2				44	20.40	4.70
2002	no data																							
2003	2	1			1	1	2			3	7		4	2		1	1	1	1	1		28	26.70	8.50
2004										1	3	13	10	13	13	4	3	1				61	27.10	7.40
2005								1	1	2	10	2	10	6	5	4	3	1	1			46	28.17	5.00
2006										1	4	6	7	9	9	8	3	4	2	2		55	31.30	5.40
2007							1		1	2	4	3	11	15	8	4	4	5	2			60	32.92	7.36
2008								1	2	5	12	16	19	21	19	15	14	7	3	1	1	136	12.76	1.15

EFDCLWSS.D00-D08

Table 39. Spring electrofishing population assessments for the walleye population at Carr Creek Lake (710 acres). Actual values are in parentheses.

	Year					
Parameter	2003	2004	2005	2006	2007	2008
Population Density	4	4	4	4	4	2
(CPUE all fish)	(26.70)	(27.10)	(28.17)	(31.30)	(32.92)	(12.76)
Growth rate	4	4	4	4	4	4
(Mean length age 3 fish at capture)	(20.60)	(20.60)	(20.60)	(20.60)	(20.60)	(20.60)
Size structure	4	4	4	4	4	4
(CPUE of fish ≥ 20.0 in)	(10.50)	(19.50)	(18.40)	(24.80)	(20.85)	(9.28)
Recruitment	4	0	0	0	0	0
(CPUE of fish < 13.0 in)	(3.80)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Total Score	16	12	12	12	12	10
Assessment Rating	Excellent	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.72	1.12	0.26	0.20	0.35	0.94
Annual mortality (A)	51.40	67.30	22.50	22.50	41.40	60.90

EFDCLWSS.D03-D08
EFDCLWAS.D03

Table 40. Number of fish and relative weight (Wr) for each length group of walleye collected at Carr Creek Lake (710 acres) on 13 and 17 March 2008. Numbers in parentheses are standard errors.

Length group					
10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr
		36	98.80 (1.6)	100	100.30 (1.0)

EFDCLWSS.D08

Table 41. Length frequency and CPUE (fish/hr) and SE (standard error) of crappie collected by electrofishing at Carr Creek Lake (710 acres) on 13 and 17 March 2008.

	Inch class										
Species	5	6	7	8	9	10	11	12	Total	CPUE	SE
WC	1	2	1	3	3	2	3	2	17	1.74	(1.04)
BC		3	4	5	4	1	1		18	1.63	(0.71)

EFDCLWSS.D08
WC=white crappie
BC=black crappie

Table 42. 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	10.07	9.14	3.82	3.00	6.19	5.29	0.72	0.72	13.89	12.06	6.91	5.12	27.84	26.00	6.87	5.25
2008	1.30	0.77	0.96	0.42	0.76	0.50	0.16	0.11	2.26	0.95	0.92	0.47	1.74	1.04	1.63	0.71

EFDCLWSS.D08

Table 43. PSD and RSD values for black and white crappie taken in spring electrofishing samples at Carr Creek Lake (710 acres) on 13 and 17 March 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ 5.0 in	PSD (+/- 95%)	RSD_{10} (+/- 95%)
White crappie	17	76 (56-97)	41 (8-36)
Black crappie	18	61 (38-84)	11 (0-26)

EFDCLWSS.D08

Table 44. Spring electrofishing catch rate (fish/hr) for each age of white and black crappie collected from Carr Creek Lake (710 acres).

	Year			
	2007		2008	
Age	WC	BC	WC	BC
1	0.00	0.00		
2	1.55	0.00	0.04	
3	5.40	0.00	0.12	
4	4.37	0.76	0.11	0.09
5	6.69	3.07	0.70	0.68
6	7.51	2.31	0.66	0.39
7	1.55		0.11	
8	0.78			0.06

EFDCLWSS.D08
EFDCLCAS.D07
WC=white crappie
BC=black crappie

Table 45. Length frequency and CPUE (fish/hr) of black bass collected in 1.00 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 28 April 2008; numbers in parentheses are

	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	
LMB	2	12	7	4	8	18	12	7	14	11	12	4	1	2	2	1	2	119	119.00	(8.23)
SB	1	1	3	3		5	2	4	1	1								21	21.00	(5.97)

LMB = largemouth bass
SB = spotted bass
EFDCCLSS.D08

Table 46. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carr Creek Lake (710 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												
2003												
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												
2007												
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

EFDCCLSS.D00-D08

Table 47. PSD and RSD values obtained for each black bass species taken in spring nocturnal electrofishing samples in Cranks Creek Lake (219 acres) in April 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a](+/- 95%)
Spotted bass	13	15 (0-36)	
Largemouth bass	86	41 (30-51)	9 (3-16)

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

EFDCCLSS.D08

Table 48. Mean back-calculated length (in) at each annulus for largemouth bass collected from Cranks Creek Lake (219 acres) on 28 April 2008, including 95% confidence intervals.

Year Class	No.	Age 1	2	3	4	5	6	7	8	9
2007	13	4.7								
2006	18	5.1	8.3							
2005	9	5.2	8.6	11.1						
2004	9	5.6	8.6	10.9	12.8					
2003	4	5.0	8.7	10.9	13.2	14.6				
2002	1	7.4	9.9	13.2	15.7	17.1	17.9			
2001	1	5.7	10.0	11.8	13.6	15.9	18.3	19.8		
2000	1	6.0	9.6	11.4	13.8	15.3	16.9	17.9	18.4	
1999	2	6.1	10.5	12.9	15.3	16.6	17.8	18.9	19.9	21.0
Mean		5.2	8.6	11.3	13.4	15.6	17.7	18.9	19.4	21.0
Smallest		3.3	6.7	8.6	10.9	11.4	15.6	17.0	18.1	19.2
Largest		7.6	12.3	14.5	17.4	18.9	19.9	20.8	21.8	22.7
STD error		0.1	0.2	0.2	0.4	0.8	0.7	0.9	1.2	1.8
95% CI LO		4.9	8.3	10.8	12.7	14.0	16.3	17.2	17.1	17.5
95% CI HI		5.4	9.0	11.7	14.2	17.1	19.1	20.6	21.7	24.4

Intercept = 0
EFDCCLAS.D08

Table 49. Population assessments for largemouth bass collected from Cranks Creek Lake (219 acres). Actual values are in

Parameter	Year 2005	2008
Mean length age 3 at capture	3 (11.2)	3 (11.2)
Spring CPUE age 1	3 (50.40)	2 (23.00)
Spring CPUE 12.0-14.9 in	1 (4.00)	2 (27.00)
Spring CPUE ≥ 15.0 in	2 (6.40)	2 (8.00)
Spring CPUE ≥ 20.0 in	3 (2.40)	3 (3.00)
Total score	12	12
Assessment rating	Good	Good
Instantaneous mortality (z)	0.48	0.52
Annual mortality (A)	38.40	40.60

EFDCCLAS.D08
EFDCCLSS.D05, D08

Table 50. 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/hour, 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
1999							44.33	10.37
2000							14.33	4.83
2001	5.0	0.11	27.33	5.21	13.33	3.04		
2002	5.1	0.09	34.40	10.63	20.80	7.74		
2003							15.00	4.25
2004							50.40	15.26
2005								
2006								
2007	4.3	0.14	32.00	8.67	7.20	2.94	23.00	7.33
2008								

EFDCCLSF.D01-D02, D07
EFDCCLAS.D08
EFDCCLSS.D00, D01, D04, D05, D08

Table 51. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.509 hours of 15-minute nocturnal electrofishing samples by area at Dewey Lake (1,100 acres) on 22 April 2008.

		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			4	9	4	2	3	6	5	3									36	28.64 (3.28)
	Largemouth bass	4	17	17	10	44	59	25	12	6	9	6	7	10	9	5	3		1	244	193.86 (17.99)
Upper	Spotted Bass		1		2	2	3	2	3	3		1								17	13.60 (12.62)
	Largemouth bass	3	21	53	25	25	50	31	15	19	16	9	7	5	1	2	1	3	1	287	229.60 (14.23)
Total	Spotted bass		1	4	11	6	5	5	9	8	3	1								53	21.12 (6.64)
	Largemouth bass	7	38	70	35	69	109	56	27	25	25	15	14	15	10	7	4	3	2	531	211.73 (12.35)

EFDDLLSS.D08

Table 52. 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	44.60		38.30		12.00		0.60		0.00		95.40	
1988	84.00		40.70		26.70		2.00		0.00		154.70	
1989	75.00		27.50		10.80		7.00		0.00		120.70	
1990	58.80		68.00		32.00		11.40		0.57		171.40	
1991	73.80		50.60		18.40		3.50		0.18		146.40	
1992	57.40		64.10		17.20		7.40		0.22		146.10	
1993	43.70		71.80		15.60		8.80		0.80		140.00	
1994	no data											
1995	46.60		59.60		28.50		3.60		0.00		138.30	16.90
1996	no data											
1997	15.30		53.30		32.30		11.00		1.00		112.00	12.20
1998	20.10		51.40		43.20		7.20		0.60		122.00	8.50
1999	78.90		34.60		39.50		12.80		0.50		165.80	12.70
2000	62.20	4.70	44.00	4.40	23.60	3.50	10.30	1.30	0.10		140.10	9.50
2001	150.10	17.20	57.80	5.70	26.90	2.70	17.80	1.60	0.60		252.60	22.80
2002	no data											
2003	71.11	10.05	55.56	4.40	23.11	1.77	22.00	2.12	0.70		171.80	14.60
2004	96.20	11.90	34.70	3.80	20.00	3.20	17.50	2.60	1.00		168.30	13.90
2005	39.30	5.00	59.20	6.30	31.00	3.20	24.50	1.90	0.30		153.90	12.80
2006	32.30	5.70	66.40	8.60	24.20	3.60	24.90	3.60	0.70		147.80	10.00
2007	54.86	9.63	80.77	9.79	35.09	4.97	30.18	4.07	1.48	0.72	200.91	19.94
2008	87.37	10.41	86.46	9.50	21.56	3.60	16.34	3.44	0.80	0.53	211.73	12.35

EFDDLLSS.D87-D02, BBRPSDEW.D03-D05, EFDDLLSS.D06-D08

Table 53. PSD and RSD values for each species of black bass in each area of Dewey Lake (1,100 acres) during spring 2008. Numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass		
Area	No. ≥ 8.0 in	PSD	RSD_{15}	No. ≥ 7.0 in	PSD	RSD_{14}
Lower	152	33 (25-40)	18 (12-25)	23	35 (15-55)	0
Upper	160	28 (21-35)	8 (4-12)	14	29 (4-53)	0
Total	312	30 (25-36)	13 (9-17)	37	32 (17-48)	

EFDDLLSS.D08

Table 54. Mean back-calculated length (in) at each annulus for largemouth bass collected from Dewey Lake (1,100 acres) on 22 April 2008, including 95% confidence intervals.

Year Class	No.	Age 1	2	3	4	5	6	7	8	9	10	11
2007	24	4.9										
2006	28	5.3	8.0									
2005	21	6.1	9.1	11.3								
2004	12	6.2	9.4	11.8	13.8							
2003	9	5.6	8.2	10.6	12.9	14.9						
2002	8	6.2	8.8	11.0	12.8	14.7	16.0					
2001	1	5.3	9.3	11.1	12.7	15.4	16.9	18.0				
2000	2	5.6	8.0	10.1	12.2	14.1	15.4	16.8	17.7			
1999	1	5.8	8.1	10.2	12.5	14.6	16.0	17.2	18.3	19.5		
1997	1	6.8	9.6	12.3	14.8	16.4	17.5	18.3	18.9	19.4	20.0	20.5
Mean		5.6	8.6	11.2	13.2	14.8	16.1	17.4	18.1	19.5	20.0	20.5
Smallest		3.3	5.6	8.7	10.2	12.0	13.1	14.1	14.9	19.4	20.0	20.5
Largest		8.9	11.2	13.7	16.3	17.6	18.6	19.5	20.4	19.5	20.0	20.5
STD error		0.1	0.1	0.2	0.3	0.4	0.5	0.9	1.2	0.0		
95% CI LO		5.4	8.4	10.8	12.6	14.1	15.2	15.7	15.8	19.4		
95% CI HI		5.8	8.9	11.5	13.8	15.5	17.0	19.2	20.4	19.5		

Intercept = 0
EFDDLLAS.D08

Table 55. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Dewey Lake (1,100 acres) from 2000-2008.

	Year							
Age	2000	2001	2003	2004	2005	2006	2007	2008
1	55.30	125.70	61.20	79.69	24.76	27.90	48.98	49.46
2	35.60	47.10	36.60	30.14	37.57	30.20	41.33	98.64
3	11.30	34.90	17.20	12.75	20.87	21.10	27.13	31.29
4	18.80	14.30	22.10	17.83	28.16	28.40	37.19	13.68
5	9.70	16.70	11.40	9.43	15.48	13.20	14.59	8.26
6	3.70	6.50	2.10	1.91	3.10	1.70	3.15	6.95
7	3.30	2.30	7.40	5.59	7.61	8.90	9.16	0.53
8	0.40	1.80	4.40	3.21	4.76	5.70	5.00	1.33
9	1.70	1.80	8.40	6.51	10.73	9.60	12.41	1.20
10	0.40	1.00	0.33	1.00	0.39	0.30	1.48	
11			0.30					0.40
12			0.30					
13				0.26	0.44	0.40	0.50	
14						0.30	0.30	

EFDDLLSS.D06-D08
BBRPSDEW.D00-D05
BBRSCDEW.D03
EFDDLLAS.D08

Table 56. Population assessments for largemouth bass collected from Dewey Lake (1,100 acres). Actual values are in parentheses.

	Year					
Parameter	2003	2004	2005	2006	2007	2008
Mean length age 3 at capture	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	2 (11.3)
Spring CPUE age 1	4 (61.20)	4 (79.70)	2 (24.80)	2 (27.90)	3 (48.98)	4 (49.46)
Spring CPUE 12.0-14.9 in	2 (23.10)	2 (20.00)	3 (31.00)	2 (24.20)	4 (35.09)	2 (21.56)
Spring CPUE ≥ 15.0 in	4 (22.00)	3 (17.50)	4 (24.50)	4 (24.90)	4 (30.18)	3 (16.34)
Spring CPUE ≥ 20.0 in	2 (0.70)	2 (1.00)	2 (0.30)	2 (0.70)	2 (1.48)	2 (0.80)
Total score	13	12	12	11	14	13
Assessment rating	Good	Good	Good	Fair	Good	Good
Instantaneous mortality (z)	0.41	0.40	0.42	0.41	0.39	0.56
Annual mortality (A)	33.60	32.60	34.30	33.50	32.10	42.80

BBRPSDEW.D03-D05
EFDDLLSS.D06-D08
BBRSCDEW.D03
EFDDLLAS.D08

Table 57. Length-frequency distribution of each black bass species captured during 2.563 hours of 15-minute nocturnal electrofishing runs at Dewey Lake (1,100 acres) on 22 September 2008. 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	Total	CPUE	
Lower	Smallmouth bass																		0		
	Spotted bass				1		2	4	5	5	3	4							24	18.30	(6.04)
	Largemouth bass	1	4	9	10	7	25	25	30	7	5	4	2	1					130	99.37	(13.92)
Upper	Smallmouth bass																		0		
	Spotted Bass							2		2	2	2							8	6.35	(6.35)
	Largemouth bass		11	38	41	18	30	47	22	28	11	4	4	2	1	2		1	260	207.40	(38.11)
Total	Smallmouth bass																		0		
	Spotted bass				1		2	6	5	7	5	6							32	12.32	(4.58)
	Largemouth bass	1	15	47	51	25	55	72	52	35	16	8	6	3	1	2		1	390	153.39	(26.27)

EFDDLLSF.D08

Table 58. 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. 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	0.04	75.58	14.20	37.56	9.36	61.23	9.44
2003	4.9	0.08	38.89	10.64	15.11	3.79	79.69	10.46
2004	5.2	0.06	45.20	7.11	25.40	4.60	24.76	4.12
2005	4.4	0.06	58.67	16.12	16.89	6.60	27.90	5.49
2006	5.1	0.07	38.97	9.89	21.32	5.82	48.98	9.18
2007	4.8	0.09	54.28	12.82	21.15	4.23	49.46	10.04
2008	5.0	0.07	54.93	14.31	30.03	7.36		

BBRPSDEW.D03-D05
BBRDLLSF.D02
BBRWRDEW.D03-D04
BBRSCDEW.D03
EFDDLLSF.D05-D07
EFDDLLSS.D06-D08
EFDDLLAS.D08

Table 59. Length frequency and CPUE (fish/nn) for white crappie collected at Fishtrap Lake (1,100 acres) in 19 net-nights from 2-3 December 2008. Standard errors are in parentheses.

	Inch class															
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	SE
WC	7	32	12	31	155	354	220	64	7	2			1	885	46.58	(14.12)
BC	29	20	15	34	102	140	35							375	19.74	(4.75)

EFDDLCTF.D08
WC=white crappie
BC=black crappie

Table 60. PSD and RSD values calculated for crappie collected in trap nets at Dewey Lake (1,100 acres) during December 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ stock size	PSD	RSD_{10}
WC	834	35 (32-39)	1 (1-2)
BC	311	11.25 (8-15)	

WC = white crappie
BC = black crappie
EFDDLCTF.D08

Table 61. Mean back-calculated length (in) at each annulus for white crappie collected from Dewey Lake (1,100 acres) in December 2008, including 95% confidence intervals.

Year		Age									
Class	No.	1	2	3	4	5	6	7	8	9	10
2008	0										
2007	24	3.9									
2006	14	3.7	5.8								
2005	18	4.3	6.0	7.2							
2004	5	4.2	5.7	6.9	7.7						
2003	15	3.9	5.6	6.6	7.4	8.1					
2002	19	4.1	5.7	6.7	7.6	8.3	9.1				
2001	2	4.5	5.7	6.5	7.3	8.1	8.8	9.6			
2000	1	4.9	7.4	8.7	9.8	10.7	11.4	12.7	13.8		
1999	1	3.8	5.1	5.8	6.4	6.8	7.0	7.3	7.5	7.7	
1998	3	3.3	4.8	5.6	6.2	6.6	7.0	7.3	7.5	7.7	7.9
Mean		4.0	5.7	6.8	7.4	8.1	8.8	8.7	8.8	7.7	7.9
Smallest		2.4	3.6	4.5	5.0	5.3	5.7	6.0	6.4	6.6	6.7
Largest		5.1	7.4	8.7	9.8	10.7	11.4	12.7	13.8	8.9	9.1
STD error		0.0	0.1	0.1	0.1	0.2	0.3	0.9	1.3	0.5	0.7
95% CI LO		3.9	5.6	6.6	7.2	7.8	8.3	7.1	6.2	6.8	6.6
95% CI HI		4.1	5.9	7.0	7.7	8.5	9.3	10.4	11.4	8.7	9.3

Intercept = 0

EFDDLCAF.D08

Table 62. Mean back-calculated length (in) at each annulus for black crappie collected from Dewey Lake (1,100 acres) in December 2008, including 95% confidence intervals.

Year		Age										
Class	No.	1	2	3	4	5	6	7	8	9	10	11
2008	0											
2007	26	3.3										
2006	9	3.5	5.4									
2005	17	3.8	5.5	6.7								
2004	7	3.4	4.9	6.0	6.6							
2003	5	3.4	5.2	6.0	6.7	7.4						
2002	4	3.8	5.3	6.0	6.6	7.2	7.8					
2001	3	3.5	4.9	5.7	6.2	6.7	7.1	7.5				
1999	1	3.2	4.2	5.1	5.7	6.0	6.2	6.4	6.5	6.7		
1998	1	2.8	4.7	5.3	5.7	5.9	6.1	6.3	6.4	6.6	6.8	
1997	2	3.2	4.8	5.7	6.2	6.6	6.8	7.0	7.2	7.4	7.6	7.8
Mean		3.5	5.2	6.2	6.5	6.9	7.1	7.0	6.9	7.1	7.4	7.8
Smallest		2.6	4.2	5.1	5.7	5.9	6.1	6.3	6.4	6.6	6.8	7.7
Largest		4.9	7.0	8.2	8.1	8.3	8.3	7.7	7.3	7.5	7.7	7.9
STD error		0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1
95% CI LO		3.4	5.1	6.0	6.2	6.6	6.7	6.6	6.4	6.6	6.8	7.6
95% CI HI		3.6	5.4	6.4	6.7	7.3	7.6	7.5	7.3	7.5	7.9	8.0

Intercept = 0
EFDFLCAF.D08

Table 63. Age frequency and CPUE (fish/nn) of white crappie collected by trap netting for 19 net-nights at Dew (1,100 acres) in December 2008; numbers in parentheses are standard errors.

	Inch class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	Age%	C
0	7	32	11											50	6	2.63
1			1	29	60	35								126	14	6.62
2				2	69	71	12							153	17	8.07
3						124	104	8						236	27	12.43
4						53		4	1					58	7	3.05
5					17	35	46	24	1					124	14	6.51
7						35	35	20	5	1				97	11	5.08
8								4		1				5	1	0.26
9													1	1	0	0.05
10							12							12	1	0.61
11					9		12	4						24	3	1.27
Total	7	32	12	31	155	354	220	64	7	2	0	0	1	885	100	
%	1	4	1	4	18	40	25	7	1	0	0	0	0			

CPUE of ≥8.0 in (quality size) = 8.83
CPUE of ≥10.0 in (preferred size) = 0.72
EFDDLCAF.D08
EFDDLCTF.D08

Table 64. Age frequency and CPUE (fish/nn) of black crappie collected by trap netting for 19 net-nights at Dewey Lake (1,100 acres) in December 2008; numbers in parentheses are standard errors.

	Inch class									
Age	2	3	4	5	6	7	8	Total	Age%	CPUE
0	29	16						45	12	2.39 (1.13)
1		4	15	27	10			55	15	2.92 (1.16)
2				7	15	28	2	53	14	2.77 (0.70)
3					46	28	12	86	23	4.54 (1.14)
4					26	14	2	42	11	2.19 (0.54)
5						28	6	34	9	1.80 (0.50)
6						14	4	18	5	0.95 (0.27)
7						14	4	18	5	0.95 (0.27)
8								0	0	0.00
9					5			5	1	0.27 (0.06)
10						14		14	4	0.74 (0.20)
11							4	4	1	0.22 (0.08)
Total	29	20	15	34	102	140	35	375	100	
%	8	5	4	9	27	37	9			

CPUE of ≥8.0 in (quality size) = 8.83
CPUE of ≥10.0 in (preferred size) = 0.72
EFDDLCAF.D08
EFDDLCTF.D08

Table 65. Population assessment scores for white crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses.

Parameter	Year 2002	2008
CPUE of crappie (excluding age 0)	4 (48.20)	4 (43.95)
CPUE age 1	4 (14.40)	2 (6.62)
CPUE age 0	4 (27.50)	1 (2.63)
CPUE $\geq$ 8.0 in	2 (4.80)	4 (15.47)
Mean length age 2 at capture	1 (6.3)	1 (7.0)
Instantaneous mortality (z)	1.27	0.49
Annual Mortality (A)	72.00	38.80
Total score	15	12
Assessment rating	Good	Fair

EFDDLCTF.D02, D08
EFDDLCAF.D02, D08

Table 66. Population assessment scores for black crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses.

Parameter	Year 2002	2008
CPUE of crappie (excluding age 0)	2 (6.10)	3 (17.35)
CPUE age 1	1 (1.30)	1 (2.92)
CPUE age 0	1 (0.60)	1 (2.39)
CPUE ≥ 8.0 in	1 (0.10)	1 (1.84)
Mean length age 2 at capture	1 (5.0)	1 (6.5)
Instantaneous mortality (z)	1.25	0.35
Annual Mortality (A)	71.40	29.60
Total score	6	7
Assessment rating	Poor	Poor

EFDDLCTF.D02, D08
EFDDLCAF.D02, D08

Table 67. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.966 hours of 7.5-min. nocturnal electrofishing samples in Fishpond Lake (32 acres) on 23 April 2008; 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	
LMB	1	2	1	1	2	3	19	80	45	11	3	3			1	1	6	1	3	1	184	192.91	(15.38)

LMB = largemouth bass
EFDFPLSS.D08

Table 68. 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.
2004	78.85	12.20	75.96	7.90	45.19	5.90	39.42	6.70	3.85	2.91	239.50	14.90
2006	31.88	5.54	168.05	9.90	14.67	3.82	30.42	2.40	7.94	2.92	245.02	12.53
2008	4.97	1.99	109.29	13.59	61.79	6.21	16.86	3.33	11.63	2.39	192.91	15.38

EFDFPLSS.D04
EFDFPLSS.D06
EFDFPLSS.D08

Table 69. PSD and RSD values obtained for largemouth bass species taken in spring nocturnal electrofishing samples in Fishpond Lake (32 acres) on 23 April 2008; 95% confidence intervals are in parentheses.

No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
179	42 (35-49)	9 (5-13)

EFDFPLSS.D08

Table 70. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.03 hours of 15-minute nocturnal electrofishing samples on Fishtrap Lake (1,143 acres) 30 April and 1 May 2008; numbers in parentheses are standard errors.

Area/		Inch class																		
	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Upper																				
	LMB			2	1	1	2	8	6	5	5	6	10	2	1	1	1		51	131.04 (11.64)
	SMB						3			1	1								5	10.29 (1.21)
	SB						4	1	4		1								10	8.71 (2.46)
Lower																				
	LMB			2	1	1	2	8	6	5	5	6	10	2	1	1	1		51	116.00 (10.07)
	SMB		2	1				2		3		1		2		1			12	45.60 (6.11)
	SB	1	2	2	10	11	7	9	3	2									47	48.00 (16.22)
Total																				
	LMB	2	21	36	18	4	5	24	15	19	20	29	16	8	2	3	4	2	228	111.91 (14.98)
	SMB		2	1			3	2		4	1	1		2		1			17	8.43 (3.07)
	SB	1	2	2	10	11	11	10	7	2	1								57	28.39 (11.45)

LMB = largemouth bass
SB = spotted bass
SMB = smallmouth bass
EFDFLLSS.D08

Table 71. Spring electrofishing CPUE (fish/hr) for each length group of largemouth and smallmouth bass at Fishtrap Lake (1,143 acres).

	Largemouth bass 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	28.70	4.20	29.00	2.30	19.00	2.60	23.00	4.30	3.40		99.70	9.90
2001	20.30	3.70	32.70	4.30	17.30	2.50	10.30	2.90	1.30		80.70	7.70
2002						no data						
2003	43.00	4.40	25.00	7.60	16.00	4.90	11.00	3.40	2.00		95.00	4.10
2004	44.70	6.80	45.10	5.80	19.30	2.20	13.10	3.90	1.50		122.20	10.70
2005	61.80	10.20	67.60	10.00	38.90	6.50	14.90	2.00	0.00		183.30	20.80
2006	52.50	8.80	37.60	1.90	33.00	3.40	4.00	0.70	0.00		127.10	11.60
2007	28.69	4.73	53.93	8.34	33.00	3.47	7.91	1.85	1.19	0.85	123.52	13.48
2008	39.49	12.67	31.06	3.49	31.99	5.81	9.37	2.66	0.00		111.91	14.98

	Smallmouth bass length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		≥14.0 in		≥17.0 in		Total	
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2000	4.70	1.60	3.30	1.80	1.70	0.60	0.00		0.00		9.70	3.30
2001	4.70	2.00	7.70	2.40	4.30	1.40	0.70	0.50	0.00		17.30	4.90
2002						no data						
2003	1.00	1.00	4.00	2.80	2.00	2.00	1.00	1.00	0.33		8.00	4.90
2004	5.10	2.20	9.50	3.00	4.40	1.40	2.90	1.60	0.45		21.80	6.60
2005	4.40	1.70	4.70	2.20	4.40	2.00	1.80	0.80	0.36		15.30	5.30
2006	8.30	4.30	5.00	1.90	3.00	1.10	1.30	0.70	0.66		17.80	6.20
2007	8.39	2.83	11.59	4.71	5.58	1.71	2.38	1.06	1.19	0.61	27.95	8.67
2008	1.50	1.05	2.47	0.72	2.97	1.25	1.50	1.50	0.50	0.50	8.43	3.07

EFDFLLSS.D00-D08

Table 72. PSD and RSD values obtained for black bass collected in spring electrofishing samples in each area of Fishtrap Lake during 2008; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Lower	largemouth bass	100	55 (41-70)	11 (2-20)
	smallmouth bass	5	78 (49-107)	33 (1-66)
	spotted bass	10	6 (0-15)	
Upper	largemouth bass	47	58 (48-68)	14 (7-21)
	smallmouth bass	9	40 (0-88)	
	spotted bass	32	10 (0-30)	
Total	largemouth bass	147	57 (49-65)	13 (8-18)
	smallmouth bass	14	64 (38-90)	21 (0-44)
	spotted bass	42	7 (0-15)	

[a] Largemouth bass = RSD15, smallmouth and spotted bass = RSD14
EFDFLLSS.D08

Table 73. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Fishtrap Lake (1,143 acres) from 2003-2008.

	Year					
Age	2003	2004	2005	2006	2007	2008
1	42.00	44.73	61.45	52.49	28.29	38.51
2	26.79	46.82	73.41	43.50	57.76	34.78
3	9.61	13.30	26.53	22.99	22.68	21.33
4	7.20	7.30	9.80	5.21	8.79	9.12
5	2.50	2.53	4.93	1.13	2.05	2.10
6	0.50	1.45	1.09	0.16	0.39	0.99
7	4.40	4.96	5.69	1.60	2.57	4.11
8	1.00	1.09			0.60	

EFDFLLSS.D03-D08
EFDFLLAS.D04

Table 74. Spring electrofishing catch rate (fish/hr) for each age of smallmouth bass collected from Fishtrap Lake (1,143 acres) from 2006-2008.

	Year		
Age	2006	2007	2008
1	6.97	6.39	1.50
2	5.80	13.39	3.46
3	2.81	4.98	1.73
4	0.33	1.59	0.25
5	0.49	1.00	1.25
6	0.16	0.20	0.25

EFDFLLSS.D06-D08
EFDFLSAS.D07

Table 75. Population assessments for largemouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses.

	Year					
Parameter	2003	2004	2005	2006	2007	2008
Mean length age 3 at capture	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)
Spring CPUE age 1	3 (42.00)	2 (35.40)	4 (61.50)	4 (52.50)	2 (28.29)	3 (38.51)
Spring CPUE 12.0-14.9 in	2 (16.00)	2 (19.30)	4 (38.90)	3 (33.00)	3 (33.00)	3 (31.99)
Spring CPUE $\geq$ 15.0 in	2 (11.00)	3 (13.10)	3 (14.90)	1 (4.00)	2 (7.91)	2 (9.37)
Spring CPUE $\geq$ 20.0 in	3 (2.00)	2 (1.50)	0 (0.00)	0 (0.00)	2 (1.19)	0 (0.00)
Total score	14	13	15	12	13	12
Assessment rating	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.52	0.56	0.65	0.83	0.72	0.59
Annual mortality (A)	40.40	42.70	48.00	56.50	51.30	44.30

EFDFLLSS.D03-D08
EFDFLLAS.D04

Table 76. Population assessments for smallmouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses.

	Year		
Parameter	2006	2007	2008
Mean length age 3 at capture	4 (12.5)	4 (12.5)	4 (12.5)
Spring CPUE age 1	2 (6.97)	2 (6.39)	2 (1.50)
Spring CPUE 11.0-13.9 in	3 (2.97)	3 (5.58)	3 (2.97)
Spring CPUE ≥ 14.0 in	3 (1.32)	4 (2.38)	3 (1.50)
Spring CPUE ≥ 17.0 in	4 (0.66)	4 (1.19)	4 (0.50)
Total score	16	17	16
Assessment rating	Good	Excellent	Good
Instantaneous mortality (z)	0.69	0.85	0.56
Annual mortality (A)	49.60	57.30	42.70

EFDFLLSS.D06-D08
EFDFLSAS.D07

Table 77. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1.514 hours of 15-minute nocturnal electrofishing samples at Fishtrap Lake (1,143 acres) on 18 September 2008; 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	Total	CPUE	
Lower																						
SMB		1	1				1		2	1	3	1	1			1				12	15.83	(6.02)
SB		2	1		6	7	14	12	6	5	2									55	72.91	(32.02)
LMB		2	9	6	1	2	8	13	9	9		3	1	3	4		1		2	73	96.27	(11.31)
Upper																						
SMB						1		1	1	2										5	6.64	(2.68)
SB						1	2		3		1									7	9.30	(5.35)
LMB	1	17	45	30	3	3	20	32	9	11	6	5	4		3	1	2			192	253.63	(28.44)
Total																						
SMB		1	1			1	1	1	3	3	3	1	1			1				17	37.17	(3.59)
SB		2	1		6	8	16	12	9	5	3									62	52.38	(20.33)
LMB	1	19	54	36	4	5	28	45	18	20	6	8	5	3	7	1	3		2	265	265.95	(37.75)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDFLLSF.D08

Table 78. 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	0.04	106.20	32.90	59.60	15.90	35.35	6.00
2004	5.0	0.03	256.00	51.10	122.67	23.90	61.50	10.15
2005	4.5	0.05	108.00	41.30	24.00	11.10	52.49	8.75
2006	5.0	0.05	72.70	14.10	36.50	8.00	28.29	4.49
2007	5.1	0.05	114.20	23.70	63.50	11.03	38.51	12.06
2008	4.6	0.06	75.30	25.85	26.34	9.49		

EFDFLLSF.D03-D08
EFDFLLSS.D04-D08
EFDFLLAS.04

Table 79. Length frequency and CPUE (fish/nn) for white crappie collected at Fishtrap Lake (1,143 acres) in 18 net-nights from 18-19 November 2008. Standard errors are in parentheses.

Inch class											
3	4	5	6	7	8	9	10	11	12	Total	CPUE
149	189	63	142	210	107	39	8	3	2	912	50.67 (14.23)

EFDFLCTF.D08

Table 80. PSD and RSD values calculated for crappie collected in trap nets at Fishtrap Lake (1,143 acres)during November 2008; 95% confidence intervals are in parentheses.

No. ≥ stock size	PSD	RSD_{10}
574	28 (24 - 31)	2 (1 - 4)

EFDFLCTF.D08

Table 81. Mean back-calculated length (in) at each annulus for white crappie collected from Fishtrap Lake (1,143 acres) in November 2008, including 95% confidence intervals.

Year		Age							
Class	No.	1	2	3	4	5	6	7	8
2008	0								
2007	28	4.3							
2006	28	4.3	6.7						
2005	22	4.9	7.1	8.6					
2004	2	4.6	7.3	9.2	10.7				
2003	6	4.7	6.8	8.1	9.0	10.0			
2001	2	3.9	5.7	6.8	7.7	8.4	9.1	9.7	
2000	1	4.4	5.8	6.7	7.3	7.9	8.3	9.2	9.4
Mean		4.5	6.8	8.4	8.9	9.4	8.8	9.5	9.4
Smallest		2.9	5.4	6.4	7.3	7.9	8.3	9.2	9.4
Largest		6.0	8.4	10.2	11.4	11.2	9.3	10.0	9.4
STD error		0.1	0.1	0.2	0.4	0.4	0.3	0.3	
95% CI LO		4.4	6.7	8.1	8.2	8.6	8.3	9.0	
95% CI HI		4.6	7.0	8.7	9.7	10.2	9.4	10.0	

Intercept = 0

EFDFLCAF.D08

Table 82. Age frequency and CPUE (fish/nn) of white crappie collected by trap netting for 18 net-days at Fishtrap Lake (1,143 acres) in November 2008; numbers in parentheses are standard errors.

	Inch Class													
Age	3	4	5	6	7	8	9	10	11	12	Total	Age%	CPUE	
0	149	189									338	37	18.78	(6.91)
1			63	104	28						195	21	10.84	(3.48)
2				38	182	47	10				277	30	15.39	(4.67)
3						54	23	3	2		82	9	4.55	(1.18)
4								1		1	2	0	0.12	(0.04)
5						7		2	2	1	11	1	0.64	(0.17)
7							3	1			4	0	0.21	(0.05)
8							3				3	0	0.14	(0.04)
Total	149	189	63	142	210	107	39	8	3	2	912	100		
%	16	21	7	16	23	12	4	1	0	0				

CPUE of ≥8 in (quality size) = 8.83

CPUE of ≥10 in (preferred size) = 0.72

EFDFLCAF.D08

EFDFLCTF.D08

Table 83. Population assessment scores for white crappie collected from Fishtrap Lake (1,143 acres). Actual assessment values are in parentheses.

Parameter	Year			
	2003	2005	2007	2008
CPUE of crappie (excluding age 0)	4 (100.00)	4 (38.90)	2 (6.70)	4 (31.89)
CPUE age 1	4 (33.20)	1 (2.10)	2 (3.20)	3 (10.84)
CPUE age 0	1 (0.001)	4 (22.50)	1 (2.70)	4 (18.78)
CPUE $\geq$ 8.0 in	4 (15.9)	4 (25.90)	2 (2.85)	3 (8.83)
Mean length age 2 at capture	1 (7.1)	1 (8.2)	2 (8.8)	1 (7.8)
Instantaneous mortality (z)	1.45	0.56	0.80	0.78
Annual Mortality (A)	76.60	43.10	54.90	54.40
Total score	14	14	9	15
Assessment rating	Good	Good	Fair	Good

EFDFLCTF.D03, D05, D07, D08

Table 84. Length frequency and CPUE (fish/hr) of bluegill, redear sunfish, black crappie, and largemouth bass collected in 0.455 hours of 7.5 minute daytime electrofishing runs at Martin County Lake (3 acres) on 22 April 2008. SE = standard error.

	Inch class																		
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	SE
BG	6	36	27	6	3	6	6										90	152.47	61.51
RE					2												2	4.80	8.00
BC						1	2		2	4		1		1			11	21.72	10.26
LMB		1	4		1	8	8	6	1	1	11	6	2	2	1	1	53	101.94	35.89

BG = bluegill
RE = redear sunfish
BC = black crappie
LMB = largemouth bass
EFDMCLSS.D08

Table 85. Length frequency and electrofishing CPUE (fish/hr) and SE (standard error) of black bass collected in approximately 0.654 hours of 7.5-min. electrofishing runs in Martin County Reservoir (23 acres) on 25 April 2008.

	Inch class																		
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	SE
LMB	1	6	11	11		3	18	25	19	16	3	3	2				1	119	181.88	9.73

LMB = largemouth bass
EFDMRLSS.D08

Table 86. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Martin County Reservoir (23 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
2004	26.37	8.00	128.57	16.70	17.58	4.00	0.00		0.00	172.50	25.40
2006	85.74	12.95	36.56	6.03	33.32	6.31	1.60	1.60	0.00	157.22	14.89
2007	53.00	7.83	158.80	37.37	56.96	5.44	5.33	3.37	0.00	274.10	41.68
2008	45.10	9.99	98.68	13.47	33.44	5.33	4.66	1.91	0.00	181.88	9.73

EFDMRLSS.D04, D06, D07, D08

Table 87. PSD and RSD values obtained for largemouth bass species taken in spring electrofishing samples in Martin County Reservoir (23 acres) on 25 April 2008; 95% confidence intervals are in parentheses.

No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
90	28 (19-37)	3 (0-7)

EFDMRLSS.D08

Table 88. Length frequency and CPUE (fish/hr) of black bass and walleye collected in 1.286 hours of 15-min nocturnal electrofishing runs in Martins Fork Lake (330 acres) on 28 April 2008; 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	Total	CPUE
LMB		3	4	3	9	7	3	6	11	7	8	6	5	6	5	2	1	86	66.88 (12.21)
RB																		0	0.00
SB	1	1	5	6	5	5	5	1	1	1	1							32	24.90 (5.03)
WE																		0	0.00

LMB =largemouth bass
RB = redeye bass (coosa bass)
SB = spotted bass
WE = walleye
EFDMLLSS.D08

Table 89. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Martins Fork Lake (330 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	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	14.00	3.70	22.00	3.80	3.30	1.20	5.30	2.00	0.00		68.00	15.70
2004	2.67	2.70	89.33	19.20	4.00	2.30	5.33	3.50	0.00		101.30	26.80
2005	4.80	2.30	23.20	6.00	17.60	4.80	4.80	2.00	0.00		50.40	10.80
2006	9.30	1.97	19.89	6.03	13.26	2.99	9.30	2.66	0.70		51.74	10.70
2007	7.86	3.30	48.64	13.30	15.65	2.58	21.13	5.27	1.57	0.96	93.27	19.34
2008	7.80	4.80	19.46	7.18	20.21	3.74	19.41	2.41	0.77	0.77	66.88	12.21

EFDMLLSS.D03-D08

Table 90. PSD and RSD values obtained for each black bass species taken in spring nocturnal electrofishing samples on Martins Fork Lake (330 acres) in April 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a](+/- 95%)
spotted bass	25	16 (1-31)	4 (0-12)
largemouth bass	76	67 (57-78)	33 (22-44)

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

EFDMLLSS.D08

Table 91. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Martins Fork Lake (330 acres) from 2003-2008.

	Year					
Age	2003	2004	2005	2006	2007	2008
1	15.31	10.86	5.37	9.98	10.12	9.98
2	19.35	78.25	20.76	17.66	41.28	17.80
3	3.33	6.89	15.47	9.49	8.22	13.50
4	2.67	1.33	2.40	6.64	15.65	10.06
5	0.67			1.33	2.36	3.90

EFDMLLSS.D03-D08

EFDMLLAS.D03

Table 92. Spring electrofishing population assessments for largemouth bass collected from Martins Fork Lake (330 acres). Actual values are in parentheses.

	Year					
Parameter	2003	2004	2005	2006	2007	2008
Mean length age-3 at capture	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)
Spring CPUE age 1	2 (32.20)	1 (10.90)	1 (5.40)	1 (9.98)	1 (10.12)	1 (9.98)
Spring CPUE 12.0-14.9 in	1 (3.30)	1 (4.00)	1 (17.60)	1 (13.30)	1 (15.65)	2 (20.21)
Spring CPUE ≥ 15.0 in	2 (5.30)	2 (5.30)	2 (4.80)	2 (9.30)	3 (21.13)	3 (19.41)
Spring CPUE ≥ 20.0 in	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.70)	2 (1.57)	1 (0.77)
Total score	9	8	8	9	11	11
Assessment rating	Fair	Fair	Fair	Fair	Fair	Fair
Instantaneous mortality (z)	1.03	2.04	1.08	0.81	0.80	0.48
Annual mortality (A)	64.40	87.00	66.00	55.70	55.10	38.40

EFDMLLSS.D03-D08
EFDMLLAS.D03

Table 93. Length frequency and CPUE (fish/hr) of black bass collected at Martins Fork Lake (330 acres) during 1.264 hours of 15 minute nocturnal electrofishing samples on 25 September 2008; 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
LMB	3	7	17	11	2	1	5	3		2		1	1	1	2					1	57	45.27 (11.85)
RB		1				1															2	1.60 (1.60)
SB	1	4	11	12	14	14	7	4	2	1	1	1									72	57.00 (10.90)
SMB																					0	0.00

LMB = largemouth bass
RB = redeye bass (coosa bass)
SB = spotted bass
SMB = smallmouth bass
EFDMLLSF.D08

Table 94. Number of fish and relative weight (Wr) for each length group of black bass collected at Martins Fork Lake (330 acres) on 25 September 2008. 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
Largemouth bass	9	81.0 (1.4)	2	92.5 (6.2)	4	102.4 (5.0)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	No.	Wr	No.	Wr	No.	Wr
Spotted bass	27	90.3 (4.8)	3	86.2 (8.4)	0	

EFDMLLSF.D08

Table 95. Electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2002 - 2008 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	0.12	34.40	8.60	25.60	7.90	15.30	3.60
2003			no fall sample				77.50	18.50
2004			no fall sample				24.60	5.90
2005	4.4	0.17	32.00	4.30	10.00	2.60	9.98	2.30
2006	4.5	0.13	38.40	14.50	11.20	3.20	10.12	3.36
2007	4.6	0.15	28.68	8.65	10.36	2.99	9.98	5.09
2008	4.4	0.15	31.87	14.27	10.33	2.72		

EFDMLLSF.D02
EFDMLLSF.D05-D08
EFDMLLSS.D03-D08
EFDMLLAS.D03

Table 96. Length frequency and CPUE (fish/hr) of black bass collected in 2.529 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 29 April 2008; numbers in parentheses are standard

	Inch class																			
Species/Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Upper																				
LMB		7	25	14	22	53	13	11	4	6	8	2		3			2	1	171	133.68 (10.43)
SMB					1												1		2	1.56 (0.96)
SB	1	3	1	7	6	3	3		3	1	1	1							30	23.53 (9.89)
Lower																				
LMB	1	5	6	6	10	51	41	18	9	4	2	3	3				1		160	128.00 (28.06)
SMB																			0	0.00
SB		1			4	2		1	1	3	1								13	10.40 (5.00)
Total																				
LMB	1	12	31	20	32	104	54	29	13	10	10	5	3	3			3	1	331	130.84 (14.14)
SMB					1												1		2	0.78 (0.52)
SB	1	4	1	7	10	5	3	1	4	4	2	1							43	16.97 (5.66)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSS.D08

Table 97. 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	6.81		10.55		1.62		0.29		0.00		19.30	
1989	15.43		16.01		3.42		0.85		0.00		36.30	
1990	34.00		31.33		2.67		2.00		0.00		70.00	
1991	26.55		33.09		12.00		0.36		0.40		72.00	
1992	16.43		43.96		21.26		0.72		0.00		82.37	
1993	16.36		26.33		22.50		2.81		0.63		68.00	
1994	34.00		47.40		26.60		3.56		0.27		111.60	15.60
1995						no sample						
1996						no sample						
1997	29.00		40.00		26.33		1.00		0.30		96.33	11.53
1998	25.70		87.69		26.34		0.00		0.00		139.70	17.90
1999	36.33		65.67		36.67		2.33		0.00		141.00	12.07
2000	12.67	4.97	95.00	19.57	27.00	7.83	2.00	0.78	0.00	0.00	136.67	27.97
2001	42.33	5.45	63.00	10.84	46.67	4.81	4.33	0.92	0.67	0.45	156.33	17.52
2002	41.80	1.80	70.50	2.70	36.00	1.40	2.20	0.20	0.00	0.00	150.90	14.20
2003	106.00	21.17	71.00	10.80	19.67	5.65	3.00	1.31	0.31	0.31	199.67	35.19
2004	62.67	10.90	92.00	19.20	17.00	3.40	2.00	0.90	0.00	0.00	173.70	25.40
2005	80.40	31.90	133.30	38.90	35.10	6.00	6.20	1.20	0.44	0.44	255.10	72.70
2006	30.55	4.43	65.11	12.57	13.60	1.92	2.64	1.12	0.00	0.00	111.91	14.27
2007	39.83	9.49	81.55	22.98	11.11	3.11	6.53	0.84	0.00	0.00	139.03	20.47
2008	37.80	6.55	79.25	11.91	9.84	1.75	3.96	1.56	0.39	0.39	130.84	14.14

EFDPLLSS.D88-D08

Table 98. 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 29 April 2008; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a](+/- 95%)
Upper	smallmouth bass	2	50 (0-148)	50 (0-148)
	spotted bass	18	33 (11-56)	6 (0-16)
	largemouth bass	103	21 (13-29)	6 (1-10)
Lower	smallmouth bass	0		
	spotted bass	12	42 (13-71)	0
	largemouth bass	132	10 (5-15)	3 (0-6)
Total	smallmouth bass	2	50 (0-148)	50 (0-148)
	spotted bass	30	37 (19-54)	3 (0-10)
	largemouth bass	235	15 (10-20)	4 (2-7)

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

EFDPLLSS.D08

Table 99. Spring nocturnal electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Paintsville Lake (1,150 acres).

	Year								
Age	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	11.80	41.00	41.20	68.30	54.60	75.60	12.28	37.95	29.76
2	68.80	29.70	50.30	21.36	81.80	104.10	70.36	47.30	72.43
3	42.60	65.70	42.80	11.19	22.40	55.60	18.87	43.41	19.95
4	7.10	9.60	8.70	4.46	9.60	8.70	4.46	3.51	3.23
5	2.90	3.90	3.90	1.28	2.60	4.10	2.86	1.63	2.04
6	1.70	2.80	2.50	0.31	1.10	1.90	2.76	1.95	1.85
7						0.40			

EFDPLLSS.D00-D08
EFDPLLAS.D03
EFDPLLAS.D06

Table 100. Spring nocturnal electrofishing population assessments for largemouth bass collected in Paintsville Lake (1,150 acres). Actual values are in parentheses.

	Year						
Parameter	2002	2003	2004	2005	2006	2007	2008
Mean length age-3 at capture	2 (11.4)	2 (11.4)	2 (11.4)	2 (11.4)	3 (11.7)	3 (11.7)	3 (11.7)
Spring CPUE age 1	3 (41.20)	4 (95.20)	4 (61.44)	4 (75.60)	1 (12.30)	3 (37.95)	2 (29.76)
Spring CPUE 12.0-14.9 in	4 (36.00)	2 (19.67)	2 (17.00)	4 (35.10)	1 (13.60)	1 (11.11)	1 (9.84)
Spring CPUE $\geq$ 15.0 in	1 (2.20)	1 (3.00)	1 (2.00)	2 (6.20)	1 (2.64)	2 (6.53)	1 (3.96)
Spring CPUE $\geq$ 20.0 in	0 (0.00)	2 (0.31)	0 (0.00)	2 (0.44)	0 (0.00)	0 (0.00)	2 (0.39)
Total score	10	11	9	14	6	9	9
Assessment rating	Fair	Fair	Fair	Good	Poor	Fair	Fair
Instantaneous mortality (z)	0.83	0.95	1.15	1.10	0.84	0.95	0.95
Annual mortality (A)	56.50	61.30	68.20	66.60	56.80	61.20	61.30

EFDPLLSS.D02-D08
EFDPLLAS.D03
EFDPLLAS.D06

Table 101. Length frequency and CPUE (fish/hr) of black bass collected in 2.561 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 30 September 2008; numbers in parentheses are standard errors.

Area/	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	Total	CPUE	
Upper																									
LMB			8	13	2	1	35	52	22	3	1			3				2				1	143	110.91	(21.95)
SMB																							0		
SB			6	11	1	6	8	2	1				1										36	26.09	(14.85)
Lower																									
LMB	1		3	18	16	4	4	27	23	24	7	2		3	1								133	103.67	(31.13)
SMB			1																				1	0.80	(0.80)
SB							2	1	2	2		1											8	6.23	(2.63)
Total																									
LMB	1		11	31	18	5	39	79	45	27	8	2		6	1			2				1	276	107.29	(17.99)
SMB			1																				1	0.40	(0.40)
SB			4	3	4	6	9	7	4	2	1	1	1										42	16.16	(7.84)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSF.D08

Table 102. 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	Standard error	CPUE	Standard error	CPUE	Standard error	CPUE	Standard error
2003	4.8	0.08	31.30	6.10	14.00	2.20	61.44	10.70
2004	5.1	0.06	65.67	10.80	37.33	8.60	75.60	29.20
2005	4.5	0.09	46.00	9.60	10.70	2.70	12.30	2.40
2006	4.9	0.06	72.40	12.00	33.60	5.10	37.95	7.95
2007	5.1	0.06	52.35	24.04	30.20	15.57	29.76	4.56
2008	4.6	0.11	24.84	8.75	8.07	5.15		

EFDPLLSF.D03-D08
EFDPLLSS.D04-D08
EFDPLLAS.D03
EFDPLLAS.D06

Table 103. Length frequency and CPUE (fish/hr) of walleye collected at Paintsville Lake (1,150 acres) during daytime spring electrofishing.

	Inch class																	
Year	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total	CPUE	SE
2008	1	2	4	2	6	4	3	2		2	1			3	4	34	7.91	4.08

EFDPLWSS.D08

Table 104. Mean back-calculated length (in) at each annulus for walleye collected from Paintsville Lake (1,150 acres) on 18 and 20 March 2008, including 95% confidence intervals.

Year Class	No.	Age									
		1	2	3	4	5	6	7	8	9	10
2005	13	11.1	14.8	17.1							
2004	4	10.6	14.0	18.1	20.1						
2003	5	10.8	14.4	17.3	19.1	20.5					
2002	3	10.8	13.6	15.2	16.5	17.9	19.0				
2001	2	10.4	14.4	17.8	19.8	21.1	22.4	23.6			
2000	3	11.7	15.7	18.4	20.6	22.9	25.0	26.6	28.2		
1999	1	13.0	18.1	20.9	22.7	24.1	25.5	26.4	27.4	28.3	
1998	1	11.5	16.6	19.8	21.8	23.4	24.9	26.1	26.9	27.7	28.5
Mean		11.1	14.7	17.5	19.5	21.0	22.8	25.7	27.8	28.0	28.5
Smallest		8.1	10.4	13.6	14.7	15.7	16.7	20.0	26.9	27.7	28.5
Largest		13.3	18.1	21.0	23.7	24.6	25.8	27.2	28.5	28.3	28.5
STD error		0.2	0.3	0.3	0.6	0.8	1.1	0.9	0.3	0.3	
95% CI LO		10.7	14.1	16.8	18.3	19.5	20.7	23.8	27.2	27.4	
95% CI HI		11.5	15.3	18.1	20.8	22.5	24.8	27.5	28.3	28.6	

Intercept = 0

EFDPLWAS.D08

Table 105. Spring electrofishing population assessments for the walleye population at Paintsville Lake. Actual values are in parentheses.

Parameter	Year 2008
Population Density (CPUE all fish)	1 (7.91)
Growth rate (mean length age 3 at capture)	3 (17.4)
Size structure (CPUE ≥ 20.0 in)	3 (3.49)
Recruitment (CPUE < 13.0 in)	0 (0.00)
Total Score	7
Assessment Rating	Fair
Instantaneous mortality (z)	0.31
Annual mortality (A)	26.70

EFDPLWSS.D08
EFDPLWAS.D08

Table 106. Number of fish and relative weight (Wr) for each length group of walleye collected at Paintsville Lake (1,150 acres) on 18 and 20 March 2008. Numbers in parentheses are standard errors.

Length group					
10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr
1	79.1	17	82.9 (2.6)	14	93.7 (2.4)

EFDPLWSS.D08

Table 107. Length frequency and CPUE (fish/hr) and SE (standard error) of crappie collected by electrofishing at Paintsville Lake (1,150 acres) on 18 and 20 March 2008.

	Inch class													
	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	SE
WC	1	3	6	8	6	4	4	1			1	34	8.09	(5.79)
BC												0		

EFDPLWSS.D08
WC=white crappie
BC=black crappie

Table 108. Spring electrofishing CPUE (fish/hr) for each length group of crappie collected at Paintsville Lake (1,150 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
2008	3.79	1.48	0.00		1.42	0.50	0.00		3.79	1.48	1.42	0.50	8.09	5.79	0.00	

EFDPLWSS.D08

Table 109. PSD and RSD values for black and white crappie taken in spring electrofishing samples at Paintsville Lake (1,150 acres) on 18 and 20 March 2008; 95% confidence intervals are in parentheses.

Species	No. ≥ 5.0 in	PSD (+/- 95%)	RSD_{10} (+/- 95%)
white crappie	33	48 (31-66)	18 (5-32)
black crappie	0		

EFDPLWSS.D08

Table 110. Mean back-calculated length (in) at each annulus for white crappie collected from Paintsville Lake (1,150 acres) on 18 and 20 March 2008, including 95% confidence intervals.

Year Class	No.	Age 1	2	3	4	5	6	7	8
2006	8	3.9	6.1						
2005	9	4.1	6.0	7.9					
2004	7	3.9	5.9	7.5	8.8				
2003	6	4.0	6.1	7.7	9.1	10.3			
2001	1	5.1	8.7	10.4	12.0	12.9	13.3	14.0	
Mean		4.0	6.1	7.9	9.2	10.6	13.3	14.0	
Smallest		3.2	5.3	6.5	7.4	9.5	13.3	14.0	
Largest		5.1	8.7	10.4	12.0	12.9	13.3	14.0	
STD error		0.1	0.1	0.2	0.3	0.4			
95% CI LO		3.9	5.9	7.5	8.5	9.8			
95% CI HI		4.2	6.4	8.2	9.8	11.5			

Intercept = 0
EFDPLCAS.D08

Table 111. Spring electrofishing catch rate (fish/hr) for each age of white crappie collected from Paintsville Lake (1,150 acres).

Age	Year 2008
1	0.00
2	2.39
3	2.15
4	1.66
5	1.41
6	
7	0.24

EFDPLWSS.D08
EFDPLCAS.D08

Table 112. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected at Pan Bowl Lake (98 acres)during 1.125 hours of 7.5 minute daytime runs on 17 April 2008. SE = standard error.

Inch class																					
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	SE
1	6	7	3	11	23	25	30	17	14	6	4	3	3			5	5	2	165	158.50	(26.87)

EFDPBLSS.D08

Table 113. Spring daytime electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Pan Bowl Lake (98 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	28.80	10.20	47.20	9.60	12.00	1.30	25.60	4.10	3.20		113.60	20.50
2004	no data											
2005	12.80	4.10	65.80	13.30	9.40	3.60	18.00	4.30	1.80		106.00	18.90
2006	no data											
2007	90.29	26.63	149.71	20.19	12.57	3.85	22.86	4.43	6.86	2.72	275.43	39.19
2008	28.00	10.03	91.00	15.56	21.50	6.37	18.00	4.72	7.00	1.81	158.50	26.87

EFDPBLSS.D03-D08

Table 114. PSD and RSD values for largemouth bass taken in spring electrofishing samples in Pan Bowl Lake (98 acres) on 17 April 2008; 95% confidence intervals are in parentheses.

No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
137	31 (23-38)	13 (8-19)

EFDPBLSS.D08

Table 115. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Pan Bowl Lake (98 acres) from 2003-2008.

	Year			
Age	2003	2005	2007	2008
1	19.20	3.42	72.00	17.00
2	32.00	53.68	92.11	51.40
3	15.38	14.77	45.03	32.91
4	10.05	7.5	30.29	21.83
5	10.30	10.09	14.10	13.86
6	10.40	6.84	4.57	6.50
7	2.53	3.56	4.95	2.50
8	5.60	3.42	8.00	7.00
9	1.73	2.71	4.38	2.50

EFDPBLSS.D03, D05, D07-D08
EFDPBLAS.D07

Table 116. Population assessments for largemouth bass collected during spring at Pan Bowl Lake (98 acres). Actual values are in parentheses.

	Year			
Parameter	2003	2005	2007	2008
Mean length age 3 at capture	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)
Spring CPUE age 1	2 (19.20)	1 (3.42)	3 (72.00)	2 (17.00)
Spring CPUE 12.0-14.9 in	1 (12.00)	1 (9.40)	1 (12.60)	2 (21.50)
Spring CPUE ≥ 15.0 in	3 (25.60)	3 (18.00)	3 (22.86)	3 (18.00)
Spring CPUE ≥ 20.0 in	3 (3.20)	2 (1.80)	4 (6.86)	4 (7.00)
Total score	11	9	13	13
Assessment rating	Fair	Fair	Good	Good
Instantaneous mortality (z)	0.36	0.37	0.43	0.42
Annual mortality (A)	30.30	31.20	35.20	34.10

EFDPBLSS.D03, D05, D07-D08
EFDPBLAS.D07

Table 117. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.750 hours of 7.5-min. electrofishing runs in Pikeville City Lake (20 acres) on 18 April 2008. SE = standard error.

	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	SE
LMB	2	1	1			4	14	6	9	7	1	4	3	4	2	10	7	7	6	2	90	120.00	16.65

LMB = largemouth bass
EFDHALSS.D08

Table 118. 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	5.13	2.60	12.82	12.80	15.38	7.70	30.77	8.90	2.56		64.10	2.60
2005	12.80	4.30	11.50	3.30	1.30	1.30	51.30	9.50	8.90		76.90	8.10
2006	5.07	2.54	34.81	4.11	3.98	2.73	49.01	6.22	1.30		92.87	9.05
2007	43.20	15.09	11.20	3.20	8.00	4.38	46.40	6.88	6.40	2.99	108.80	24.34
2008	10.67	3.37	48.00	7.45	10.67	2.67	50.67	7.35	10.67	4.92	120.00	16.65

EFDHALSS.D04-D07

Table 119. PSD and RSD values obtained for largemouth bass species taken in spring electrofishing samples in Pikeville City Lake (20 acres) on 18 April 2008; 95% confidence intervals are in parentheses.

No. ≥ 8.0 in	PSD (+/- 95%)	RSD_{15} (+/- 95%)
82	56 (45-67)	46 (35-57)

EFDHALSS.D08

Table 120. Length frequency and nocturnal electrofishing CPUE (fish/hr) of black bass collected at Yatesville Lake (2,280 aces) during 3.052 hours of 15 minute samples on 21 April 2008; numbers in parentheses are standard errors.

Area/	Inch class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	
Upper																				
LMB	4	17	35	27	21	11	16	18	12	10	10	11	4	2	2			200	133.33	(8.11)
SB			1															1	0.67	(0.67)
Lower																				
LMB		6	14	11	7	17	18	12	13	7	14	10	21	12	8	1	2	173	111.20	(18.81)
SB			3	4	10	6	6	3	4	5	2		1					60	27.88	(10.64)
Total																				
LMB	4	23	49	38	28	28	34	30	25	17	24	21	25	14	10	1	2	373	122.27	(10.32)
SB			4	4	10	6	6	3	4	5	2		1					45	14.28	(6.53)

LMB = largemouth bass
SB= spotted bass
EFDYLLSS.D08

Table 121. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass at Yatesville Lake (2,280 acres). SE = standard error.

	Length groiup											
	<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	153.70		82.90		20.10		7.40		0.00		264.00	
1994						no data						
1995						no data						
1996	21.50		65.50		7.80		1.50		0.00		96.30	11.50
1997	50.70		23.70		16.70		2.00		0.00		93.00	10.50
1998	10.70		25.70		16.30		5.70		0.00		58.30	7.20
1999	42.70		29.00		16.30		13.70		0.30		101.70	12.20
2000	63.30	8.00	55.70	7.90	9.30	1.10	7.00	1.60	0.00		135.50	13.70
2001	35.00	7.00	58.30	7.50	19.30	3.20	9.70	2.10	0.30		122.30	7.80
2002	54.30	7.80	50.00	4.40	19.30	2.90	16.70	3.20	0.00		140.30	7.40
2003						no data						
2004	12.67	2.80	40.33	10.50	23.67	5.10	9.00	2.20	0.00		85.67	19.40
2005	43.70	7.80	61.30	6.60	42.00	4.70	21.70	2.10	0.30		168.70	15.40
2006	47.30	7.40	68.00	10.30	20.30	2.20	16.00	4.00	0.70		151.70	17.50
2007	47.70	5.91	62.25	5.71	31.33	4.15	15.78	2.65	0.00		157.05	10.65
2008	47.01	8.37	38.29	3.80	20.36	3.68	16.60	4.85	0.00		122.27	10.32

EFDYLLSS.D93 - D08

Table 122. PSD and RSD values for largemouth bass taken in spring nocturnal electrofishing samples in each area of Yatesville Lake (2,280 acres) on 21 April 2008; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Upper	Largemouth bass	96	41 (31-51)	8 (3-14)
	Spotted bass	0		
Lower	Largemouth bass	135	56 (47-64)	33 (25-41)
	Spotted bass	37	32 (17-48)	3 (0-8)
Total	Largemouth bass	231	49 (43-56)	23 (17-28)
	Spotted bass	37	32 (17-48)	3 (0-8)

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

EFDYLLSS.D08

Table 123. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Yatesville Lake (2,280 acres).

	Year							
Age	2000	2001	2002	2004	2005	2006	2007	2008
1	59.70	32.20	52.10	13.00	42.30	45.90	46.98	44.95
2	56.00	54.90	46.60	35.70	54.90	69.20	63.06	40.12
3	11.30	23.40	22.70	23.60	43.00	16.80	23.71	16.41
4	5.70	8.50	16.40	11.90	23.20	15.70	18.54	16.38
5	1.10	1.20	1.00	0.60	1.90	3.40	4.77	3.78
6	1.60	1.80	1.20	0.90	2.80	0.30		
7								
8		0.30						

EFDYLLSS.D00-D02
EFDYLLSS.D04-D08
EFDYLLAS.D05
EFDYLLAS.D06

Table 124. Spring nocturnal electrofishing population assessments for largemouth bass collected at Yatesville Lake (2,280 acres). Actual values are in parentheses.

	Year					
Parameter	2002	2004	2005	2006	2007	2008
Mean length age-3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.5)	4 (13.5)	4 (13.5)
Spring CPUE age 1	4 (52.10)	1 (13.00)	3 (42.30)	3 (45.90)	3 (46.98)	3 (44.95)
Spring CPUE 12.0-14.9 in	2 (19.30)	2 (23.70)	4 (42.00)	2 (20.30)	3 (31.33)	2 (20.36)
Spring CPUE $\geq$ 15.0 in	3 (16.70)	2 (9.00)	4 (21.70)	3 (16.00)	3 (15.78)	3 (16.60)
Spring CPUE $\geq$ 20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.70)	0 (0.00)	0 (0.00)
Total score	14	10	17	14	13	12
Assessment rating	Good	Fair	Excellent	Good	Good	Good
Instantaneous mortality (z)	0.86	1.07	0.91	1.23	0.80	0.57
Annual mortality (A)	57.80	65.80	59.80	70.80	55.20	43.60

EFDYLLSS.D02-D08
EFDYLLAS.D05
EFDYLLAS.D06

Table 125. Length frequency and CPUE (fish/hr) of black bass collected in approximately 3.032 hours of 15-minute nocturnal electrofishing samples in Yatesville Lake (2,280 acres) on 2 and 6 October 2007; 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	Total	CPUE
Upper																					
LMB	1	2	29	37	8	2	24	39	14	11	9	4	6	1					1	188	124.04 (9.84)
SB			1			2														3	1.98 (1.98)
Lower																					
LMB		4	17	29	12	2	13	17	7	5	3	8	5		3					125	82.91 (24.87)
SB	3	10	15	17	13	9	17	13	9	6	2		1							115	75.84 (11.66)
Total																					
LMB	1	6	46	66	20	4	37	56	21	16	12	12	11	1	3				1	313	103.48 (14.18)
SB	3	10	16	17	13	11	17	13	9	6	2		1							118	38.91 (12.48)

LMB = largemouth bass
SB= spotted bass
EFDYLLSF.D08

Table 126. Fall electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2003 - 2008 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	0.06	46.00	6.30	29.30	4.40	12.70	2.80
2004	4.8	0.08	69.50	13.50	32.50	10.80	42.30	7.10
2005	4.7	0.11	47.00	12.30	20.00	7.10	45.93	7.21
2006	4.9	0.08	29.50	7.80	13.80	3.80	46.98	5.95
2007	5.3	0.10	37.36	10.64	23.22	6.12	44.95	8.09
2008	5.1	0.07	45.93	7.78	28.42	6.00		

EFDYLLSF.D03-D08
EFDYLLAS.D05
EFDYLLAS.D06

APPENDIX A

Buckhorn Lake (N=202)

3. Which species do you fish for at Buckhorn Lake?

	Frequency	Percent
Bass	109	54.0%
Crappie	72	35.6%
Musky	24	11.9%
Bluegill	41	20.3%
Catfish	28	13.9%
Trout	1	0.5%

4. Which one species do you fish for most at Buckhorn Lake? (check only one)

	Frequency	Percent
Bass	94	48.0%
Crappie	37	18.9%
Catfish	18	9.2%
Bluegill	27	13.8%
Musky	19	9.7%
Trout	1	0.5%
Total	196	
No Response	6	

5. What level of satisfaction do you have with bass fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	15	12.8%
Somewhat Satisfied	55	47.0%
Neutral	27	23.1%
Somewhat Dissatisfied	19	16.2%
Very Dissatisfied	0	0.0%
No Opinion	1	0.9%
Total	117	
No Response	85	

5a. If you responded with somewhat or very dissatisfied in question (5) - what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of Fish	14	87.5%
Size of Fish	2	12.5%
Not Happy with Regulations	0	0.0%
Total	16	
No Response	186	

6. What level of satisfaction do you have with crappie fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	3	4.6%
Somewhat Satisfied	16	24.6%
Neutral	15	23.1%
Somewhat Dissatisfied	30	46.2%
Very Dissatisfied	1	1.5%
No Opinion	0	0.0%
Total	65	
No Response	137	

6a. 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	4	12.9%
Size of Fish	25	80.6%
Not Happy with Regulations	2	6.5%
Total	31	
No Response	171	

8. What level of satisfaction do you have with channel catfish fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	4	13.3%
Somewhat Satisfied	15	50.0%
Neutral	7	23.3%
Somewhat Dissatisfied	3	10.0%
Very Dissatisfied	0	0.0%
No Opinion	1	3.3%
Total	30	
No Response	172	

8a. 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	50.0%
Size of Fish	2	50.0%
Not Happy with Regulations	0	0.0%
Total	4	
No Response	198	

9. What level of satisfaction do you have with flathead catfish fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	0	0.0%
Somewhat Satisfied	5	21.7%
Neutral	11	47.8%
Somewhat Dissatisfied	6	26.1%
Very Dissatisfied	1	4.3%
No Opinion	0	0.0%
Total	23	
No Response	179	

9a. 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	7	100.0%
Size of Fish	0	0.0%
Not Happy with Regulations	0	0.0%
Total	7	
No Response	195	

10. What level of satisfaction do you have with bluegill fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	4	9.5%
Somewhat Satisfied	29	69.0%
Neutral	7	16.7%
Somewhat Dissatisfied	2	4.8%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	42	
No Response	160	

10a. 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	1	50.0%
Size of Fish	1	50.0%
Not Happy with Regulations	0	0.0%
Total	2	
No Response	200	

11. What level of satisfaction do you have with musky fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	4	16.0%
Somewhat Satisfied	12	48.0%
Neutral	8	32.0%
Somewhat Dissatisfied	0	0.0%
Very Dissatisfied	1	4.0%
No Opinion	0	0.0%
Total	25	
No Response	177	

11a. If you responded with somewhat or very dissatisfied in question (11) - what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of Fish	0	0.0%
Size of Fish	0	0.0%
Not Happy with Regulations	1	100.0%
Total	1	
No Response	201	

12. In 2003, KDFWR raised the size limit on musky from 30 inches to 40 inches at Buckhorn Lake. Do you support or oppose this change?

	Frequency	Percent
Support	23	11.4%
Oppose	80	39.8%
No Opinion	98	48.8%
Total	201	
No Response	1	

12a. If opposed, what size limit would you prefer?

	Frequency	Percent
20"	7	8.9%
20-30"	1	1.3%
30 or less	1	1.3%
30"	57	72.2%
32"	1	1.3%
35"	3	3.8%
36"	4	5.1%
any	1	1.3%
None	4	5.1%
Total	79	
No Response	123	

13. In 2003, KDFWR lowered the musky creel limit from 2 fish to 1 fish at Buckhorn Lake. Do you support or oppose this change?

	Frequency	Percent
Support	26	13.1%
Oppose	52	26.1%
No Opinion	121	60.8%
Total	199	
No Response	3	

13a. If opposed, what creel limit would you prefer?

	Frequency	Percent
2	35	66.0%
2-3	2	3.8%
2 or more	1	1.9%
3	3	5.7%
4	2	3.8%
5	2	3.8%
20	1	1.9%
any	1	1.9%
None	6	11.3%
Total	53	
No Response	149	

14. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?

	Frequency	Percent
Support	32	19.2%
Oppose	13	7.8%
No Opinion	122	73.1%
Total	167	
No Response	35	

15. Are you satisfied with the current size and creel limits on all sport fish at Buckhorn Lake?

	Frequency	Percent
Yes	107	58.8%
No	75	41.2%
Total	182	
No Response	20	

Bass Size Limit

	Frequency	Percent
12	1	100.0%

Crappie Size Limit

	Frequency	Percent
6	1	14.3%
7	2	28.6%
8	2	28.6%
None	2	28.6%
Total	7	

Crappie Creel Limit

	Frequency	Percent
15	4	28.6%
20	10	71.4%
Total	14	

Musky Size Limit

	Frequency	Percent
20	7	9.3%
20-30	1	1.3%
30	55	73.3%
32	1	1.3%
35	3	4.0%
36	4	5.3%
any	1	1.3%
None	3	4.0%
Total	75	

Musky Creel Limit

	Frequency	Percent
2	34	75.6%
2-3	2	4.4%
3	3	6.7%
5	2	4.4%
any	1	2.2%
None	3	6.7%
Total	45	

Support or Oppose only 1 catfish over 34 inches?

	Frequency	Percent
Support	21	23.6%
Oppose	1	1.1%
No Opinion	67	75.3%
Total	89	
No Response	113	

APPENDIX B

Buckhorn Lake Musky Anglers only (N=24)

4. Which one species do you fish for most at Buckhorn Lake? (check only one)

	Frequency	Percent
Bass	1	4.5%
Crappie	1	4.5%
Bluegill	1	4.5%
Musky	19	86.4%
Total	22	
No Response	2	

11. What level of satisfaction do you have with musky fishing at Buckhorn Lake?

	Frequency	Percent
Very Satisfied	4	16.7%
Somewhat Satisfied	11	45.8%
Neutral	8	33.3%
Somewhat Dissatisfied	0	0.0%
Very Dissatisfied	1	4.2%
No Opinion	0	0.0%
Total	24	

11a. If you responded with somewhat or very dissatisfied in question (11) - what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of Fish	0	0.0%
Size of Fish	0	0.0%
Not Happy with Regulations	1	100.0%
Total	1	
No Response	23	

12. In 2003, KDFWR raised the size limit on musky from 30 inches to 40 inches at Buckhorn Lake. Do you support or oppose this change?

	Frequency	Percent
Support	13	54.2%
Oppose	10	41.7%
No Opinion	1	4.2%
Total	24	

12a. If opposed, what size limit would you prefer?

	Frequency	Percent
30"	5	50.0%
32"	1	10.0%
35"	2	20.0%
36"	2	20.0%
Total	10	
No Response	14	

13. In 2003, KDFWR lowered the musky creel limit from 2 fish to 1 fish at Buckhorn Lake. Do you support or oppose this change?

	Frequency	Percent
Support	18	75.0%
Oppose	3	12.5%
No Opinion	3	12.5%
Total	24	

13a. If opposed, what creel limit would you prefer?

	Frequency	Percent
2	3	100.0%
Total	3	
No Response	21	

15. Are you satisfied with the current size and creel limits on all sport fish at Buckhorn Lake?

	Frequency	Percent
Yes	12	54.5%
No	10	45.5%
Total	22	
No Response	2	

Musky Size Limit

	Frequency	Percent
30	5	50.0%
32	1	10.0%
35	2	20.0%
36	2	20.0%
Total	10	
No Response	14	

Musky Creel Limit

	Frequency	Percent
2	2	100.0%
Total	2	
No Response	22	